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Original Articles.

THE DIET IN TYPHOID FEVER.[1]

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IN view of the unanimity which prevails among medical writers on the subject of the diet of typhoid fever, it may seem surprising that this subject requires any discussion at all. That this unanimity is so marked among authors in all countries may be attested by a perusal of even the latest editions of the text-books and systems of medicine. Indeed, so accomplished a clinician as Chantemesse, in the celebrated "Traité de Médecine" of Charcot and Bouchard, dismisses the whole subject of the diet in typhoid fever in five lines. Nearly all writers are agreed in maintaining that the diet during the febrile stage shall consist either of milk alone or some preparation of it, beef-juice, or tea, or bouillon, gelatins, meat peptones, somatose and similar preparations, eggs, various gruels and broths, and alcohol; also a few vegetable- and fruit-juices. But on one point they are one and all unanimous, that under no conditions shall solids in any form be allowed to the febrile typhoid patient, and that even in the administration of liquid foods especial care shall be taken that these be chosen with reference to their blandness and to the amount of residue which is left after they have been digested in the stomach. One writer has even gone to the extreme of stating that even milk itself ought not to be allowed, since this is a good culture medium for the typhoid bacilli, and hence he has recommended preparations of malt, since it has been shown that the typhoid bacilli do not thrive in this medium.

As to the diet after defervescence, writers are again quite unanimous in stating that no solids of any kind should be administered until at least seven to ten days have elapsed after the establishment of a normal temperature; and when the fluid diet is departed from at this stage, the utmost care should again be exercised in the selection of bland articles of nourishment. It is true that a few writers, among whom we may mention Peabody of this city, have recommended that meat be administered as soon as the temperature reaches the normal line, yet such has been the fear of the febris carnis that these teachings have for a long time stood alone. The fact remains, therefore, that the general consensus of opinion is that the patient in typhoid fever shall be kept upon a liquid diet as long as there is the slightest possibility of the existence of ulcerated areas in the intestinal tract.

But there is another side to this question. The observations which have been reported, it is true, do not include a very large number of cases; yet they have been conducted on such careful lines that they are well worthy of attention. Of these recent publications I may mention that of A. J. Barr,[2] of Leeds, England, who reports his observations upon cases of typhoid fever in which the patients were fed with bread and butter, minced meat, and ordinary mixed diet, even though they had a temperature of 104° F. So far from doing the patients any harm, he even claims that they were benefited thereby. His observations were based on thirty-one cases, of which only three ended fatally; and to these three patients he had never been able to give solid food. He lost no case in which early full feeding was adopted, and his own mortality was not so great as the average mortality of the hospital (that is, of the Leeds General Infirmary). Relapses occurred in two of the thirty-one cases (six per cent).

Much more striking is an elaborate report that comes from Russia. Bushuyev, being fully convinced of the desirability of feeding patients with typhoid fever as fully as possible, concluded to have a comparative test made of this method, and arranged with his colleague, Sartsievich, that all the cases of typhoid fever which were admitted to the hospital in the year 1896-97 should be compared from this standpoint. Accordingly on the one division only milk (two quarts every twenty-four hours), one or two eggs soft boiled or in Stokes' mixture, were allowed to the patient, while on the other the full diet, the details of which will be stated below, was given. The results were as follows:

	Bushuyev	Sartsievich.
Whole number of patients.........	80	74
Recovered	72 (90 p.c.)	65 (87.8 p. c.)
Average day of illness on entrance in the hospital.	7.5	5.8
Average day of entrance to division..................	8.4	8.3
Day on which recovery was complete.....................	49.5	55
Number of days spent in hospital.	42	49.2
Days of fever in hospital........	18.9	22.3
Dismissed incapable of duty.....	6 (8.3 p.c.)	10 (15.4 p.c)
Died......	8 (10 p.c)	9 (12.1 p.c.)
Average day entrance to hospital.	8.5	5.8
Average day of entrance to division....	9.1	8.4
Day of death (average)	28.6	26.7
Number of days between entry and death...................	20 1	19.4

Bushuyev argued that those who objected to feeding based their objections not so much on the insufficiency of the digestive juices as the danger of hemorrhages. He argued that the changes which result in perforation rarely come on suddenly, but occur gradually; furthermore, that the lesions are so far removed from the stomach that by the time the foods, even those hard to digest, reach these areas, they are so far changed that one can hardly imagine that they could injure the intestines. Wholly indigestible substances such as fruit seeds or skins, which might injure the gut, are as a rule so rolled up in mucus or intestinal contents as to be harmless. Autopsies on cases of typhoid fever on the thirtieth day or later, in patients who had been liberally fed, showed that the intestines were in the same condition as under ordinary typhoid diet. That the cause of perforation is not the character of the food, but the nature of the ulcer, is asserted by Bushuyev, since one never hears of perforation of the tuberculous ulcer due to food. He also absolutely states that he knows of nothing to support the view held by some, that injury to the intestinal walls by solid food might provoke a re-entrance of the bacilli, and increase the frequency of relapses.

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[1] Read before the Metropolitan Medical Society, November 28, 1899.

[2] British Med. Jour., 1897, vol. i., p. 125.

From the table of supplies open to him, Bushuyev devised the following plan for feeding typhoid patients, which he carried out for two years:

7 A.M. Tea with roll.

8 A.M. 400 c.c. of soft (liquid) oatmeal, barley, or wheat porridge with butter.

9 A.M. One or two boiled eggs, soft or hard, as the patient desires.

10–11 A.M. A glass (200 to 220 c.c.) of milk with roll, one-half a cutlet, and a bit of boiled meat (160 to 168 gm.).

12–12:30 P.M. A plate (220 c.c.) of chicken soup or a bowl of ordinary soup, sometimes with a bit of chicken from the soup, and a small cup of kisel (a sort of sour jelly); rarely a little preserved fruit.

3 P.M. Tea with a roll.

6 P.M. A cup of chicken or beef soup; semolina pudding or milk; a bit of chicken.

8 P.M. Milk with a roll.

During the night: Coffee or tea with milk two to four times; coffee with cognac.

For dinner or supper the white bread may be replaced with black (with the crust), and the soup by a thick wheat gruel. Many patients prefer boiled meat to cutlets, and the ordinary soldier's soup to hospital soup and gruel. The milk is generally boiled; occasionally it is given in the form of junket. As to beverages, the patients were allowed cold water, boiled or unboiled, cranberry juice, milk of almonds, small amounts of beer, and kvass. The cranberry juice was particularly grateful to the patients. In addition the patients received from one to three ounces of wine in the morning, and every two hours half an ounce of Stokes' mixture.

Bushuyev naively states that had he had a greater variety of articles of food he could have excited the appetites of the patients, so that in some instances they might have eaten more. As it was, some complained of insufficiency of bread. He was also unable to give the patients as much milk as he wished.

During the year 1897 under this diet he lost twenty-six out of three hundred and eighteen patients, or 8.2 per cent. During the years 1888 to 1897, the deaths from typhoid fever at the military hospital at Kiev varied between 10 and 19.3 per cent. The mean average in ten years was 12.4 per cent., three hundred and fifty-eight deaths in twenty-eight hundred and eighty-seven patients. Thus in 1897 with a mixed diet the death rate was materially less than for the ten years previous.

He declares enthusiastically that under this treatment the general condition of the patients was far better than that of those kept on exclusively fluid diet. The common complaints were scarcely ever heard. At meals the patients were uncommonly wide awake, and even those that were ill sat up in bed, begged for food, and ate with much satisfaction Only a few had to be fed by nurses. If one observed the patients at mealtime, he wholly forgot that they were seriously ill, with temperatures above 39° C. (102.5° F.). The visitors in the ward at meal-times were amazed "by seeing almost no typhoid-fever cases."

He states further that during the first hours in the ward the patient lies in a motionless condition, failing to answer questions and refusing food; but if one succeeds in some way or other in persuading him to eat a bit of meat or cutlet, or an egg, he begins immediately to show some interest in the surroundings. In a few days, often within a day, no trace of the typhoid condition remains. Unfortunately, it is impossible to persuade all typhoid-fever patients to eat. Attempts at forced feeding cause vomiting. Every care should be directed toward stimulating the patient's appetite, and to avoid disgusting him by what is brought before him.

When the patient enters in an unconscious condition he should be given as much of a liquid diet as he can take without vomiting, and if it be impossible to feed him by the mouth, he should be fed through the nose with a tube.

The tongue and lips remain in relatively good condition; there are no unpleasant gastric or intestinal symptoms. The bowels are often constipated, and pea-soup stools occur only in cases fed with milk and bouillon.

As regards complications, it is to be noted that intestinal hemorrhage is not more frequent during a solid diet than under exclusive liquids. Thus Bushuyev did not lose a single case from intestinal hemorrhage.

In 1897, among three hundred and eighteen cases there were only four instances of hemorrhage, *i.e.*, 1.7 per cent., whereas in the statistics of others it varies from two to ten per cent. Of the four patients with hemorrhage, two died, and it is to be noted that of these four patients only one received solid diet, two entering the hospital in so serious a condition that they had to have forced liquid feeding, and the other was that of a physician who preferred to be fed upon liquids. Perforation occurred in the last two years only once in five hundred and nine patients; that is, .19 per cent. The other authors estimate it from 1.25 to 3.04 per cent. General peritonitis occurred only twice.

The loss of weight in these patients was less than that which occurred in those on a more restricted diet The general condition was so good that they preferred as a rule to walk to their tubs and to the closet. Long before the end of the fever they got out of bed, and there was much difficulty in making them lie down. In summer they went out into the garden almost on the first day of the febrile condition.

Dr. Thayer, whose abstract of this paper in "Progressive Medicine," 1899, vol. i., p. 328 et seq., I have quoted so liberally, in commenting on it states that both reasoning and the figures are such as to make us reflect. He adds that if a more liberal diet than that afforded by the purely liquid regimen could be assimilated, the patient's strength would hold out materially better, and in diphtheria and pneumonia or febrile tuberculosis we endeavor to feed the patient as fully as possible on a simple, easily absorbable, and nourishing diet; but in typhoid fever we are restrained by a vague fear that any departure from the customary regimen is for some reason or other dangerous.

Thayer believes that indiscretions of diet may produce sudden rise of temperature with alarming symptoms, but he has never seen anything to show that this is more common in typhoid fever than in any other similar condition.

The only other elaborate reports which have recently been published on the use of solid foods in typhoid fever are those of Dr. F. C. Shattuck, of Boston, which were published in 1897, and the recent address of Dr. R. H. Fitz, of Boston. Shattuck's line of argument is very similar to that of Bushuyev, and his results are equally striking. He was led to take up this line of treatment as a result of having accidentally fully fed a number of typhoid-fever patients, the true diagnosis of which was not made until some time afterward. These results were so strikingly favorable that he was led to adopt a fuller regimen in the treat-

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[1] Jour. Amer. Med. Assoc., July 10, 1897, p 51.

ment of his cases at the Massachusetts General Hospital. The statistics which he reports are most satisfactory.

Shattuck, after arguing against the fallacy of the old doctrines of depletion in acute febrile disorders, urged that although typhoid fever was a self-limited disease, yet its long duration rendered it necessary that, inasmuch as we could not directly attack the cause of the disease, our duty was to support the patient's strength to the utmost by maintaining nutrition at the highest level. We have no fear of feeding febrile patients in other diseases, and he calls attention to the forced feeding in the suppurative fevers, whether tuberculous or not. Furthermore, he says that no matter how we feed a patient there will be intestinal peristalsis, and the waste products must pass over the ulcerated areas. Furthermore, he does not accept the old idea that relapses are due to dietetic errors alone, but that nervous excitement, undue fatigue, etc., also cause rises of temperature; nor does he believe that these factors can cause fresh infection by bacilli. Thus for twelve years, from 1886 to 1897 inclusive, three hundred and eighty cases were under his treatment. From 1886 to 1893, two hundred and thirty-three were upon exclusively milk diet, with a mortality of ten per cent.; from 1892 to 1897, one hundred and forty-seven were upon a more liberal diet, with a mortality of 8.1 per cent. Shattuck admits that the number of his observations is small, and that other factors in the treatment, such as the introduction of hydrotherapy, may have had something to do with his better results; but one factor remains, namely, that the more liberal diet at all events did no harm. Shattuck does not advise eating everything, but he insists that we should treat the patient and not the disease, that we should feed him with reference to his digestive powers and not with reference to the fever, and furthermore, that there is no increased danger of irritation from food which leaves no irritating residue, and which cautious trial shows is digested without disturbances. His diet includes:

1. Milk, hot or cold, with or without salt, diluted with lime water, soda water, Apollinaris, or Vichy water; peptogenic and peptonized milk; cream and water (*i.e.*, less albumin); milk with white of egg, buttermilk, koumyss, matzoon, whey; milk with tea, coffee, or cacao.
2. Soups—beef, veal, chicken, tomato, potato, oyster, mutton, pea, bean, squash; carefully strained and thickened with rice (powdered), arrowroot, flour, milk or cream, egg, barley.
3. Mellin's food, malted milk, carnipeptone, bovinine, somatose.
4. Beef juice.
5. Gruels—strained corn meal, crackers, flour, barley water, toast water, albumen water with lemon juice.
6. Ice cream.
7. Eggs, soft boiled, raw, egg-nog.
8. Finally, minced lean meat, scraped beef; the soft part of raw oysters; soft crackers with milk or broth; soft puddings without raisins; soft toast without crust; blanc mange, wine jelly, apple sauce, and macaroni.

In the admirable address[1] at the recent general discussion on typhoid fever at the last meeting of the New York State Medical Association, Dr. R. H. Fitz, of Boston, presented the statistics on typhoid fever at the Massachusetts General Hospital, extending from 1821 to 1899. In the course of this address, among other things, he directed especial attention to the influence of diet upon the course of typhoid fever, upon the general mortality, the occurrence of hemorrhage and of perforation:

"For the thirty years from 1839 to 1869 the diet of the patients was liquid, the fluids often containing some farinaceous ingredients. From 1869 to 1879 beef tea and beef juice were largely used in addition to the milk, and from 1879 to 1899 the liquid portion of the diet has been chiefly milk. Between 1893 and 1898 the patients under the care of Dr. Shattuck [namely, the cases which have been referred to above] have received, in addition to the milk, minced meat, raw and soft-boiled eggs, macaroni, soft crackers, toast, and puddings. Patients under the care of Dr. E. G. Cutter, during a like period, have been fed on skimmed milk, buttermilk, eggs and milk, albumen water, chicken broth, and beef juice with barley water. The mixed foods were so strained as to be freed from solid particles. During the thirty years of liquid farinaceous diet, the average mortality was 14.1 per cent. In the milk and beef-tea decade it was 16.6 per cent., although in the immediately preceding liquid farinaceous decade it was 15.9 per cent. From 1879 to 1899, among those patients using milk as the principal article of food, the mortality was 14.6 per cent., which was about the same as during the period of liquid farinaceous diet. The mortality was only 11.3 per cent., however, among the patients between 1893 and 1898, who were fed upon the liquid and soft solid diet prescribed by Dr. Shattuck. This mortality compares very favorably with that of 15.1 per cent. noted among the patients using a largely milk diet, and with a 16.6 per cent. mortality occurring among patients taking strained, starchy, and proteid fluids. As regards the occurrence of hemorrhages, it was noted among patients living on a milk diet in 10.6 per cent.; among those fed on proteid and amylaceous fluids it was sixteen per cent., while it was only nine per cent. among the patients living upon fluids and soft solids. The inference from this comparison is that a diet of soft solids not only does not provoke an intestinal hemorrhage, but also rather lessens the tendency to this complication. On the other hand, the strained mixed diet may increase somewhat the frequency of the hemorrhages.

"The frequency of perforation could be noted with sufficient accuracy to permit comparison, only in the cases reported within the past thirty years. From 1869 to 1879 the average frequency of this occurrence was 1.1 per cent.; from 1879 to 1889 0.3 per cent., and from 1889 to 1899 1.6 per cent. These differences are so slight as to make it doubtful if dietetic treatments have had any effect in modifying the frequency to these grave complications of typhoid-fever patients. Of ten patients with perforation, between 1893 and 1897, five, or 2.8 per cent., were using a largely milk diet; two, or 1.8 per cent., the strained liquid diet; and three, or 3.4 per cent., were fed upon liquid and soft solid diet.

"As to frequency of relapses, careful thermometric records having only been made at the hospitals since 1869, it is possible to make comparisons only since then. It is to be noted that the frequency of relapses has increased from 8.7 per cent. of the decade from 1869 to 1879 to 13.6 per cent. in the next decade, and 11.3 per cent. in the last decade, namely, 1889 to 1899. This frequency may possibly, as has frequently been maintained, be due to hydriatric treatment of the disease.

"It is to be noted that relapses were rather more frequent among patients living upon a largely milk diet, since among them the ratio of relapses was 13.1 per cent.; it was 11.1 per cent. among patients living upon strained proteid and amylaceous diet, and 10.2 per cent. among the patients fed upon fluids and soft solids." Fitz, therefore, in his conclusions maintains that a considerable variety in the diet may be permitted not only without detriment, but also with possible benefit to the patient.

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[1] Boston Med. and Surg. Jour., Nov. 23, 1899. I am indebted to Dr. Fitz for his courtesy in sending me advance sheets of his paper.

My own experience in this field is, I regret to say, more limited than I would like. There are many reasons for this small number, one being that the number of typhoid-fever cases is usually small during the greater part of my service at the Mount Sinai Hospital (*i.e.*, February 1st to August 1st), and, furthermore, I did not begin this plan of treatment till the middle of May. This year's epidemic, also, was peculiar both in the comparatively small number of cases and its severity. Never have I seen such a series of bad cases; the tendency to complications was unusually great, among which pneumonia was the most prevalent. This is shown in the hospital statistics of the cases of typhoid fever treated this year up to November 24, 1899:

Total Number 90.		Full Number. Per Cent.	Number on Liquid Diet, 82. Per Cent.
Total deaths........	11	12.2	13.4
Total relapse........	14	15.5	14.5 (12 cases.)
Total perforation....	4	4.4	4.88
Total hemorrhage ...	3	3.3	3.5

Mortality of hospital for 1896, 7.6 per cent.; for 1897, 9.57 per cent.; average mortality, 1893–1897, 11.09 per cent.; average per cent. of relapse, 1893–1897, 8.42.

The percentages for the series of eight cases on fluids and soft solids are not given, as it is scarcely justifiable to present any results based on such a small number. It is to be noted, however, that there were no deaths, hemorrhages, or perforations. The two relapses will be discussed later on.

This series, as stated, included only eight cases, four males and four females, the ages of whom ranged from sixteen to twenty-five years. The plan of treatment was that ordinarily pursued at the hospital, *i.e.*, a minimum amount of medication, usually including only dilute hydrochloric acid and stimulants, unless some special indications should arise. Plunges at 90° to 80° F. or cold packs were the routines for high temperatures. The majority of the cases were of the severe type, as their subsequent course proved.

The diet allowed was the soft diet of the hospital. This includes soft boiled eggs, milk, milk toast, custard, strained jellies, chicken, rice, farina, strained oatmeal and other cereals, softened soda crackers, baked potatoes. One and all the patients relished their food, although I must confess it at first seemed somewhat uncanny to see these patients sitting up in bed, trays in front of them, and with contents rapidly disappearing. That they digested the food was proven by the constant supervision of the stools; it is also to be noted that diarrhœa was not present in any larger proportion than is usual in this disease. In several of the cases there was constipation; two of the patients had two or three soft stools daily. The tongues were always moist, whether they were coated or not. In other words the food was tolerated in every way, and that it was absorbed was manifest from the fact that, as a rule, these patients emaciated less rapidly than the others who were under liquid food treatment at the same time. The better nutrition of these patients was also demonstrated by blood counts which were made for other purposes on two of them, both of which ran severe courses; one of them was complicated by pharyngeal diphtheria. On the twelfth day there were 4,280,000 erythrocytes, and 12,000 leucocytes. In the other case, in the fifth week, the examination showed 5,087,000 erythrocytes, although the temperature was still elevated.

There were no deaths, although according to the high average mortality of the hospital for this year we should have expected at least one death. This is remarkable in view of the severity of the cases, diphtheria, pyelitis, mastitis, and a marked psychosis being among the complications. There were no hemorrhages, since we can eliminate the few drachms of blood which were once reported in one case. Perforation and indeed all peritoneal symptoms were absent. Likewise there were no thromboses.

Relapses were reported in two cases. Of these one occurred three weeks after the patient's discharge from the hospital, and can therefore hardly be attributed to the increased diet. The other relapse was that of a robust domestic, who had a mild primary attack, but who subsequently had two severe relapses. It is to be observed that in her first relapse she was fed on milk alone. This apparently did not prevent her having the second relapse.

Whether this high percentage of relapses (twenty-five per cent.)—which, it is to be observed, is higher than the average of the other hospital cases for this year—is a coincidence or not, I will not discuss, since it would be rash to draw conclusions from eight cases. The larger statistics of Fitz and Shattuck demonstrate that relapses are less under full diet than they are on a liquid régime. On the other hand, if we eliminate the one case in which the relapse occurred three weeks after discharge from the hospital, as we are justly allowed, then the percentage would be twelve, which would be close to the hospital average.[1]

Having thus presented the leading facts which have thus far been presented on this side of the dietetic question, let us review the grounds on which the necessity of a liquid or soft diet in typhoid fever has been so generally emphasized, so that we may see the practical reasons pro and con. In no other way can any definite conclusions be reached. The subject is deserving of discussion, even though all the text-book writers are unanimously opposed to any change. For a long time many were opposed to the bath treatment; to-day it maintains its popularity even though statistics show that hemorrhages and relapses are probably more frequent under this treatment than they ordinarily are. The benefits from the treatment far outweigh the disadvantages of the method. In medicine nothing is fixed, and progress is alone possible by constant revision, even of that which at the time is universally accepted.

The fundamental principle is that typhoid fever is a general infectious disease, the chief and most important feature of which is the lesions in the intestines; and since these lesions are accompanied by an ulceration more or less deep of the intestinal walls, every effort should be made to secure the utmost possible rest for the gut, both in the nature of the food residue which passes through the involved intestine, and the amount of distention to which its walls may be subjected by undue fermentations.

The extent to which these views now prevail in the minds of some of the very best authorities may be inferred from the statements made by some of them that constipation is the ideal state, and that the bowels should be moved as little as possible. But it is to be answered that typhoid fever is something more than an intestinal lesion. The bacilli can be found in the blood as early as the fifth day, and are in the spleen and other organs at an even earlier period. Later on they may be found in almost any part of the body. This has been well shown by Keen, in his elaborate synopsis on the various parts of the body in which Eberth's bacillus has been found.[1] This list includes the blood, the endocardium and endocardial vegetations, the walls of the arteries and veins, thrombi, muscles, the connective tissues, the skin, the synovial sheaths of tendons, joints, the bones, the brain and spinal cord, thyroid gland, parotid gland, orbit, middle ear, lungs, pleura, peritoneum, liver, the gall bladder and bile, the spleen, the mesenteric glands, the kidney, the urine, ovaries, testicles and epididymis, and even in the placenta and fœtus.

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[1] In the discussion a number of cases of typhoid fever were reported in which the patients were, for some reason or another, fed upon solids throughout the whole course of the disease. Among these was one narrated by Dr. Leszynsky: the patient, being the wife of a doctor, thought she knew all about feeding, and insisted upon a diet of tongue and ham sandwiches, etc. She could not be dissuaded, her chosen diet was regularly given to her; the course of the disease was uneventful. Dr. Kubin stated that while he was house physician of the German Hospital scraped ham was often allowed without any bad effects. Dr. Koplik said that at Bellevue Hospital Dr. Alonzo Clark and Dr. Delafield not infrequently permitted scraped meat. I may add that during a recent conversation with Dr. Janeway on this topic he told me of a patient at Bellevue Hospital who insisted on being fed on corned beef and cabbage, no harm resulted, since his case pursued the ordinary course.

In his most recent paper on the diagnosis of typhoid fever, Osler[2] lays special stress upon the necessity of recognizing the general infection in typhoid fever, since it is the failure to recognize this that so often leads to errors in the early diagnosis of this disease. Thus the toxæmia from which the patient suffers is not alone due to the poisons which are produced by the bacilli in the intestine, but is due to those which are elaborated in the other organs.

Furthermore, typhoid fever is not alone due to the typhoid bacilli, but it is a mixed infection in which the colon bacilli, staphylococci, streptococci, and other micro-organisms play a most important part; hence the fever in the early stages of typhoid fever is entirely due to the typhoid infection, but in the later stages there is the added factor of the mixed infections which occur in the ulcerated areas in the intestines and elsewhere. Moreover, not a few cases have been reported in which the most careful examination at autopsies has failed to find the slightest involvement of the intestines.[3]

Another important fact which must not be overlooked is this: that the severity of the intestinal lesion cannot be inferred from the amount of diarrhœa. The deepest ulceration may be accompanied by constipation, and furthermore a marked catarrhal condition of the mucous membrane with only moderate ulcerations of Peyer's patches may be accompanied by an unusual number of intestinal evacuations. The difficulties attending this question may be inferred by the following quotation from Hare:[4]

"The consensus of opinion seems to be that diarrhœa is usually more active in serious cases. Whether this is an instance of purging as an effort of elimination, a favorite theory of those who are fond of using purgatives and so-called intestinal antiseptics, with the idea that by so doing they eliminate poisons and prevent their formation, or whether it is a manifestation of severe ulceration of the bowel with an associated catarrh, is difficult to determine. Ord agrees with the view that diarrhœa is usually associated with ulceration, and his opinion has been confirmed by the autopsies he has seen. Peabody states the case exactly opposite to this view. That Ord's view is not correct seems proved by the fact that advanced ulceration is often found in cases which have not had diarrhœa, and cases of marked diarrhœa are seen in which the autopsy does not reveal much intestinal ulceration. In Bryant's case diarrhœa was active, yet no intestinal lesions were found. In all probability diarrhœa is neither indicative of a severe nor a slight attack in many cases, although if it is violent the exhaustion produced by the discharges may seriously imperil the patient's chance of recovery."

Finally it is urged, but by no means proven, that administration of solids necessarily increases diarrhœa or tympanites. The contrary is often true. Bushuyev and Shattuck especially note that many of their patients were constipated; in my own cases on solids the same was frequently reported.

The opponents of the administration of solid food forget that, no matter how carefully the diet is regulated, the intestinal contents must pass over the ulcerated areas; that peristalsis must take place. Its advocates argue that the former lose sight of the fact that fortunately the favorite site of the lesions in the intestines is the ileum, especially its lower part, less frequently the jejunum and the colon, hence food even of a solid nature must have been fairly well digested before it reaches this part. The other arguments advanced have been sufficiently referred to in the statement from Bushuyev given above. If any further details are needed upon this question as to whether peristalsis is especially injurious, one may recall the various procedures of the so-called eliminative treatment of the disease.

The point upon which special stress must be laid is that typhoid fever is a general toxæmia, and it is to this rather than to any particular lesion that we must direct our attention and regulate our diet. Barr has urged that ulcerations in the intestine are like ulcers elsewhere, and that they will heal much more rapidly when the blood and the tissues are well nourished. The disease being one of long duration, the patient is enabled to combat it far better if his general nutrition has been kept at the highest point possible under the circumstances. That this plan is feasible is shown by the results narrated by Barr, Shattuck, Fitz, and Bushuyev. My own limited experience confirms it. The general mortality is decidedly less under liberal diet that on liquid or restricted soft foods, as the statistics already given sufficiently prove, so far as statistics in so variable a disease as typhoid fever will enable one to judge.

The second ground of contention is the presence of the fever. Those in favor of liquid diet maintain that the digestive secretions are lessened, and hence the quantity of saliva, gastric juice, pancreatic juice, and bile is entirely insufficient to digest anything but the simplest foods. Furthermore, the lack of appetite prevents the administration of anything except liquids; even the patient's appetite is not a safe guide, for he may simulate hunger under the false impression that his recovery will be facilitated if he takes a large quantity of nourishment. Thus the fact is emphasized that it is one thing to introduce food into the body, but that it is quite another to digest and assimilate it. But, say the opponents of these views, we feed other fevers no matter what their nature may be, whether they be the prolonged fevers of tuberculosis, of suppuration, or other conditions; indeed, we make it a point to do everything which we can to get the patient to take the maximum quantity of nourishment. Be these views as they may, all are agreed that there is such an enormous waste of the body albuminoids and fats that we must strive as far as possible to replace these lost tissues in the diet, and at the same time we must seek to protect the remaining tissues from too rapid destruction. The general consensus of opinion is, that this can be amply provided for by increasing the quantities of liquid food, our guides being the amount of residue which is found in the stools, the general condition of the nutrition of the patient, and the state of his mouth, etc. That this is not fully accomplished is shown by the marked emaciation which always accompanies typhoid fever. Voit has shown that the caloric value of three or four

[1] "Surgical Complications and Sequels of Typhoid Fever," 1898, p. 23.

[2] New York Med. Journal. November 11, 1899.

[3] Biggs (Med. News, November 11, 1899) has well shown the fallacy of calling this disease enteric fever.

[4] "Medical Complications and Sequelæ of Typhoid," February, 1899, p. 121.

pints of milk daily is not sufficient to feed and replace the waste in this disease. Furthermore, no food produces more virulent toxins than does milk. Every pædiatrist is emphatic in directing attention to this important point in the treatment of gastro-enteric disorders in children. The imperative need for more nourishment is only too frequently attested by the pitiable cries for food so often uttered by these patients, even before defervescence. Although the diet allowed by Bushuyev is that of an enthusiast who has gone to the other extreme, yet the fact that his patients thrived on it proves that an increased diet may not alone be eaten by this class of patients, but may also be fully digested and assimilated.

The third point of contention is the danger of hemorrhage. So far as the limited number of cases quoted above will permit any judgment, it must be confessed that it would seem that the administration of solids has not increased the frequency of hemorrhage. Indeed its frequency is distinctly less in the series of Bushuyev, Shattuck, and Fitz. Thus Bushuyev had only four cases in his series of three hundred and eighteen, *i.e.*, 1.7 per cent., but of these one only had solid food, thus reducing the percentage to 0.3 per cent. Fitz reports nine per cent. of hemorrhage of those upon fluids and soft solids, as opposed to sixteen per cent. among those on liquids. There were no hemorrhages in my own cases. On the other hand, so eminent an authority as Curschmann[1] reckons dietetic errors among the exciting causes of intestinal hemorrhages.

Fourth, the danger of perforation does not seem to bear any relation to the character of the food administered, at least so far as the statistics which are available will permit any judgment. Nor indeed is this surprising, for perforation is due to the nature of the lesion, to the progressive ulceration rather than to anything else. It has repeatedly been shown that perforation bears no relation to the severity of the general symptoms. It is true that a gut which is unduly active in its peristalsis, and is unduly distended by gas, will be much more apt to rupture under these conditions than when they are more favorable. As this subject has already been sufficiently gone into, it need not be discussed at any greater length here.

Fifth, the subject which is apparently much less difficult of determination from statistics is the occurrence of recrudescences of fever and relapses from the administration of food. Yet in a disease which is as protean in its manifestations as typhoid fever, in which the collected statistics even of enormous numbers of cases show such great variations in the frequency of relapses, in which the epidemics from year to year present the most varied phenomena, one must be reserved in passing judgment. We do not yet know why one case relapses and the other does not. The *post hoc* and *propter hoc* must be carefully kept asunder; for undue mental excitement or even fatigue, the administration of drugs (Hare mentions the occurrence of recrudescences after full doses of strychnine), the change from one liquid to another, as has been claimed by West, and many other occurrences may cause relapses. Hence in a given case one can never be certain that the relapse which occurs has been due to the administration of food. Still the general consensus of opinion is that, in a large number of cases, relapses or recrudescences or fever have resulted directly from dietetic errors. Every physician who has had an extensive experience with typhoid fever has encountered numerous such examples. I am sure that every year I have seen cases of relapses which have apparently resulted from errors of diet. The most striking case of this kind which I can recall is that of a boy whose fever most persistently remained elevated. Search as we would, we never could find any cause for its protracted course. The death of the patient in the neighboring bed soon brought his fever to an end. It was then that we learned that this patient was surreptitiously supplied with fruit, cakes, etc., on visiting days, and taking pity on his neighbor he passed it over to him. Many of the relapses of this kind are due to another factor; *i.e.*, the patients are so famished that they ravenously devour what they can lay hands on, often doing so surreptitiously. Bread, fruit, and sponge-cake are the especial offenders in the case of hospital patients.

But is there any evidence to show that indiscretions of diet produce rises of temperature with unpleasant symptoms more frequently in typhoid fever than in other conditions? I can fully indorse Thayer's statement[1] already quoted, that "an indiscretion of diet may produce such symptoms in any condition of severe physical exhaustion," and that he "has never seen anything to suggest that it is more common in typhoid fever than in any other similar condition." Neither does Shattuck believe that relapses are due solely to dietetic errors. It must be distinctly remembered that relapses occur even on a strict milk diet. It is possible that relapses may take place more frequently under full feeding, just as they are reported more frequently in the Brand treatment. The question is one which is very difficult of solution, and time and a larger experience can alone solve it. The only available statistics are those of Fitz already quoted, *i.e.*, that relapses occurred in 13.1 per cent. on a milk diet, in 11.1 per cent. on a strained, proteid, and amylaceous diet, and in 10.2 per cent. on fluids and soft solids.

As to the question of the diet in convalescence, it follows that those who believe in full feeding have already solved it before defervescence has occurred. If the patient has been kept on liquids, my own experience inclines me to allow solids gradually at the earliest possible moment, the guides being the patient's general condition, the presence of hunger, clean tongue, and the absence of sloughs or much mucus from the stools.

The question of radical increase of diet may also come up at other times. Among these I may mention the unduly prolonged persistence of fever. Not a few of these cases are cases of inanition or starvation, the bodily and mental phenomena of which are not recognized as such, but are reckoned among the typhoid phenomena. A careful consideration of all the features of the case, and more especially an examination of the blood, will often reveal the true condition.

The most marked example of starvation which I have thus far encountered occurred in a case in private practice this spring. After having been for some time under the care of another physician, the bad condition of the patient led to a change of her medical adviser. I found the patient, a wildly maniacal woman, aged thirty years, with fever of 104.5° F.; pulse, 140; respiration, 38. Feeding was utterly impossible on account of her mania. There was no other recourse except to feed her by means of the stomach tube. This was easily effected with the aid of a gag. Within twenty-four hours the effect was almost magical: all the symptoms, especially the mental changes, were decidedly improved. Investigation of the diet on which the patient had been fed before I assumed charge showed that the nourishment which she had received was absolutely liquid, and of the most meagre character. I may add that the subsequent course of the case was most prolonged and complicated, and yet she recovered in spite of eighteen profuse hemorrhages, a lobar pneumonia, and saphenous thrombosis.

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[1] "Der Unterleibstyphus." Nothnagel's "Spec. Pathologie und Therapie." 1898. Bd. iii., Theil i., 206.

[1] *Loc. cit.*, p. 332.

In this connection I may be pardoned if I refer to the use of the stomach tube in typhoid fever. While there have not been many occasions on which its use has seemed necessary to me, yet I have never had occasion to regret its use. The indication has been uncontrollable vomiting. Careful lavage of the stomach, and the introduction of small quantities of predigested food while the tube was *in situ*, have given satisfactory results. We do not hesitate to use the tube in cases of strangulated intestines, after laparotomies, etc. Why should we hesitate to use it in typhoid fever, if the indication should arise? It need scarcely be added that such a procedure should be entrusted only to those who by constant practice are able to pass the soft stomach tube with the least amount of discomfort to the patient. At such a time and place the bungler ought to recognize his proper sphere.

There is still another point of which experience has taught me to recognize the value, *i.e.*, the importance of allowing intervals in which nothing at all is permitted to enter the stomach in patients whose feeding has been rendered difficult from fermentations, vomiting, etc. This is especially frequent when the diet has been entirely liquid; the stomach is ceaselessly deluged with liquids; its motility and secretion being diminished, its burden cannot be effectually disposed of; stagnation results with its coincident fermentation, and the familiar vicious circle is established. Rest to the organ is the simplest and best way to remedy this distressing combination.

In conclusion I would state that I have not touched on many other points in the dietetic treatment of this disease. This was done advisedly, since I believe I have presented enough to show the paramount need of physicians paying more attention to the diet in these cases. At present it is entirely too stereotyped, or it is not regulated at all, the simple direction being given to feed the patient on milk! If only a fraction of the energy which is now wasted in prescribing needless drugs were devoted to intelligent personal supervision of the diet, the patient would gain much; if another fraction of this same energy were given to securing proper disinfection of the stools, urine, bedclothing, etc., the patient's family and the community at large would be greatly benefited; and if still another fraction of this energy were devoted to a study of the diagnosis of typhoid fever, the profession at large would be spared the humiliation of being so frequently and so justly scourged for its ignorance on this most important topic. And, as a corollary, the patient's stomach would be spared many a task, and it would be left in condition to digest something more than the emasculated slops which are now tendered under the guise of many of the so-called foods!

Finally, I must add, lest I may perchance be misunderstood, that I do not advise that each and every patient be placed upon these less restricted diets, nor that every article of diet may be allowed. The question has not yet been sufficiently studied to justify one in giving any sweeping directions. Enough material has, however, been gathered by such trustworthy clinicians as Fitz and Shattuck to justify physicians, especially those who have the advantages of hospital services, in giving an extended trial to the more liberal feeding of typhoid-fever patients.

Rectal Adenomas.—According to Beach (*Philadelphia Medical Journal*, December 16, 1899, p. 1195), rectal adenomas may be hard or soft. They contain the constituent elements of the mucosa and submucosa. They may be benign or malignant. Benign in origin, they may become malignant. Early recognition, made possible by the newer methods of inspection, is of first importance.

TWO CASES OF TUMOR PRESSING UPON THE CAUDA EQUINA; REMOVAL; RECOVERY.[1]

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In the cases to be reported herewith, the symptoms pointing to intra-vertebral tumor were slight, yet definite enough to warrant prompt surgical interference. In both cases the neoplasm was found and successfully removed. The patients have been relieved of the distressing symptoms. In both the chances of life are far better than if the malignant tumor had been allowed to go on growing indefinitely.

Case I.—The first patient was seen by me September 23, 1899, in consultation with Dr. J. A. Wyeth, who will publish the full surgical details in his series of spinal cases.

Colonel J——, fifty-six years of age, married, a man of robust constitution, has been suffering for the past eighteen months from severe pains in the right thigh and leg, associated latterly with sudden and severe spasmodic contractions of the thigh muscles. He had been shot in the Civil War, the bullet passing obliquely through the upper portion of both thighs and out. His pains were suspected to be connected, possibly, with this old bullet wound, or to be of the ordinary neuralgic type (sciatic and crural). Anti-neuralgic measures had been employed by various physicians in the South without benefit to the patient, who was finally referred to Dr. Wyeth for further treatment. At the time of my first and the only examination prior to the operation, I was struck by the cachectic condition of the patient, by the violence of the pains, and by the frequent severe spasms of the muscles of the right thigh; these spasms being preceded, as a rule, by excruciating pain. The entire right thigh and leg were somewhat wasted, but the muscular power was in keeping with the amount of muscular tissue preserved. The patient could not state whether this condition had been developed during the past two years, or whether the limb had been wasted in consequence of the bullet wound, thirty-five years ago. As there was little if any paralysis, I was inclined to accept the latter theory, and did not allow the general atrophy of the muscles to interfere with the localization of the lesion. The pain, as described by the patient, was neuralgic in character, not markedly affected by the position of the limb, but was much more persistent than in ordinary neuralgias, and radiated from the lumbar region of the spine into the posterior portion of the entire extremity as far as the toes, and occasionally would go into the anterior aspect of the thigh. In walking, the lower portion of the spine was rigid and appeared to be a functional rigidity due to pain. The spinal column was not very sensitive at any part. Deep pressure upon the spinous processes of the second and third lumbar vertebræ produced some pain. On pressing even lightly at a point about one inch to the left and between these vertebræ, pain was excited, and this pain radiated down the leg in the same fashion and was exactly like the pain which the patient experienced at other times. This statement was made so positively that it had great weight, in view of the very moderate development of all other symptoms. The suspicion of a neoplasm involving the cauda equina was strengthened by the objective disturbances, however slight, of sensation. There was a distinct diminution, not a loss, of tactile pain and temperature sense in the posterior and upper inner portion of both thighs; pulling of the hair, slight pricks of a pin, blowing of breath upon the skin could not be readily distinguished; but more intense stimuli could be perceived. The right knee jerk was absent, the left normal and lively; both Achilles-tendon reflexes could not be elicited; there was no ankle clonus; the scrotal reflex of the left side was greatly increased; all other deep and superficial reflexes were about normal. The vesical and rectal reflexes were not impaired. The heart and kidneys were normal.

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[1] Read before the New York Neurological Society, December 5, 1899.

The persistent neuralgic pains and the slight objective disturbances of sensation, though they had lasted nearly two years, formed a scanty basis upon which to rest a diagnosis of tumor; but the presence of a new growth was rendered more probable by the severe spasmodic contractions of the thigh muscles and by the production of pain exactly like those of which the patient complained, from pressure near the second lumbar vertebra. Moreover, the site of this painful area tallied perfectly with the portion of the spinal axis to which the objective sensory symptoms had to be referred. The absence of the right knee jerk and the atrophic condition of the muscles of the thigh and leg would have pointed to a lesion nearer the second lumbar segment; but these symptoms were accounted for by the old bullet wound. In the absence of vesical and rectal disturbances, and because of the strictly unilateral character of the symptoms, although the disease had lasted nearly two years, preference was given to the cauda equina, rather than to the lumbar segments, as the site of this lesion. That the neoplasm was extradural was also probable, for an intradural growth would surely have produced symmetrical symptoms referable to the cauda equina, and if intradural, the symptoms would be more symmetrical; the sensory and motor symptoms in the case were taken to be irritation symptoms of the anterior and posterior roots. At the conclusion of my first examination I urged Dr. Wyeth to operate at once for the removal of the growth which he was to find under the second or third lumbar vertebræ. The operation was undertaken on October 1st. A large incision was made from the third lumbar vertebra upward. Upon dissecting away the muscles from the median line, a small bulging mass was observed on the left side between the second and third lumbar vertebræ. The mass appeared so vascular that Dr. Wyeth exercised the greatest precaution not to injure it while removing the laminæ of the exposed vertebræ. Upon exposure of the spinal canal, a tumor, of the size of a small walnut, adherent to the dura and to the inner surface of the bones, was in evidence. This was removed in blunt fashion, without injuring the soft parts; the lamina had, however, been invaded by the disease. A microscopical examination of the mass proved this to be an alveolar sarcoma. The surgeon removed as much as was practicable of the diseased bony tissues, but whether or not the line of demarcation between healthy and diseased tissue had been reached could not be stated with certainty.

On the fifth day after the operation I had an opportunity of examining him. He was out of bed, and, for the first time in many months, was free from pain and able to walk about with comfort. The spasmodic movements of the limbs had ceased, and the most careful testing failed to reveal any objective sensory disturbances. It was evident, therefore, that these symptoms were due entirely to pressure of the tumor upon the strands of the cauda equina. The knee jerk has not returned, but this I hold to be due to the injury of years ago. The patient made an excellent recovery, returning to his home in the South a month after the date of the operation. He was free of pain, had full use of his limbs, and was evidently none the worse for the removal of two laminæ. It is, of course, possible that the patient may some day suffer a relapse —possibly from a deposit in some other organ—but he has been cured, apparently, of the spinal disease, and, if Bruns is right, a recurrence of the spinal affection need not be feared.

Case II.—In the second patient the difficulties of diagnosis were far greater and the disease was more advanced.

A. A——, thirty-two years of age, was admitted October 9, 1899, into Mt. Sinai Hospital, in the service of Dr. Alfred Meyer, who was kind enough to place the patient under my care. His father died of pneumonia; his mother is living and healthy. There was no history of any previous infection, and, according to his own statement, the patient has been moderate in all his habits. Ten years ago he was supposed to have pulmonary tuberculosis, and Dr. Loomis advised his going to Colorado. The patient spent two years in California, and evidently recovered from the disease which threatened his life.

The patient remained well until one year ago, when he began to feel shooting pains in the back and legs. They were most marked every second or third night. During the past six months the attacks of pain became more frequent, occurring during the day-time as well as at night. About six or seven months ago he noted a girdle sensation about the level of the umbilicus, which he experiences no longer. He has also noticed paræsthesiæ of the plantar surfaces of the feet, but only when walking barefooted. Three or four months ago, he thinks, there was anæsthesia on the outer side of the left leg. He states that a few months ago there was distinct double vision. Hearing, taste, and smell have always been normal. About six months ago his legs became unsteady, and the unsteadiness increased after an enforced rest in bed of six weeks. He experienced distinct pain while walking, and states that this was more marked in the left leg. During the last two months walking had become increasingly difficult. The patient thinks that the difficulty was due to the fact that he was unable to bear the weight of the body, not to a tendency to swaying. He never noticed any symptoms about the arms, but during the past six months has had a feeling of stiffness in the lower portion of the back, but did not know that there was any change in the configuration of the spine. There was tardy micturition, and occasionally the act was accompanied by pain. The patient is of the emotional order; many of his statements have had to be taken with a grain of salt; they were colored by the fact that he had been seen by a number of physicians, who had evidently questioned him closely in their endeavor to elicit the symptoms of tabes dorsalis, the diagnosis with which the patient had been sent to the hospital.

His condition at the time of my first examination, October 14, 1899, may be summed up as follows: Slight weakness of the external rectus, evidenced by slight lateral nystagmus-like movements on following the finger to the extreme left. The pupils reacted normally to light and during accommodation. Every passive movement of the eyelids was promptly perceived. There were no tremor of the tongue and no facial tremor. In the upper extremities not a single symptom was to be elicited. On the chest, back, and abdomen sensation was normal, and all the reflexes could be elicited. There was a distinct kyphos involving the twelfth dorsal and the upper three lumbar vertebræ. There was no pain on pressure over this area, except at one point about one inch to the left of the median line between the third and fourth lumbar vertebræ. Muscular power was evidently diminished in both lower extremities, the left leg being weaker than the right. But, in spite of his pain, the patient could be got out of bed and made to stand and to take a few steps, but his locomotion was difficult, and made doubly so by the fear of the pain accompanying it. Both knee jerks were absent. On the right side the plantar reflex was wanting; on the left side it was slightly present. Both Achilles-tendon reflexes were wanting. In the lower extremities the sensation was normal, except on the dorsal aspect of the left thigh, of the left half of the perineum, scrotum, and of the penis. In this area there was no absolute loss of any form of sensation, but there was distinct diminution of all. Heat and cold could be felt, but could not well be distinguished from one another. There was no marked interference at this time with the vesical and rectal reflexes, and no other symptoms of any account were noted, except that the lungs seemed suspicious. Both apices were dull, and there was distinct broncho-vesicular breathing at the left apex, with crepitant and subcrepitant râles. These râles were also heard over the entire left chest anteriorly.

In view of the normal condition of the pupils, the absence of strictly ataxic symptoms, and the presence of a kyphos and of a considerable amount of paresis in the lower extremities, the diagnosis of tabes was rejected. The gradual onset of the disease, the rapid development of the lumbar deformity, the weakness of the lower extremities, the loss of the deep reflexes, and the strictly unilateral character of the sensory changes pointed to a lesion involving the lowest portion of the spinal axis. The diagnosis of a malignant neoplasm was made after the first examination. In deference, however, to the views of several colleagues, to the suspicion of tuberculosis years ago, and to the signs presented by the patient at the time of the examination at the hospital, and also in consideration of the marked kyphos present, the possibility of a lumbar Pott's disease was borne in mind. At the suggestion of the attending physician, the patient was suspended, and it was concluded to put him upon the iodides, nutritious diet, etc., and other appropriate treatment for a period of two weeks. While the patient was suspended, it was noted that the kyphos was not corrected and that the patient could hardly move his legs and thighs. During the period allowed the symptoms showed no improvement, and on November 3d I urged the patient's removal to the surgical ward for operation by Dr. Gerster.

The symptoms had not been altered, except that the weakness of the legs had slightly increased, but the areas of disturbed sensation remained practically the same. It was at this time a little doubtful whether the trouble was entirely restricted to the cauda equina, or whether the lumbar enlargement had been partially involved. The conclusions reached were that the neoplasm within the vertebral canal pressed upon the lowest spinal strands, those connected with the first, second, and third sacral segments. It was probable that the neoplasm arose from the inner surface of the bone pressing upon the left half of the cauda, but that it had gradually extended across the median line to the right. It was evident that the disease was steadily progressing, and the appearance of the kyphos denoted involvement of the body of the vertebra. The mercurial and iodide treatment to which the patient had been subjected in the medical wards had been of no avail; the possibility of a gummatous affection was dismissed, so that the diagnosis was narrowed down to a tuberculous or other malignant neoplasm. If tuberculous, there was every reason to suppose that the process was strictly localized, and I did not, therefore, allow this possibility to deter me from urging operative interference.

At my suggestion, Dr. Gerster, on November 10, 1899, undertook to do a laminectomy of the second and third lumbar vertebræ. I quote from the surgeon's record of the operation:

"Longitudinal incision from 12 D to 4 L. As soon as lamina of the third lumbar was removed, nodular, elastic, pale, somewhat gelatinous masses were seen to occupy the space between the laminæ of the second lumbar and fourth lumbar vertebræ. Puncture gave no result, proving the masses were solid. The spine of the third lumbar vertebra was movable and detached from the lamina. As soon as this was removed it became evident that the entire posterior portion of the third lumbar vertebra had been invaded by a new growth, which had disrupted the cohesion between the spine and the laminæ. The loose portion of the lamina of the third lumbar vertebra was removed by forceps and scissors, when the semi-globular tumor mass was exposed in its full extent. To ascertain whether the neoplasm extended up the canal, the spinous process and the lamina of the second lumbar vertebra were also removed, and it was shown that the tumor extended only to the lower margin of this vertebra. The tumor was removed, and above the normal and glistening dura was clearly seen. The cauda equina under the tumor had evidently been much compressed and appeared attenuated. The wound was drained with gauze, and most of it closed with button sutures. The patient made a good recovery from the operation."

Sections of the tumor, prepared for me by Dr. A. Wiener, show it to be a small-celled fibro-sarcoma.

The first sensory tests were made two hours after the operation, and at that time seemed to be about the same as before the operation, except that on the right buttock the area of anæsthesia was more extensive. Three days after the operation, on the 13th, sensation in the legs seemed improved. The patient could feel stimuli, but had some difficulty in locating the point at which he was touched. Since the day of operation the patient has been improving steadily, but he is still confined to his bed. The wound has been allowed to granulate slowly, for the purpose of thwarting the recurrence of the new growth.

The history of the case has been rather uneventful, the patient slowly regaining power in both lower extremities, having full control over the vesical and rectal reflexes, but exhibiting more marked disturbance of sensation.[1] The extension of the areas of anæsthesia directly after operation must be attributed to hemorrhage or some other slight accident during the operation. At the present time there is only a slight anæsthesia to touch and to pain on the soles and dorsal margins of each foot, and on the posterior aspect of each thigh and leg, the disturbance being greater on the left side than on the right. Both knee jerks are absent, and an electrical examination proved that the responses were diminished, but not distinctly altered in any of the thigh and leg muscles or nerves.

Although this patient has not yet fully recovered his health, the improvement is so marked as to lead to the hope of a temporary recovery. The resemblance to the first case was so striking that I felt justified in reporting it; for we can claim in this, as in the case of the first patient, that life has been prolonged by the operation. Surgical interference was surely warranted, and if any error in judgment has been made it was in the length of time the operation was delayed. If we had not deferred to the fear that the disease was, after all, tuberculous, I doubt whether the invasion of the bone would have been as complete, and we could have been more certain of radical enucleation of the tumor. While Dr. Gerster removed as much as could be seen of the malignant mass, it is possible that some of the new growth remained behind, and the danger of relapse is, therefore, so much the greater.

The writings of Gowers and Horsley,[2] of Thorburn,[3] Starr,[4] Putnam and Warren,[5] and the excellent mono-

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[1] I am indebted to Dr. Beer of the house staff for repeated and careful sensory tests.

[2] Med.-Chir. Trans., 1888, p. 407.

[3] Brain, vol. xi., p. 289; also monograph, "A Contribution to the Surgery of the Spinal Cord," London, 1889.

[4] Amer. Jour. of the Med. Sci., July, 1892; Brain, October, 1894; Amer. Jour. of the Med. Sci., June, 1895.

[5] Amer. Jour. of the Med. Sci., October, 1899.

graphs of Schlesinger[1] and of Bruns[2] have left little to be said on the subject of spinal tumors, but it may not be amiss to refer briefly to the lessons taught by the experience here recorded. Bruns' opinion, that the diagnosis of an intravertebral tumor can be made only by a fortunate combination of circumstances, may hold good in many instances; more often the examination has not been searching enough. In my first case a chronic neuralgia was diagnosticated, in the second a tabes dorsalis. In the first case the error was pardonable, for the sensory changes were so slight that I would not have ventured to attach much importance to them, if the disturbances in sensation had not tallied very accurately with the area which was painful on pressure, and pressure exerted over the area produced pain corresponding in every particular to that felt spontaneously by the patient. In the second case the areas of anæsthesia were also distinct and peculiarly limited to the sacral distribution. The unilateral disturbance of sensation in one-half of the perineum, scrotum, and penis is surprising, in view of the large size of the tumor; but evidently it must, for mechanical reasons, have exerted far greater pressure upon the left than upon the right half of the cauda equina. In both cases the question arose whether the symptoms were due solely to pressure upon the cauda equina, or whether the lumbar enlargement was the site of the trouble independently of, or in association with, the cauda equina. The restriction of objective sensory disturbances to the region supplied by the sacral plexus, the bilateral distribution of the pain, the absence of marked vesical and rectal symptoms, the relatively slight paralysis, pointed to the cauda equina and not to the lumbar enlargement. The question was practically settled by the discovery in each case of an area painful on percussion below the level of the second lumbar vertebra. However secure we may feel in our present knowledge of segmental function, it will surely be wiser to urge operation at or near the site of a kyphos, or over the painful area on the spine and from there upward or downward, than to disregard such palpable evidence of trouble and to trust in refinements of diagnosis. In both cases the method was adopted with entirely satisfactory results.

Segmental diagnosis[3] has been carried to such a degree of perfection that the more difficult question is not, Where is the lesion? but What is the nature of the lesion? Do the symptoms warrant a diagnosis of tumor in a given case? Pain and other sensory or motor symptoms, strictly localized, unilateral or bilateral, but progressive, and bearing for a long time the characteristic marks of root symptoms, followed possibly by symptoms of an advancing invasion of the cord substance, should suggest the probability of intravertebral neoplasm. If extra-spinal, the sensory symptoms will predominate for a long period of time; but whether extra- or intradural, it is not easy to decide; except that if the neoplasm is intradural, cord symptoms will be added earlier to those pointing to root involvement. In both my cases I predicted extradural growths, because unilateral symptoms persisted for a great while, and in the second case because of the rapid invasion of the spinal column while the sensory symptoms remained unilateral.

Upon the nature of the growth in either case I did not care to speculate, for an experience[4] reported thirteen years ago taught me that solitary tubercles may occur in the spinal cord of persons who are apparently in excellent health, and who had not presented tuberculous signs in any other organ. In the first patient sarcoma was probable; in the second, the history of tuberculous disease suggested the possibility of spinal caries or of solitary tubercle; the new growth was, however, distinctly sarcomatous. If one bears the entire progress of the disease in mind, there are, after all, few chronic spinal processes that take the slow yet steadily progressive course so typical of intravertebral neoplasm.

Whenever there is a strong suspicion of extra-spinal neoplasm, and a possibility of reaching the site of a supposed tumor, an exploratory operation should be attempted, and at as early a stage as possible. I am thoroughly opposed to unwarranted operations, as when there is evidence of complete destruction and involvement of the cord; but in this matter I would prefer to take sides with Horsley and Starr than to adopt the ultra-conservative views from which even Bruns could not wholly escape. An exploratory laminectomy, if properly done, is comparatively harmless, particularly in the dorsal and lumbar regions; and, fortunately, a large number of spinal neoplasms occur in these regions. The removal of several lumbar laminæ does not interfere with the stability of the vertebral column. In my first case, even if the tumor had not been found, the patient would not have been made worse by the operation; and this, I doubt not, would be true of many other cases. The second patient would have had better chances of rapid recovery if the operation had been done a fortnight earlier, when the idea was first mooted. In the presence of malignant disease prompt action is the most conservative. The report submitted herewith should give some support to that view.

PUERPERAL INSANITY.[1]

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Since the earliest times in the history of medicine the relation of child-bearing to insanity has interested physicians. The literature which exists on this subject has become so voluminous that it hardly can be overlooked to-day. If in spite of this I take the liberty of bringing this subject before you, it is not because I think that I can add anything to the facts collected, but rather on account of the great differences of opinion which exist among physicians on the subject. I feel the more justified in doing so, as these differences do not consist entirely of academical and theoretical questions, but have an important bearing on the treatment and general management of individual cases.

Since the doctrine as enunciated by Hippocrates, it has been a generally accepted theory that all the different stages belonging to the process of gestation are apt to produce certain forms of mental disease, which, according to this theory, were classified as psychoses of pregnancy, psychoses of puerperium, and psychoses of lactation. When I speak of puerperal psychoses, I wish to be understood as comprising all these three categories under the general term. A great many theories have been advanced as to the pathological relation between the uterus during this period and the psychoses. Hippocrates laid great stress on the manner in which the milk entered the breasts, and held this process responsible for the production of the mental disease. According to him the retention of the lochia post partum produced a maniacal condition. Since the times of Hippocrates this view, though under various modifications, has prevailed, that the entire process of gestation in all its different phases produced certain chemical changes in the female body, which under favorable circumstances may affect the brain and produce a mental disorder. It is not my intention to give you a history of the various theories and views regarding this subject. I wish to discuss only certain questions, and especially those which are of practical importance, which must necessarily influence us in the treatment and management of the patient.

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[1] "Beiträge zur Klinik der Rückenmarks- und Wirbeltumoren, 1898.

[2] "Die Geschwülste des Nervensystems," Berlin, 1897.

[3] *Cf.* writings of Starr (*loc. cit.*); Head, Brain, 1893; Schultze, Deutsche Zeitschr. f. Nervenheilk., vol. v., p. 247; Sherrington, Journal of Physiology, 1892, vol. xiii., No. 6; and of Wichmann, "Die Rückenmarksnerven und ihre Segmentsbezüge," Berlin, 1900.

[4] Sachs: Journal of Nervous and Mental Disease, vol. xiii., 1886.

[1] Read before the Metropolitan Medical Society, January 24, 1899.

The principal question of course, in which all our investigations must culminate, is the rôle which the process of gestation plays in the production of psychoses. This point is of vital importance in the treatment of our patients. Take, for instance, a woman who develops a severe psychosis, say during the third month of pregnancy. Shall we allow her to go to term or not? I think it is evident that if we are convinced that pregnancy as such has produced the mental disease, we could not expect to cure the latter while the cause not only persists, but increases for the next six months with the further progress of pregnancy. According to the fundamental principle of the practice of medicine, it would be our duty to remove the cause of the disease—to empty the uterus. In order to throw some light on this important question it is necessary to discuss several points. The first would be: Does there exist a certain form of mental disease which is clinically so characteristic that we could make the diagnosis of a puerperal psychosis merely from the psychopathic symptoms, as for instance we can diagnosticate an alcohol psychosis or epileptic insanity merely from the clinical aspects? This has been claimed by only a few psychiatrists, as for instance Fürstner, who in the year 1875 published a few cases under the name of "puerperal insanity," of which he claimed that they formed a special disease which was clinically well defined and different from any other form of insanity. Whether Fürstner has kept up this view until to-day I do not know. His new disease, however, seems not to have been accepted by other psychiatrists, and I think that nobody believes to-day in the existence of a specific puerperal psychosis.

If, therefore, the process of gestation plays any rôle at all in the production of insanity, it can be only that of an etiological factor like other etiological moments. The place which it occupies in etiology could be determined solely by experience and observation, and in order to determine this important question we have to refer to a valuable but equally dangerous medium of science—*i.e.*, statistics.

I do not intend to fatigue you with figures either from my own experience or from the observation of others. I only want to ask you to let me consider with you for a moment the manner in which statistics have been employed in this question, and what conclusions have been drawn from them. Most authors who have written on this subject have taken the entire number of all mental diseases among women which came under their observation, and then calculated the percentage of those cases which would go under one of the three categories of puerperal psychoses. In other words, any woman who was either pregnant or was in the puerperal stage, or who nursed a baby at the onset of the disease, counted as a puerperal psychosis. The higher the percentage of these cases was the more apparent was, according to the conclusion of these authors, the connection between the process of gestation and insanity. Some writers, as for instance Ripping, report that nearly twenty-two per cent. of all their female cases of insanity were puerperal psychoses. Now, are we justified in drawing such conclusions from these figures? I think that it would be a great mistake to do so. In my mind these figures do not prove more or less than the simple fact that of so and so many insane women such and such percentage happened to be in one of the stages of gestation. In order to decide the point in question it would be necessary to supplement these figures by others, as, for instance, what is, under normal conditions, the percentage of women who are in one of these stages? If we consider that one entire process of gestation, including the stages of pregnancy and lactation, takes nearly two years, and that in some countries the average woman has five or six children, it is evident that if these women should get a mental disease at all between the ages of twenty and forty years, they have more than fifty per cent. of chances to be classified as puerperal psychoses. It always remains to be proven that such a woman would not have acquired the disease just as well without her pregnancy.

While it is very difficult to obtain from statistics sufficient data to draw any reasonable conclusion regarding this subject, I think the figures themselves which have been reported by different authors may lead to quite an opposite verdict if they are looked at in a certain light. There are, for instance, very marked discrepancies between their various reports. As I said, Ripping reports 21.6 per cent. of puerperal psychoses, while others have totally different figures. A recent publication from one of the largest private institutions in Germany has only 12.5 per cent. Now what is the reason for this discrepancy? This latter institution receives mostly patients of the higher classes, especially of the German and Russian aristocracy, while Ripping's report is from a public institution in which the patients belong to the lowest class of social life. Now what follows from this? That in the aristocracy the process of gestation is less apt to produce mental diseases than in the lower classes? If this were so, then the total percentage of insanity ought to be less also in the higher classes. But is this true? No, quite the contrary; there is much more insanity among the aristocracy than among the laboring classes. The only conclusion, therefore, which could reasonably be drawn from these figures is, that the women of the higher classes bear fewer children than those of the lower classes, which assumption corresponds, as you all know, to facts. Most women of the laboring classes between twenty and forty years of age are either pregnant or nursing a baby, while in the aristocracy women are much more careful in preventing conception, and nursing their own babies is quite a rarity. In an analogous way the reports of French authors show considerably lower figures in the percentage of puerperal psychoses for the simple reason that French women have fewer children. But is insanity a rarer occurrence among French than among German women? By no means. The percentage is, on the contrary, higher in France than in any other country. What do these figures prove, then? If anything, they show that the process of gestation plays quite a subordinate rôle in the etiology of mental disease.

Furthermore, if the different phases of child-bearing would really play such an important rôle in the production of psychoses, it would be reasonable to expect that in all these cases of so-called puerperal psychoses the other etiological factors should be less than in ordinary cases of insanity. The principal element in the etiology of mental disease is, as you all know, heredity. Now is there less heredity in these puerperal cases than in others? No; according to the reports which I have referred to, there is even a higher percentage of heredity in these cases. The recent report from the German institution mentioned gives heredity in sixty-six per cent. of these puerperal cases, which is even higher than one usually finds in insanity. In my own cases of mental diseases of all kinds I have found heredity as an etiological factor in only fifty-eight per cent.

If, furthermore, these twenty per cent. of all cases of female insanity should really be due to the influence of gestation, insanity should be much more frequent among women than among men. But this is not the case. All statistics show that there is very little difference in this respect between the two sexes; that if anything men are in the majority. It is true that there are certain etiological factors in men which play an inferior rôle in women, as for instance alcohol and syphilis, general paresis being comparatively rare among women. This, however, is balanced by other factors in women besides child-bearing, as for instance the menopause, etc., but it could never reach the enormous difference of twenty per cent.

While all these facts strongly indicate that there is nothing peculiar in the so-called puerperal insanity, I will not deny, on the other hand, that the process of gestation may in some cases play a more or less important rôle in etiology, and that for the sake of proper treatment we have to make the relation between this factor and the mental disease a subject of special consideration in each individual case.

Now let us consider under what circumstances and in what diseases any of the phases of gestation might be apt to influence our judgment of the cases regarding the prognosis, or to affect our method of treatment and the management of the patient. Any pregnant woman, of course, might as easily acquire a mental disease as any other woman. The prognosis of such disease is exactly the same as it would be under ordinary circumstances. It depends on the history of the case, heredity, general health, and the general classification. Still the question will always be asked by the laity as well as by physicians, whether such a woman should be allowed to go to term or whether her pregnancy should be terminated. After what I have said before, it is needless to assert again that it would be obviously absurd to perform an abortion in every case of pregnancy complicated by a mental disorder. On the other hand, however, this question must always be borne in mind, as under certain circumstances the uterus should be emptied. The most frequent of mental diseases is a simple melancholia. As long as such a patient is physically in a good condition, as long as her general nutrition is good, there is no reason why we should interfere with the process of nature. Such a patient should be treated like any other woman with melancholia—which treatment, of course, cannot be discussed here—and the further course of the disease might prove to be entirely independent of pregnancy. I have seen quite a number of patients who developed a melancholia during the earlier part of pregnancy, and who under proper treatment made a prompt recovery before the birth of the child. There is, however, a certain class of melancholic cases, especially in weak, anæmic women, in which we have to deal with a rapid loss of strength and flesh, and in which, even under ordinary circumstances, it is sometimes extremely difficult to keep up the general nutrition. If such a woman is rapidly losing weight, I should surely not allow her to go on with her pregnancy, but would have an abortion performed, of course under the greatest precautions as to shock and loss of blood. The same holds good for cases in which the patient has to be fed forcibly with the stomach tube. Melancholic patients sometimes have the delusion that they are too bad to eat, or they may want to starve themselves to death, or a hallucinatory voice may tell them: "You must not eat." In such cases it might be necessary to perform artificial feeding for some time, and as naturally under such circumstances the general nutrition can be kept up only with great difficulty, I would also terminate pregnancy in such a case. Another indication for surgical intervention would be extreme restlessness on the part of the patient, as we see it in cases of melancholia agitata or acute mania. Patients in this condition sometimes have to be forcibly restrained, and it is hardly necessary to point out the danger in which pregnancy might involve a woman under such circumstances.

There are some cases of hysteria in which the fear of having children is apt to produce a severe mental disorder. We sometimes see such women just at the border-line of insanity, and may be able by a surgical intervention to prevent the development of a severe psychosis. I must admit that just in these cases the question whether we shall interfere or not belongs to the most difficult problems in practice. On the one hand, we are averse to performing an abortion on any hysterical woman who does not want a child. On the other hand, we do not want a mental disease to develop, if we possess the means to prevent it. How we have to act in individual cases of this kind cannot possibly be described theoretically. Our decision must be based on personal experience, on psychological and psychiatrical knowledge. No rules can be laid down; every case has to be judged by itself. I have seen several cases of this kind during the last few years, in which I feel satisfied that the development of a severe mental disease has been prevented by an operation.

A question which we are frequently asked is, whether insanity during pregnancy has any direct bearing on the offspring. As in all questions, authorities differ. My personal opinion is, that the development of the child will not be influenced at all by such a disease during pregnancy, but that the development underlies the general law of heredity as under ordinary circumstances.

The puerperal state plays a more important etiological rôle than pregnancy in the production of insanity. There are certain mental diseases which come on during or within a limited period after delivery which are indeed intimately connected with this process. It is this class of cases which gave rise to the term "puerperal mania." This name has been retained all over the world, although it is generally admitted to-day that most of these cases do not show true mania at all. In order to reach a clear understanding of this class of disease, and to realize the true connection between it and the process of parturition, it is necessary to consider several types respectively.

We sometimes meet cases of transitory disturbances of consciousness during the process of parturition. They are most frequently produced by mental shock, excitement, fear, etc. They occur mostly in unmarried women, in whom the natural excitement is increased by shame and sorrow. The clinical aspect of these cases is that of psychical epilepsy. The patient becomes suddenly very excited and agitated. The face is flushed, the eyes are staring. Her actions are impulsive and inco-ordinated. She might in this condition commit any act of violence, attack her friends or kill her child. After this condition has lasted for one hour or several hours, the patient passes into a deep sleep as after genuine epilepsy, from which she awakens with total amnesia for the period of her excitement. In some cases of this kind the history of epileptic convulsions in previous life may reveal their true epileptic nature. These cases have, of course, a great medico-legal significance, many cases of infanticide being due to this disturbance of consciousness.

Another group of mental disturbances during or after parturition may be classified as toxic psychoses.

The clinical features of these cases consist of an acute delirium. Of course, I don't mean the ordinary fever delirium, but a certain psychopathic state, which is apt to occur during the course of various mental diseases. This delirium as a rule sets in quite abruptly, without any prodromic symptoms or after a very short period of mental depression. It is not dependent on temperature. The patient may have fever or the temperature might be perfectly normal. The atypical form and the rapid change of the symptoms are characteristic of this form of disease. From a dull and apathetic condition the patient suddenly passes into a state of restlessness and agitation. Hallucinations of one or more senses are always present. There is incoherence of thought and action. The entire programme of psychosensory and psychomotor symptoms is apt to occur without order or system. The prognosis depends largely on the physical condition of the patient. Cases in which the constitution is run down and the general nutrition bad may terminate fatally within a short time. Otherwise complete recovery will take place. The duration of this class of cases varies from a few days to several weeks. When they do not end in recovery by this time a secondary psychosis develops which may assume the clinical character of an ordinary melancholia or mania, or frequently the atypical form of mental disorder may develop which has been described by Kahlbaum as dysphrenia. The secondary psychosis may last for a number of months and then end in recovery or pass into a state of terminal dementia.

As far as the etiology of these cases is concerned it would be erroneous to assume that we must necessarily have a septic infection. Any inflammatory process in the body is apt to produce a toxic psychosis. Cases of acute delirium, such as I have described, have been observed after any infectious disease as well as after any local inflammatory process even as slight as an ordinary angina. Therefore cases of vaginitis, endometritis, salpingitis, or oöphoritis occurring post partum are just as apt to produce the psychosis as severe septicæmia.

Some authors maintain that uræmia, with or without eclampsia, produces a special kind of insanity. I myself, however, do not agree with this view. We see in these instances the same toxic delirium which is produced by other toxic agents; besides, we must bear in mind that albuminuria is a comparatively frequent symptom in cases of psychoses and does by no means necessarily indicate a nephritis. Albuminuria is in a good many instances the consequence of the psychosis rather than its cause.

Those cases of mental disturbance which are produced by excessive loss of blood, such as may occur in placenta prævia, have a very similar clinical aspect. Here also the psychosis begins with an acute delirium, which, however, has more the character of inanition psychoses. We have the typical asthenic delirium which we frequently see after a collapse; this condition, too, may end fatally or lead to recovery after a short time. The development of a secondary psychosis is not so frequent as it is after a toxic delirium. If it does set in, however, the prognosis is less favorable than in the toxic cases.

Finally we see, after cases of very difficult labor, mental disturbances which might be classified as traumatic psychoses. They do not differ, however, from cases which may occur after any other trauma or surgical operation. Mostly they are of the hysterical type, but may assume a more severe character, as acute dementia, etc.

In all these different varieties of psychoses during or after parturition, the etiological factors which I have mentioned—shock, intoxication, inanition, and trauma—must of course be looked at only as the exciting causes. As a rule we find, as in most mental diseases, certain predisposing causes, as heredity, degeneration, malnutrition, anæmia, etc. Although parturition plays an important etiological rôle in these cases in one sense, it is evident that all cases might also result from other causes connected with shock, loss of blood, intoxication, etc., so that we are not justified here either in speaking of a specific puerperal insanity.

So far as the treatment of these cases is concerned we must, of course, give our first attention to the underlying cause—for instance, any local inflammation of the sexual apparatus. In those cases which are the outcome of exhaustion, an energetical stimulation of the bodily strength is of the greatest importance. A sufficient amount of nourishment is absolutely necessary. If the patient refuses to eat and cannot be fed otherwise, we must employ the stomach tube at once and not wait until the loss of strength has advanced too far. Nutritive enemata are very valuable as a help in nutrition, if the patient takes some nourishment through the mouth, but they cannot be relied on exclusively. In cases of delirium after excessive loss of blood, an intravenous or intracellular infusion of a saline solution is indicated. In the endeavor to preserve the general strength it is of the utmost importance to combat the motor restlessness. The patient, of course, has to be kept in bed. Wet packs and warm baths have often, at least temporarily, a soothing effect. If fever is present, ice applications and cold sponge-baths are useful. If the starting-point of the restlessness lies in the psychomotor area, hypodermic injections of hyoscine or hyoscyamine are efficacious, while in psychosensory irritation opium should be given. In some cases which seem to be dependent upon congestive conditions hypodermic injections of ergotin are often beneficial. It is of the greatest importance in these cases to produce sleep. In fact sleep is just as important as nourishment; a long period of insomnia may very quickly exhaust the patient and lead to a fatal issue. If sleeplessness sets in, as it nearly always does, it is therefore indicated to administer hypnotic remedies in liberal doses. Trional and sulphonal may be given in doses of 2 gm. Another valuable hypnotic in cases of this kind is paraldehyde, which may be given in doses up to 8 gm., even 10 gm. As long as the delirium persists, mental impressions of all kinds must be forbidden. Ornaments and pictures should be removed from the room, which must be kept dark. It should be absolutely quiet. The nurse must be instructed not to speak to the patient unnecessarily. If other psychoses, as melancholia or mania, develop secondarily, they must of course be treated as under ordinary circumstances.

Finally we have to consider the relation which the process of lactation bears to mental diseases occurring during this period. Although the various statistics show that insanity occurs more frequently during this period than during pregnancy, I do not believe that the process as such has anything to do with the production of the psychosis. It is evident that all the weakening influences which child-bearing has on the nervous system are apt to show themselves during the first few months after delivery. If we consider the many cases of anæmia due to post-partum hemorrhage, the cases of exhaustion through difficult labor, the mental excitement of the young mother, which is frequently increased, especially in the lower classes, by anxiety about the future, etc., we surely cannot be surprised to find the average nervous system of women during the first few months after delivery of the child more disposed to mental and nervous diseases than under ordinary circumstances. The psychoses which are observed during this period have absolutely nothing specific in their clinical features. They are the same as might occur in any other woman at any other time. Their prognosis depends on the same factors and the treatment must be the same as under ordinary circumstances.

In concluding I may be allowed to summarize with a few words the important points of the relation of child-bearing to mental diseases:

1. A specific form of mental disease, which might be called puerperal insanity, does not exist. The different psychoses which are observed during one of the stages of gestation are the same as those we see in other patients.

2. Pregnancy may, under certain circumstances, be one of the etiological factors of insanity. Its etiological importance, however, is proven by neither statistics nor clinical observation. It is, therefore, not permissible to terminate pregnancy on account of a psychosis, unless there are special indications for such intervention.

3. During parturition we sometimes meet a transitory disturbance of consciousness, the clinical features of which resemble psychical epilepsy.

4. Psychoses which occur in connection with the act of parturition are produced (*a*) by trauma in cases of difficult labor; (*b*) by anæmia and exhaustion after severe hemorrhage; (*c*) by intoxication in septic cases or cases with local inflammations, or uræmia. The clinical symptoms of this group of psychoses consist of an acute delirium which either leads to recovery after a short time or passes into a secondary psychosis. All these cases may be produced by the same causes in the non-pregnant state. The clinical features have nothing specific in any way.

5. Lactation, as such, plays no rôle at all in the production of insanity. It is due to other circumstances that during the first few months after delivery women on the average are more predisposed to nervous and mental diseases than under ordinary conditions.

Therapeutic Hints.

Conjunctivitis.—In white staphylococcus forms irrigation may be practised with decinormal salt solution, or with the following:

℞ Borate of sodium	℥ iij
Chloride of sodium	℥ ss.
Cryst. carbolic acid	gr. xv.
Water	gal. I.

The frequency of the irrigation should be regulated by the accumulation of matter on the surface of the conjunctiva. The upper lid being everted and the irrigating bag being hung twelve inches above the plane of the patient's eye, the nozzle of the irrigator is held over the bridge of the patient's nose and the fluid allowed to run over the everted lid and the inferior retrotarsal surface into a mass of absorbent cotton held on the temple. This should be repeated every half an hour.—DUDLEY S. REYNOLDS, *Medical News*, October 28th.

Diabetes Mellitus.—J. M. Allen (*Journal of the American Medical Association*, October 28th) says: The combination which I have used with apparent benefit is as follows:

℞ Creosote	gtt. ⅓
Tinct. nux vomica	gtt. x.
Saw palmetto	ʒ i.
M.	

In saw palmetto we have something of a tonic as well as a stimulant to the mucous membrane, thereby lessening retrograde metamorphosis of this tissue. Basing my treatment on the philosophy of etiology and pathology as given, it is as follows: (1) Allow the patient to eat only such foods as can be digested by the stomach, giving the duodenum rest, and thereby preventing physiological hyperæmia. This continued for a time will reduce the hyperæmia to a point so small and feeble as not to be a source of irritation to the inflamed, etc., structures. (2) Use intestinal germicides, the value of which, in my experience, is in the order given: creosote, sulphocarbolate of zinc, hyposulphite of soda, eucalyptol, menthol, oil of cinnamon, sulphide of calcium, salol, betanaphthol, carbonate of guaiacol. I have found the pulvis hydrastis canadensis, combined with salol, efficient and more or less alterative to the mucous membrane. To control reflex reaction I use gr. $\frac{1}{15}$ to $\frac{1}{10}$ of morphine three times daily, or aqua chloroformi, a dessertspoonful three times daily. All of these patients suffer more or less from anæmia of the nerve centres; to prevents this I give gr. $\frac{1}{60}$ to $\frac{1}{40}$ of strychnine nitrate three times a day, or the equivalent amount of nux vomica. As a tonic I use either the bitter tonics or the phosphate of lime, or wine of the phospho-glycerate of lime (Chapteau); the ferruginous preparations and the cod-liver oils should be excluded.

For Cystitis, especially in its chronic form:

℞ Balsami canadens	20
Magn. calcin	27
Pulv. sapon.,	
Pulv. benzoes	āā q.s.

Ut f. pil. No. c. S. Four to six pills daily.

—MESNARD.

Toothache.—

℞ Cocaine	0.25
Chloroform	q.s.
Essence violet	5.0
Camphorated oil,	
Essence peppermint,	
Creosote	āā 2.0

℞ Creosote,	
Chloroform,	
Laudanum	āā 10
Tinct. benzoin	30

Goitre.—It has been my opinion for some years past that iodine alone was the essential medical remedy for the removal of such goitres as could be influenced by medicine, and with this idea in mind I have, during the last four years, treated three-fifths of my cases with iodine and two-fifths with the thyroid preparation, and have found in thirty thus treated that the patients who received the iodine improved more rapidly than the others, and during the last three months my patients have been taking iodine, only accompanied by tonics as required. Few of them can take iodine steadily for many weeks, without showing evidence of weakness; slight anæmia is likely to follow, with increased rapidity of the heart's action; often slight dyspnœa and headache with diminution of bodily weight. The prescription is as follows:

℞ Iodi (crystals)	gr. ij.
Pot. iodid	gr. iv.
Spir. vini rect	ʒ i.
Syr. simplicis	ʒ i.
Aquæ destill	℥ ij.

M. S. A teaspoonful in a wineglassful of water, one hour after each mealtime.

After about two weeks, sometimes from the beginning, an iron tonic is given; and if the patients are weakening rapidly, strychnine combined with calisaya and iron, the iodine being discontinued for a week or two at a time. After three weeks there is usually a perceptible difference in the size of the goitre. In six months many of the goitres disappear, others are reduced to from one-half to one-eighth their original size.—FREDERICK G. SCHAEFER (*Journal of the American Medical Association*, November 25th).

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NEEDED REFORMS IN OUR AMBULANCE SYSTEM.

OWING to the fact that of late the oft-time and much discussed question relative to New York's ambulance service and the seeming inhumanity of some of our hospitals in subjecting patients to apparently unnecessary transfers from one institution to another has received considerable attention at the hands of the daily press, it is time to look at the question in its practical bearings as to possible reform.

Of the various charges brought against the ambulance surgeon by the laity, impugning his capability as a physician and criticising his general conduct, we would suggest that the many complaints harbored by the public are the result not so much of wilful shortcomings of the young surgeon as the outcome of a system which is palpably inefficient. To expect that a man but recently graduated from a medical college, and having had at the best but six months' experience in practical medicine, should be capable at all times of rendering a diagnosis absolutely correct and permitting of no doubt, would savor of the miraculous. That he might, however, without injury to himself cultivate a little more of the "*savoir faire*," and likewise be appreciative of the fact that an ambulance surgeon does not of necessity constitute the pivotal point around which the rest of mankind ought to rotate in silent admiration, is a bit of advice which, if followed, might tend to make the relations between himself and the general public of a more genial nature.

Mistaken diagnoses have been, and probably will continue to be, made, and we much doubt if there be a single practitioner who during some time of his career has not been guilty of an error; "*errare humanum est.*"

When any doubt exists, however, be it ever so slight, it should be accorded the patient, for it were far better that one hundred cases not demanding treatment were taken to the hospital than that one case diagnosed "drunk" should be for hours locked in a cell, and that later examination should disclose a serious injury or illness.

By making this a rule the opportunity would be denied the daily press of presenting, as was recently the case, a table of cases in each of which "intoxication" had been the verdict, while subsequent examination revealed serious injury; though in so large a metropolis as New York, in which hundreds of ambulance calls are daily answered, the fact that seven errors have been committed during a period extending over eighteen months, should not be accounted sufficient to prejudice the public at large.

If those of our hospitals equipped with an ambulance service would descend from their throne and revise some of the existing rules and regulations, it would benefit both their reputation and the public's safety, and tend to obviate future criticism. As we have before remarked, it is absurd to exact from a novice that which can be the result only of experience. The ambulance surgeon of the present day, when summoned to a case, has no opportunity for calling a consultation, but has to rely solely upon his own knowledge. Would it not be better, as a furtherance toward preventing mistakes, to constitute his duties the closing ones of his hospital career instead of the opening ones? During a space of one and a half years much valuable experience should be gleaned.

Transferring of patients from one hospital to another, save where it can be accomplished without the shadow of a risk to the life and health of the patient, is an unjustifiable act, and, if done to further an ulterior purpose, becomes criminal. A low mortality rate is a result to be desired, but fair means should be employed to obtain it. Only a few days ago a coroner's jury had occasion to denounce this practice and censure the hospital authorities for permitting repeated transfers, which ultimately resulted in the death of the patient concerned. Citizens of Greater New York are as a whole but little interested in hospital statistics, and the fact that one institution can, at the end of the fiscal year, boast of a lower mortality rate than some other, is a matter of but little import to them. What the individual desires, who when ill has to seek hospital treatment, is the feeling of assurance that he will be accorded all the care and attention necessary to his health and comfort, irrespective of the hospital receiving him. The fact that a mortally injured or sick person dies after admission to a hospital is not going to diminish the standard or injure the reputation of the institution concerned one whit. Every person of even mediocre intelligence realizes that wonders cannot be performed at the present day.

Poverty has from time immemorial been deemed a crime, and frequently treated as such; but surely in so noble a profession as that of medicine, one calling perhaps for more arduous work and unrewarded self-sacrifice than any other, the lowliest and most humble of our brethren should not be subjected to indignities which would never fall to the lot of his brother more blessed with worldly goods.

The needed reforms in the present system are obvious enough. There should be no such thing as questioning the fact whether or not a given patient is a suitable one for any particular hospital. Every institution having an ambulance should take any and every case presenting itself. In case of accident every victim is a suitable one for every hospital professing to care for emergency cases. If there is doubt as to the seriousness of the injury, the patient should be taken to the hospital for necessary diagnosis and treated there until he recovers or dies.

THE TREATMENT OF PNEUMONIA.

To die or not to die? that is too often the question that the physician is asking himself under the professional mask of encouragement that he assumes at the bedside of pneumonia or any critical disease. The more he doubts the certain efficacy of any particular drug, the more sincere he believes himself to be. To have unlimited, exuberant faith in any line of treatment, and emphatically and hopefully to prognosticate a successful issue, is, he feels, akin to quackery. An honest skepticism is the only attitude that his own heart will allow him. If the toxic effects are greater than the body can combat the patient must die. If not so great, the body will wage its own war and the methods of treatment are but turns in the scale one way or the other.

Such is the solid, unenthusiastic, almost resigned tone of the honest discussions that follow the presentation of any line of treatment for serious diseases. We are sometimes almost tempted to think that the physician can be little more than an umpire to decide how the fight is waging, and that his prescriptions have as little effect on life and death as his bulletins; but this is a hypersensitive, over-conscientious, faint-hearted attitude to take. It might be pardoned in the laboratory student whose chemical symbols work out in exact equations, but it should never be the attitude of the hopeful practitioner. The experience that accompanies good theory and sound judgment is something too individual and intangible to be set down in print as a rule for other men, but the fact remains that the spirit of fight and the energy of action are as essential in combating disease as the application of statistical studies. Every inch counts. Every step must be fought with the spirit to win, not with the cold calculation of chances. It is the old, level-headed player in this game of life and death who knows how to play up to his man and score a point with a worn-out trick.

And, after all, knowledge unfolds but slowly. What we claim for science one day we relegate to empiricism the next, when we find that we had hit a half-truth at random. Therefore there is salvation in the faith that begets action.

From this point of view the optimistic attitude taken by Dr. A. H. Smith, of New York, in a recent paper on "The Treatment of Pneumonia in the Light of its Newer Pathology" (*Medical News*, December 16, 1899) is worthy of further comment. It is of little moment from the present standpoint whether the pathology as outlined by Dr. Smith will stand the tests of further histological and chemical investigation, for he makes the assertion that pneumonia is not an inflammation at all, but simply a process which permits of the development of bacteria, *i.e.*, a culture medium. Apart from this he says that by reason of the fact that the lungs possess a double circulation, the study of therapeutic agents intended to affect them has special points for consideration. Reasoning from these hypotheses he claims that rational therapeutic indications would be met most directly by the application of local and general anti-bacterial agents. Thus if local contact with germicides could be effected, some progress could be made in the treatment of the disease; and since the blood exudate found in the alveoli supplies the pabulum for the growth of bacteria, any agent that can modify that medium and render it unsuitable for the growth of micro-organisms would be the means of solving the problem of pneumonia therapy.

If given at the outset of the disease, Dr. Smith says that the evidence at hand in favor of the beneficial results of the use of calomel is sufficient to merit its continued use. Its action, he believes, is to prevent the growth of further bacteria and not to counteract the effects of bacterial toxins already formed. Calomel should be given early in the disease. Small continued doses are probably as efficient as large amounts. The opinions of Flint and Hare with reference to the beneficial action of large doses of quinine are quoted with approval. Inhalations of chloroform are believed to be of some benefit, inasmuch as they exercise, in laboratory experiments at least, a depressing effect on the growth of the pneumococcus. The gratifying experiences of a number of observers who have administered creosote by inhalation and by the stomach are quoted, and in the form of carbonate of creosote its use is warmly recommended. The salicylates, notably the salicylate of ammonium, is highly thought of, not only acting on the pneumonia but exercising a stimulating effect on the heart.

Dr. Smith's preferences may be summed up in his own words: "I have been searching for the best weapon against the pneumococcus. I have used all the drugs mentioned with the exception of large doses of quinine, which have seemed to me too slow in action and too disturbing to the stomach. At one time the salicylates were my preference, but I think that late in the disease they may be depressing to the heart, and they may often cause gastric irritation. I now prefer creosote. In my hands it has done good service and the testimony of many authorities is strongly in its favor. . . . As to accessory treatment the indications are, first, stimulation of the emunctories to carry off the poison as it forms; second, sustaining the vital powers and particularly the heart; third, relieving the pulmonary circulation by vaso-dilators and venesection; fourth, compensation for loss of respiratory surface, by inhalation of oxygen; fifth, reduction of excessive temperature by cold; and, sixth, relief of incidental symptoms."

BULLETS IN MODERN WARFARE.

The war in South Africa is affording unfortunately an ample and accurate test of the effects of bullets fired from a modern small-bore rifle, and the conclusions so far arrived at coincide in most respects with the opinions formed of the destructive nature of these weapons and of the character of the wounds produced by them, by our surgeons during the Cuban and Philippine wars. Naturally, however, knowledge on the matter will be very considerably amplified owing to the number of men engaged, to the accuracy of the Boers' shooting, and to the fact that their principal weapon is the rifle. The firearm used by the British is the Lee-Metford, and the bullet is termed Mark II. The Boers use the Mauser. The Lee-Metford bullet is rather longer than the Mauser, but its velocity is somewhat less, consequently the momentum of each is practically the same. It should be said that both these bullets are wholly mantled, and are consequently non-expansive.

Drs. Keith and Rigby contributed to *The Lancet* of December 2d a very complete and exhaustive article on the nature of the injuries inflicted by the Mauser bullet, by the Mark II., by the Mark IV., and by the Dum-dum bullets. Although the experiments were carried out on the cadaver the results detract little from their value viewed comparatively. After pointing out that there were three different types of bullet wounds met with, viz., flesh wounds, wounds in which bone is involved, and wounds in which the bullet has passed through a cavity with fluid contents, Drs. Keith and Rigby went on to compare the destructive qualities of the four bullets in the following manner: If the destructive power of the Mauser be taken as a unit, that of the British service Mark II. bullet is nearly twice and that of Mark IV. more than twice as great, and the Dum-dum probably four or five times that of the unit. They sum up thus: "We find that the destructive effect of the Mark II. bullet, the Mark IV. bullet, and the Dum-dum bullet stand to the Mauser in the ratio of 1.7, 2, and 5.4 to 1. But this result applies mostly to flesh wounds, the bone-destroying and explosive tendencies of all, and especially of the open-nosed bullet Mark IV., being unnecessarily great. One point of exceptional interest in regard to all these injuries is that neither the wound of entrance nor exit is any index to the amount of destruction wrought. The conclusions, therefore, to be drawn would seem to be these; that the covered bullet expelled from a modern small-bore, provided no vital part or bone is reached, is not nearly so deadly as one fired from the older type of rifle; that when a bone is struck there is always fearful shattering, the bone being invariably irretrievably injured; that the unmantled and open-nosed bullets are the most effective, so far as disabling is concerned, of any yet brought out, their effect both on bone and soft tissue being of a terribly destructive nature."

News of the Week.

Northwestern Medical and Surgical Society.—At the thirtieth annual meeting of the Northwestern Medical and Surgical Society the following officers were elected for the ensuing year: *President*, Dr. R. A. Murray; *Vice-President*, Dr. Frank Grauer; *Treasurer*, Dr. Robert H. Greene; *Secretary*, Dr. S. Henry Dessau.

New York State Sanatoria for Consumptives.—The committee appointed by the New York State board of health to study the question of State sanatoria is preparing a report in which it will recommend that a system of local institutions be established with one or more State institutions, which shall be maintained by a per capita tax on the locality from which each patient comes. The plan is said to be at variance with that outlined in the bill introduced in the legislature last winter at the request of the State Medical Association.

Obscure Disease.—The physicians of Madison Township, Pa., are puzzled over an obscure malady which has become prevalent in the community and has proved fatal after a brief illness. By some the disease is thought to be cerebro-spinal meningitis.

Measles is reported to be epidemic among the children at Newburg, N. Y. More than one hundred cases have been reported to the health officer, twenty-three new ones in one day. No deaths have been reported, and few adults are attacked.

The Medico-Legal Society.—At the annual dinner and election of officers of the Medico-Legal Society at the Hotel St. Andrew on December 20th, the following were elected: *President*, Mr. Clark Bell, of this city; *First Vice-President*, Dr. George L. Porter, of Connecticut; *Second Vice-President*, Dr. T. D. Crothers, of Connecticut.

Osteopaths in Georgia.—Governor Candler of Georgia has vetoed a bill passed recently by both houses of the general assembly, providing for the practice in that State of osteopathy. At the public hearing given by the governor before taking action on the bill, it was contended that osteopaths knew nothing of materia medica, while they would be given the right to prescribe medicine the same as any regular licensed physician should the bill become operative.

Hospital Ships in Japan.—It is stated in *The Hospital* that Japan possesses several specially equipped hospital ships for use in warfare. These have been provided under the supervision of the Japanese Red Cross Society, which joined the Geneva Convention many years ago. The ships were built in England, and in time of peace are used as passenger boats. The *Kosai-Maru*, equipped only last year, has a fine saloon, easily convertible into a ward. Arrangements have been made for special wards for the isolation of infectious cases, and a distinct sanitary service will be organized in case of war.

A Red Cross Swindler.—A man, calling himself a clergyman, has been convicted at Fairfield, Ill., of fraudulently receiving money orders, and sentenced to imprisonment for eighteen months. He operated by soliciting contributions from persons in Ohio, Indiana, and Illinois in the name of the American Red Cross. In the presence of the contributors, he would seemingly insert a money order for the amount contributed in a stamped envelope and mail it to Miss Clara Barton. What he really inserted, however, was simply a blank piece of paper, the money order being slipped into his pocket and subsequently cashed on a forged order.

The Composition of Cigarettes.—An analysis of various brands of cigarettes, both English and American, has just been concluded in the laboratory of *The Lancet*. Tests for opium, arsenic, and other alleged ingredients were made, but they were negative in their results in every instance. The only injurious substance found was tobacco. We wish *The Lancet* commission had enlarged the scope of its inquiry a little, in order to determine what it is that causes the peculiarly nauseating odor of these nasty cylinders.

Japanese Physicians for China.—The Chinese authorities have engaged a staff of Japanese medical men for service at Newchwang, where the plague prevails. The mission numbers fifteen physicians who are said to have had special training. At its head is Dr. Murata Shosei, a pupil of Kitasato.

Trying a Tuberculosis Cure.—It is reported that a trial of Crotte's alleged cure for pulmonary tuberculosis, an attempt to exploit which was made at the Columbus meeting of the American Medical Association, is being conducted at St. Luke's Hospital in this city. The principle of the treatment, so far as M. Crotte has announced it, is the saturating of the diseased portions of the lungs with formic aldehyde by means of cataphoresis.

An Anti-Tobacco Congress.—The second international congress against the abuse (which is here synonymous with "use") of tobacco will be held in Paris during the summer of 1900. The work of the congress will be divided into seven sections, dealing severally with (1) history, statistics, various methods of the employment of tobacco; (2) chemical and physiological researches on tobacco; (3) diseases caused by tobacco; (4) hygiene and sociological questions; (5) education as a means of restricting the use of tobacco; (6) the morality and criminality of tobacco users; (7) miscellaneous. Papers may be read in English, French, German, Spanish, Italian, or Russian. Those desiring to become members of the congress are requested to signify their intention to the president of the committee of organization, M. E. Decroix, 20 *bis*, rue Saint-Benoit, Paris. The subscription to the congress, which has been fixed at five francs, or one dollar, should be sent at the same time.

Conscience-Stricken Contributors to Hospitals.—A writer in *Tit-Bits* says that in many of the London hospitals there is a list kept, headed "Hospital Conscience Gifts." Anonymous donors will often contribute a sum stating that they do so as a kind of expiation of some error or misdoing on their part, and the money so contributed is entered on this list. One gentleman contributed £20 to the accident ward of a certain hospital, stating that he offered the money as he had an accident, for which he regarded himself responsible, upon his conscience. He had seen a brick one night in the middle of the road in which he lived, and had failed to remove it. In consequence of this a cyclist met with an accident by which he was severely injured. A fashionable nobleman, who some time ago accidentally caused the death of a gamekeeper while out shooting, not only provided for the man's wife and family, but yearly contributes £200 to the hospital to which the unfortunate man was conveyed. Thoughtless throwers-down of orange peel contributed in one year to one hospital alone over £500—their consciences burdened by the memory of that thoughtless act which often results in misery to others.

Danger from Samples of Medicine.—The coroner of Philadelphia, after having investigated the death of a child from ingestion of sample pills, has called the attention of the director of public safety to the danger attending the indiscriminate and careless distribution of patent medicines and nostrums, particularly headache powders.

Smallpox and Chickenpox.—No end of trouble has been caused in various parts of the country during the past year or two by confusion in the minds of various physicians between variola and varicella. The latest case of the sort was at Dixon, Ill., where numerous cases of smallpox occurred in the course of six weeks, but were all diagnosed as chickenpox, the mistake not being discovered until there had been nearly one hundred cases. Recently a mistake the other way was made by a physician on a train between Chicago and New York. He notified the conductor that there were two cases of smallpox aboard, and the conductor telegraphed the news ahead to Pittsburg. When the train arrived there it was held, and policemen would not permit any of the passengers to alight. The city physician examined the patients, two children, found they were ill with nothing more serious than chickenpox, and the train was released. The passenger who had caused the commotion by declaring the cases to be smallpox was a physician from Kansas, and fearing that the passengers would carry out their promise to make it pleasant for him the rest of the journey, he waited over for another train.

Philadelphia Pediatric Society.—At a stated meeting held December 12th, Dr. C. F. Judson exhibited a case of Erb's palsy in a girl aged about ten years, due to pressure by forceps during delivery; also a case of rotatory spasm in a colored child aged about two years, with evidences of rickets; and a case of left hemiplegia with aphasia in a child about three years old, in whom there had been a convulsion at the age of ten months with left hemiplegia, and another convulsion at the age of eighteen months with paralysis of the left side of the face. Dr. Judson also reported a case of cerebral diplegia in a child that presented tremor. Drs. F. T. Stewart and Alfred Hand, Jr., detailed the account of a case of dilatation of the colon in a child three years old, terminating fatally. Dr. J. Madison Taylor reported a fatal case of hemorrhagic purpura, occurring in a girl thirteen years old; also a case of scurvy resembling syphilitic hemiplegia; also a case of Hodgkin's disease in a boy aged seven years, and a case of arthritis deformans in a boy aged nine years. Dr. Alfred Hand, Jr., reported a case of multiple auto-vaccination.

College of Physicians of Philadelphia: Section on General Medicine.—At a stated meeting held December 11th, Dr. Alfred Stengel exhibited a case of anæmia with splenic enlargement, occurring in a child three years old, in which following or in conjunction with enterocolitis there developed profound anæmia with enlargement of the spleen. The hæmoglobin was diminished in greater degree than the red cells, and there was no leucocytosis. Dr. Stengel proposed the following classification of the anæmias in childhood with enlargement of the spleen: A, without leucocytosis: 1, primary (splenomegaly); 2, secondary (syphilis, rickets, tuberculosis, gastro-intestinal disorders). B, with leucocytosis: 1, primary (leukæmia); 2, secondary. Dr. J. A. Scott read a communication on "A Case of Mitral Stenosis," with exhibition of the specimen, in which he discussed at length etiology, pathology, and diagnosis. Dr. M. Howard Fussell read a paper on "The Position and Color of the Ring in Heller's Test for Albumin in the Urine," in which he pointed out that the color-ring due to biliary pigment, potassium iodide, and the like is at the junction of the nitric acid and the overlying urine, the white band of albumin a little above this line of junction, and the ring of urates some distance above the latter. Dr. Joseph Sailer read a paper entitled "Withdrawal of Liquids from the Diet of Diabetes Mellitus," in which he related that such withdrawal in a case under observation failed to afford any relief, but rather aggravated existing conditions, primarily of course the thirst, and especially also the secretion of urine and the elimination of sugar. Dr. H. D. Beyea read a paper entitled "An Ovarian Cyst Associated with Diabetes; Operation, followed by Disappearance." He referred also to a few other cases of like nature recorded in the literature, and expressed the opinion that some undetermined etiological relation must exist between the character of the tumor and the morbid symptoms.

Pathological Society of Philadelphia.—At a stated meeting held December 14th, Drs. G. E. de Schweinitz and J. D. Steele reported a case of melanotic sarcoma of the choroid and orbit, in which primary operation was followed by recurrence. The secondary operation was radical and quite extensive, but there has been no recurrence. Dr. J. A. Scott exhibited a specimen of syphilis of the liver, the organ being enlarged, multilobulated, and covered by a dense capsule, with much cicatricial contraction and deformity. The spleen also was much enlarged, and mould-like deposits were present upon several portions of the intestine. Sections disclosed marked interstitial hepatitis. Dr. L. N. Boston also exhibited a specimen of syphilis of the liver, the organ being rather diminished in size and the seat of numerous nodules, some large, some small. Sections in this instance also exhibited the histological appearances of interstitial hepatitis. Dr. A. A. Eshner exhibited a specimen of carcinoma of the œsophagus, from an elderly man who presented during life symptoms, and after death lesions, of tuberculosis. The lesion in the œsophagus was situated about three inches above the cardia, and its histological character was disclosed on microscopical examination. Drs. J. H. Jopson and A. A. Ghriskey reported a case of anthrax, and exhibited cultures of anthrax bacilli in various media, as well as cover-slip preparations. The patient had been a morocco finisher, who presented a lesion upon the forearm acquired by inoculation of a scratch-wound, and in which bacilli were found that on microscopical examination and on culture exhibited the characters of anthrax bacilli. Death occurred suddenly and unexpectedly, but an autopsy could not be secured. No other case of the disease was observed among those employed in the same factory.

Diphtheria in Philadelphia is so prevalent that a number of schools have been closed for purposes of disinfection. It is now proposed to disinfect with formaldehyde all of the schools during the Christmas holidays, in order to begin the new year with a clean bill of health; and it is hoped that with aid of the volunteer staff of medical inspectors infection in the schools will be kept at a minimum.

An International Congress on Malaria is to be organized by the Liverpool School of Tropical Diseases. It was this school that sent out the commission under Dr. Roland Ross to Sierra Leone last summer, the labors of which have added so materially to our knowledge of the malarial mosquito.

Post-Graduate Instruction in Moscow.—The medical faculty of the University of Moscow has decided to open a school for post-graduate instruction, in which clinical instruction in twelve subjects will be given. The material will come chiefly from the Catharine Hospital, but other public hospitals and clinics will also be drawn upon as occasion offers.

Orleans Parish (La.) Medical Society.—At the annual meeting of the Orleans Parish (La.) Medical Society, December 10th, the following officers were elected to serve during 1900: *President*, Dr. T. S. Dabney; *Vice-Presidents*, Drs. H. S. Magruder, H. B. Gessner, and E. J. Graner; *Secretary*, Dr. E. H. Walet; *Librarian*, Dr. S. P. Delaup; *Treasurer*, Dr. Maguire.

The Eastern Medical Society of the City of New York.—At the annual meeting of this society, held December 8th, the following officers were elected for the ensuing year: *President*, Dr. Abram Brothers; *First Vice-President*, Dr. J. Guttman; *Second Vice-President*, Dr. A. Hymanson; *Secretary*, Dr. R. Abrahams; *Treasurer*, Dr. J. Barsky.

The Japanese Navy Medical Services.—There are one hundred and seventy-one medical officers of the Japanese navy, whose rank is as follows: Inspectors-general, two; deputy inspectors-general, thirteen; deputy assistant inspectors-general, twenty-one; fleet surgeons, thirty-one; staff surgeons, sixty-three; surgeons, thirteen; assistant surgeons, twenty-six; deputy assistant surgeons, two. The pharmacists number fifteen.

The British Medical Association will hold its sixty-eighth annual meeting at Ipswich, from July 31 to August 3, 1900. The president will be Dr. W. A. Elliston, and the local secretary Dr. E. A. Barnes of Eye. The address in surgery will be delivered by Mr. Frederick Treves, that in medicine by Dr. Pye-Smith, and that in obstetrics by Dr. W. J. Smyly.

The address in surgery will doubtless deal with military practice if the Boer war is ended in time to permit Mr. Treves to return from South Africa to deliver it.

Professor Koch, it is announced, is now studying malaria in Batavia, but will soon go to New Guinea.

Dr. Alfred E. Thayer of this city has been elected professor of pathology and bacteriology in the West Virginia University at Morgantown.

Berks County (Pa.) Medical Society.—At a stated meeting held at Reading on December 12th, Dr. John M. Bertolet read a paper on "Witch Doctors and Their Deceptions."

Bequests to Hospitals.—By the will of Mrs. Elizabeth C. Judd, widow of Colonel Henry B. Judd, of Wilmington, Del., $5,000 is bequeathed to St. Luke's Hospital, New York, and $500 to the Delaware Hospital of Wilmington.

Transactions of the Twelfth International Medical Congress.—The Russian government has made an appropriation of 9,200 rubles to cover the expense of publication and distribution of the volumes of Transactions of the Moscow Congress, which are now in press.

Help for Struggling Young Physicians.—A physician of St. Petersburg, Dr. G. I. Arkhangelsky, who died last summer, left nearly his entire fortune (about $12,000) to the Society for the Protection of Public Health, in order to establish a fund for the assistance of young physicians in the first years of their practice.

A Contribution to the Appendicitis Question.—In a letter to *The Medical Press and Circular* of recent date, Dr. Keen, of Philadelphia, mentions several of the most insistent advocates of instant operation in every case of appendicitis, and makes the surprising statement concerning them that, while they advocate this plan in theory, they do not practise it in fact.

An International Congress on Tuberculosis.—At a recent meeting of the Council of the British Association for the prevention of consumption, it was resolved to call a preliminary meeting of prominent individuals and representatives of institutions for the purpose of making arrangements for the Internal Congress on Tuberculosis, which is to be held in London in the spring of 1901, under the presidency of the Prince of Wales.

An International Health Conference.—The Italian Foreign Office has sent a note to the various powers which were represented at the International Hygienic Conference held in 1897 at Venice, inviting them to give their opinion as to the advisability of convening another meeting of the same kind to take measures, on an international scale, for the defence of Europe against the plague.

The Osiris Prize.—A triennial prize of the value of about $20,000 has been established by M. Osiris, of Paris, through the French Institute, for the most notable work published or discovery announced during the preceding three years, which shall be of benefit to humanity. Special reference is made to medical discoveries.

Doctors Mulcted.—A jury at York, Pa., on December 12th, awarded the plaintiff $1,000 damages against Drs. Vaillic and John A. Hawkins in an action to recover for alleged negligent treatment of a broken leg. It was charged that the leg was so tightly bandaged as to become gangrenous, and require amputation.

Camden (N. J.) District Medical Society.—At a stated meeting held on December 12th, reports were made as follows: Practice of medicine, Drs. E. L. B. Godfrey, J. R. Stevenson, W. R. Powell; health-conditions of Camden in respect to malaria and typhoid fever, Dr. E. L. B. Godfrey; contagious disease in Camden, Dr. J. F. Leavitt; gynæcology, Drs. H. H. Sherk, H. F. Palm, J. F. Leavitt; Surgery, Drs. Alexander McAllister, E. A. Y. Schellinger, Paul M. Mecray.

Philadelphia Neurological Society.—At a stated meeting held December 18th Dr. Wharton Sinkler exhibited a case of acute anterior poliomyelitis in a young man aged eighteen years, in whom the symptoms appeared after bathing for a long time in the open air. There was at first myalgic pain with loss of power in both lower extremities, followed by improvement almost to normal on one side, with persistent flaccid paralysis, loss of reflexes, and degenerative reactions in the other side, and without sensory derangement. The expulsive function of the bladder was at first impaired. Dr. James Hendrie Lloyd exhibited a case of hysterical choreiform movement in a girl aged about nineteen years, who presented rhythmic beating of the left hand against the thigh, and in the sitting posture also a distinct and asynchronous rhythmic lateral movement of the corresponding thigh. Other hysterical stigmata had not been detected. Restraint of the movement in the affected arm was attended with appearance of a similar movement in the opposite member. Dr. Charles K. Mills reported a case of unilateral progressively ascending paralysis, probably representing a new form of degenerative disease. Dr. Mills was inclined to consider the case one of unilateral amyotrophic lateral sclerosis, while Dr. Sinkler, who also had seen it, thought it might be due to disease of the posterior roots in their passage through the intervertebral orifices. Drs. C. W. Burr and D. J. McCarthy reported a case of serous meningitis in a man who presented symptoms suggestive of typhoid fever, but without Widal reaction, diazo-reaction, and other distinctive phenomena. Cerebrospinal fever also was thought of, as this disease was prevalent at the time. Improvement and exacerbation followed alternately on several occasions, but death eventually took place in coma. Toward the close deafness set in suddenly. Post-mortem examination disclosed in addition to excess of cerebro-spinal fluid thickening of the ependyma of the ventricles and round-cell infiltration of the subjacent brain tissue.

Similar lesions were induced experimentally in cats by introduction into the cerebro-spinal cavity of dilute hydrochloric acid, urine, bacterial toxins, etc. Dr. Joseph Sailer reported a case of motor and sensory disturbance of obscure nature occurring in a man about thirty-one years old, who presented loss of painful and thermal sensibility and of motor power, and increased reflexes on one side of the body, with early recovery, leaving only loss of sexual power. The urine was free from albumin. The lesion was thought tentatively to consist in some disturbance at the level of the restiform bodies.

Dr. Bernard Sachs has been appointed on the visiting staff of the Manhattan State Hospital to fill the vacancy caused by the death of Dr. Charles Inslee Pardee.

Bequests to Hospitals.—By the will of the late Mr. Daniel S. Ford, of Boston, proprietor of *The Youth's Companion*, the Massachusetts General Hospital receives $7,000, the Boston City Hospital $6,000, and the Children's Aid Society and the Children's Hospital of Boston each $5,000.

An Ambulance Refused by the Boers.—A dispatch from Durban to the London *Times* says that the Transvaal government has refused to receive the ambulance organized by Mr. Sivewright, an ex-minister of Natal, and that it will now be offered to Natal. It is not likely, however, in view of the circumstances that the authorities will accept it. The medical corps attached to this ambulance was composed of Afrikander physicians studying at the University of Edinburgh, who sailed only recently for South Africa.

The Course of the Plague.—A case of what was undoubtedly the plague was discovered on December 12th in the person of the bookkeeper in a Chinese establishment in Honolulu. The council of state was immediately called in extraordinary session, and appropriated $25,000 for the use of the board of health in combating the disease. The Oriental quarter was at once quarantined, and no one was allowed to enter or leave this section without a permit from the board of health. Within twenty-four hours after the bookkeeper's case had been diagnosed as the bubonic plague five deaths had occurred, all from the plague. Fumigation plants and crematories were established at the four corners of the Oriental section, and the bodies of the dead were cremated. The transports *Warren*, *Centennial*, and *Newport* were in the harbor, but left in the course of the week, the first-named for Manila. The others reached San Francisco on December 27th, and were detained at quarantine.—In India a recrudescence of the epidemic is threatened. Ahmednuggur has suffered very badly from the plague, and is not yet free from it. Sholapur now has a severe epidemic. Bombay is thought to be in the beginning of another plague experience. Parts of the Satara district have been badly attacked. News from reliable sources in the Orient is to the effect that the disease is prevalent in China and also in Japan, and the officers at Manila have taken precautions to prevent the plague from getting a foothold there.—In Mauritius during December there were twenty new cases of plague in the island, and twelve deaths from the disease occurred during the same period.—A despatch from Manila, dated January 3d, states that the health officers have found a native having all the symptoms of bubonic plague in a house in the walled city, where two deaths which may have been due to plague have occurred. The patient has been isolated and every precaution has been taken to prevent a spread of the disease. The quarantine system in the Philippines has been placed under the direction of the Marine-Hospital service. There are already two quarantine plants in the islands, and some of the surgeons of the Marine-Hospital service are already on their way to Manila and are expected to arrive there within a short time.

Smallpox has broken out among the Indians in the Colville Reservation, Washington.

Beriberi has been epidemic among the Chinese population in Hong Kong during the past summer and autumn.

Suit against a Chicago Hospital.—A woman residing in Racine, Wis., has entered suit in the Cook County circuit court against the Presbyterian Hospital of Chicago for $100,000 damages. She alleges that she has been made an invalid for life by the mistake of a nurse in the institution, who gave her a dose of medicine intended for another patient. The hospital authorities admit that an error was made by one of the nurses, but declare that the medicine given by mistake was harmless.

A Hospital Offered to the City.—Negotiations are said to be in progress looking to the transfer of the Brooklyn Homœopathic Hospital, Dispensary, and Training-School for Nurses, in Cumberland Street, to the New York City authorities. The plan suggested is that the control should vest in the city along with the actual property and obligations of the institution, and that in return the city should agree to maintain it under the homœopathic system. The property is worth about $150,000 and there are obligations amounting to $60,000. The hospital was organized in 1852.

The Alleged Grave Robbery in New Haven.—A hearing in the case of Dr. Oliver T. Osborne, professor of materia medica and therapeutics in the Yale Medical School, on the charge of unlawfully disinterring a body, was held at New Haven on December 26th. The charge was of removing from its grave, without permit for an autopsy, the body of a negro girl, within a few hours after burial. The prosecution was instituted on complaint of some members of the family of the dead girl, who watched the grave and claimed to have witnessed the removal of the body. Dr. Osborne denied that there was any attempt at secresy in the steps that were taken to secure an autopsy. The evidence brought forward by the prosecution was of a contradictory nature, and at its conclusion Dr. Osborne was acquitted of the charge.

An Attempt to Check Suicides.—It is said that a bill will be introduced at the coming session of the legislature at the instance of the New York State

Medical Society to prohibit the sale of carbolic acid except upon a physician's prescription. It is estimated that in 60 per cent. of the suicides in this State during 1899 carbolic acid was the means employed.

Professor Ogston, of Aberdeen, has gone to South Africa. He was not sent by the British authorities, but went as a private individual to take advantage of the opportunities there offered for the study of military surgery.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending December 30, 1899. December 23d.—Surgeon H. E. Ames, order of December 20th modified, ordered to duty in connection with fitting out the *Kearsarge*, Newport News, Va. Assistant Surgeon E. J. Grow detached from the *Massachusetts* and ordered to the *Dixie*. December 27th.—Medical Inspector M. H. Simons ordered to Cleveland, Ohio, for recruiting duty.

A Hospital Interne Suspended.—A member of the medical house staff of Bellevue Hospital was recently suspended for three months by the commissioners of charities. The action was taken because, it was charged, the physician received money with which to buy delicacies for a patient. The commissioner has posted in all the city hospitals an order forbidding all employees of the department of public charities, including the members of the medical staff, to accept from a patient, or other inmate, any sum of money for any purposes whatever, except with the knowledge and consent of the superintendent of the institution in which the patient or inmate may be. Any infraction of this rule will, it is announced, be punishable by instant dismissal.

Famine in India.—A recent report from Calcutta states that nearly three million persons are receiving aid from the famine relief fund. The government is spending almost 200,000 rupees daily. It is estimated that the cost of the relief to the end of March will be 30,000,000 rupees. Reports from American missionaries are to the effect that the present famine in Western India promises to be far more distressing than even the famine of two years ago. The entire community in some places will be in distress. A severe drought has already begun in the Ahmednuggur district. In many places it is hard to get sufficient water to drink, and no rain can be expected until the middle of June. The early crops in the Ahmednuggur district were only from one-eighth to one-sixth of full ones, and the later crops are almost a total failure. In other districts the crops are small. Husbands are leaving their wives, and parents their children. Relief corps are being organized; some charity also is administered, but official relief, Mr. Hume says, never can meet the multitude of necessities.

Obituary Notes.—Dr. Gustavus S. Winston died at his home in this city on December 29th of apoplexy. He was born in New York in 1833, and was a graduate of the College of Physicians and Surgeons in the class of 1863. In the Civil War he was surgeon of the Eighth Regiment, and was captured and confined in Libby Prison, from which he escaped with the assistance of a friend of the family, living in Richmond. Dr. Winston was medical director of the Mutual Life Insurance Company for about twenty-five years, and a great part of the time was the chief director.

Dr. Elliott Coues, of Washington, died at the Johns Hopkins Hospital in Baltimore on Christmas day, from the effects of an operation performed some time ago. He was born in Portsmouth, N. H., in 1842, and was graduated from the medical department of the Columbian University in Washington in 1863. In 1862 he entered the United States army as a medical cadet, and two years later was promoted to assistant surgeon, which rank he held until his resignation in 1881. His special interest was in natural history, more particularly ornithology, and wherever his army duties called him he made exhaustive studies of the fauna and flora of the region. He held the chair of anatomy in the National Medical College, Washington, from 1877 to 1883, when he was appointed professor of biology in the Virginia Agricultural and Mechanical College. The range of Dr. Coues' literary life was very great. He was the author of thirty-seven volumes, and contributed over one thousand articles to various magazines and periodicals. He served six different scientific journals in editorial capacities, and his name was on the rolls of more than fifty foreign and American scientific societies. One of his most important labors in recent years was done on the Century Dictionary, to which, in seven years, he contributed forty thousand words and definitions in general biology, comparative anatomy, and all branches of zoölogy.

Dr. Thomas O'Callaghan, of Jersey City, died suddenly on December 27th while making a professional call on a patient. He was sixty-five years old, and was a graduate of the New York University Medical School in 1862. He had practised in Jersey City continuously ever since his graduation.

Dr. Frank Gruber, of Newark, N. J., died suddenly on December 30th while attending a patient. He was stricken with apoplexy as he sat down at the bedside of his patient, and he died within a few minutes. He was fifty-seven years old, and was born in Germany.

Dr. Lewis Armstrong died at Middletown, N. Y., on December 31st, aged eighty-one years. He had been prominent in medical and business circles in Orange County for many years.

Dr. Henry F. Gehring, of Chateaugay Lake, died at Malone, N. Y., December 30th. A few days before he performed a surgical operation, and in some way slightly scratched his finger. Symptoms of septic poisoning set in, quickly resulting in death. He was a graduate of Starling Medical College, Columbus, Ohio, in 1884.

Dr. Francis G. Bonynge, of Chicago, died at his home in that city on December 26th. He was a graduate of the University College in London in 1878, of the Royal College of Surgeons in Ireland in 1879, and of Kings and Queens College, Ireland, in 1880.

Dr. Wickliffe Smith, of Delphi, Ind., surgeon of the 161st Indiana regiment, was killed on December

29th, together with his Cuban boy, Francisco Sousa, three miles from Delphi, by a Wabash train. On account of the cold weather they were bundled up so they did not hear the train. Both were instantly killed. Dr. Smith was a graduate of the Medical College of Ohio in the class of 1874.

Dr. Irwin Fisher, of Harlingen, N. J., was found dead in his bed on the morning of December 31st, He was a graduate of the Medico-Chirurgical College of Philadelphia in the class of 1896. He was a member of the Somerset County Medical Society and of the New Jersey State Medical Society, and was the coroner of Somerset County.

Dr. Almira L. Fowler Breakspear died on Sunday at her home in West Orange, N. J. She was seventy-three years old, and was born at Cohocton, N. Y. She was graduated from the Jackson Academy, Jackson, Mich., and from the Woman's Medical College of Boston. She first practised medicine in this city, and moved to Orange in 1858.

Obituary.

SIR JAMES PAGET, BART., F.R.S., F.R.C.S., D.C.L., LL.D.

The death is announced in London of Sir James Paget, in his eighty-sixth year. He was born at Great Yarmouth, January 11, 1814. He was educated at St. Bartholomew's, became a member of the Royal College of Surgeons in 1836, and was elected a fellow of the same institution in 1843. In 1875 he was president of the Royal College of Surgeons, and from 1884 to 1895 was vice-chancellor of London University. He was created a baronet in August, 1871, in recognition of his many discoveries in surgery. In 1881 he was appointed a member of the royal commission to inquire into the condition of the London hospitals for smallpox and fever cases. At the jubilee, in 1882, in commemoration of the three hundredth anniversary of the founding of the University of Wurzburg, he was one of the foreign scientific celebrities who received honors.

He was also a corresponding member of the Institute of France and an honorary fellow of many universities and other institutions. For many years he had been consulting surgeon of St. Bartholomew's Hospital.

Sir James Paget was one of the most famous English surgeons of the century, and made many contributions to surgical knowledge. Among his best known literary works are the "Pathological Catalogue of the Museum of the College of Surgeons," "Report on the Results of the Use of the Microscope," published in 1842, and "Lectures on Surgical Pathology," published in 1853, 1863, and 1868. He was also an extensive contributor to the "Transactions" of the Royal Society, of which he was a fellow, and other learned institutions. Since 1863 he had been surgeon to the Prince of Wales, and since 1878 sergeant surgeon to Queen Victoria.

The Cuban Orphan Society of New York City has made an application to the State board of charities to approve of its incorporation. The objects of the society are to care and educate the orphan and destitute children of Cuba through the establishment of an institution in Cuba for that purpose.

Progress of Medical Science.

New York Medical Journal, December 30, 1899.

Some Practical Notes upon Diseases of the Rectum.—L. H. Adler, Jr., alludes to the natural reluctance of patients to undergo rectal examination, and then passes to consider some of the maladies of this region most commonly met with. Congenital malformation occurs once in eleven thousand births. He believes that in fistula the internal opening is to be found in most cases between the two sphincters, and not, as is commonly believed, higher in the rectum. As to operation in phthisical cases, his rule is, "If the lung trouble is active, no operation; otherwise, operate." For cases of fissure, opium should be avoided and iodoform used instead. He believes that constipation is greatly on the increase, the latter being due to modern ways of living, adulterated food-stuffs, and rapid eating with little exercise.

Diphtheria: Remarks on Clinical Diagnosis and Treatment.—H. B. Sheffield emphasizes the essential early clinical signs of the disease, contrasting the appearance of the pharynx in diphtheria with that presented in the varieties of amygdalitis, follicular, parenchymatous, herpetic, and necrotic. Not much definite information can be obtained from the condition of the submaxillary glands, except that diphtheria presents generally a greater enlargement, hardness, and tenderness of them. Albuminuria strongly suggests true diphtheria. A table of diagnostic signs between laryngeal diphtheria and non-diphtheritic membranous laryngitis is given. He uses antitoxin only in combination with other remedies, and gives formulæ of drugs which have served him well.

Tubercle Germs and Giant Cells in Human Tissue.—P. G. Bourland refers to the literature of the subject of tubercle bacilli in giant cells, and narrates his own findings. Several thousand specimens were examined, including material from lung, kidney, liver, spleen, lymph nodes, and granulations from a tuberculous knee joint. In only four instances (three in lung and one in liver) did he find the bacilli within the cells. The full microscopic findings in the four cases are given. Bourland believes that the relation between bacillus and cell is a variable one. It is not fixed by anything apparent in the light of our present knowledge. He describes his method of examination and gives a bibliography.

Diet in Typhoid Fever.—E. Speidel advocates a daily rectal irrigation with two quarts of decinormal salt solution, and its interstitial injection in cases in which for any reason the rectum is unavailable. Water should also be given internally with great freedom. For nutrition, buttermilk, sweet milk (prepared in various ways), milk with malt extract, unfermented grape juice, strained oyster or clam broth in commencing convalescence, and broiled steak are all commended. The patient should be allowed chewing-gum for a short period each day. Then follow various solids. The article contains several practical recipes for the palatable preparation of the various food-stuffs named.

Mastoiditis: The Importance of Early Surgical Treatment.—B. J. F. McCaw concludes a practical article as follows: (1) In threatened mastoid involvement and in the mild acute cases the conservative plan of treatment should be tried for at most a week or ten days unless dangerous symptoms arise. (2) Operative interference should be instituted (*a*) in acute cases where there is sagging of the postero-superior canal wall, (*b*) when the infection is of a virulent nature, and (*c*) in all cases complicating chronic otorrhœa.

The Surgical Treatment of Phthisis.—W. C. Wood states that there are four plans of surgical treatment to be considered: First, aspiration of cavities and direct medication; second, pneumonotomy or incision and drainage of cavities; third, pneumonectomy or excision of a tuberculous focus; fourth, obliteration of a cavity by causing collapse of the lung. He gives the technics of each of the methods enumerated.

Examination of the Urine in Epileptics.—E. G. Klein examined the urine in twenty-three cases as soon as possible after an epileptic seizure. Specific gravity ranged from 1.007 to 1.026; traces of albumin were present in fifteen of the cases; glucose was not found in any. Results are also given of analyses of the urine of the same patients some time after the attack had passed over.

An Arrangement of Gastric Instruments Devised to Facilitate the Physical Examination of the Stomach and Its Treatment.—C. S. Fischer describes and figures various tubes, siphons, and electric-light devices which he has found of service for the examination and treatment of patients with gastric troubles. Nothing essentially new as regards treatment is given.

Heroin in Affections of Respiratory Organs.—H. D. Fulton commends the use of heroin in acute and chronic bronchitis as well as in tuberculous cases. A solution for hypodermatic use may be made by the addition of a little acetic acid. Maximum doses cause gastric derangements similar to those of morphine. The remedy is often curative as well as alleviative.

The Medical News, December 30, 1899.

Splenectomy.—J. Wesley Bovée, in a review of this subject, says that the operation was probably first performed by Zanarelli, in 1549. The spleen is thought to be the source of origin of leucocytes and the graveyard of the red blood cells, though in its absence the lymphatic glands and bone-marrow assume its function. No characteristic symptoms follow splenectomy in children, while in the adult they are increased pulse rate, syncope, pallor, temperature above normal, weakness, loss of weight, anæmia, headache, drowsiness, voracity, thirst, diminished or increased urinary secretion, griping pain in the abdomen, and pain and tenderness of the long bones. Among the indications for splenectomy are enlargement of the organ, malignant disease, axial rotation, wandering spleen, cysts, chronic congestion, amyloid disease, and rupture. But the operation should never be done except under the most favorable circumstances, unless immediate death threatens. Variations from the normal blood conditions, and leucocythæmia, are most important complications. The diagnosis is generally simple. The mortality of this operation between 1885 and 1895 is reported as 20.68 per cent.

The Pathology and Treatment of White Swelling of the Knee.—A. B. Judson asserts that white swelling of the knee goes from bad to worse so long as the patient continues to subject the joint to the weight of the body when standing, and the severe traumatism attending walking and running. He arrests motion by means of a posterior upright which is worn day and night. The weight-bearing function is held in abeyance by the use of the ischiatic crutch, worn only when the patient is up. In undue flexion of the knee the fixative brace may be used.

A Brief Report of an Epidemic of Typhoid Fever in Worthville, N. C., during 1898.—Charles Hubbard reports the recent epidemic of this village to be in accordance with Osler's observation, "Outbreaks of typhoid fever are more likely to occur in extremely hot and dry seasons when the water-supply is very low." In the whole town there were sixty-three pure cases with a death rate of about ten per cent., besides several suspicious ones. Eighteen of the sixty-three were under twelve years of age.

Journal of the Amer. Med. Assoc., Dec. 30, 1899.

Splenic Anæmia, or "Banti's Disease," Complicated by Diabetes Mellitus.—In *The Medical News* of March 27, 1897, H. A. Hare reported a case of splenic anæmia with grave blood changes in a man aged twenty-four years. An examination revealed a great excess of lymphocytes, although the total number of leucocytes was about normal. The red cells varied from time to time from 1,000,000 to 2,800,000. The spleen was enormously enlarged. While under observation from 1895 to 1898 nothing abnormal was revealed by examination of the urine. Hare now further reports that the patient came to him in November, 1898, and was found to be passing thirty grains of sugar to the ounce. It was not possible to make a blood count, as the patient failed to return the next day. The author is unable to say whether there was any connection between the two diseases.

Some Phases of Intranasal Surgery.—G. V. Woolen, of Indianapolis, summarizes the reasons which should underlie the chief operative measures in the nares, as follows: (1) To restore nasal respiration and relieve disease of the respiratory tract; (2) to aid the drainage of the nose and its accessory cavities; (3) to remove pressure irritation, (4) to remove local hyperæsthetic tissues; (5) to render local medication possible and successful; (6) to remedy auditory disease; (7) to remedy voice difficulties; (8) to remove malignant disease. Woolen urges that much confusion could be avoided by a proper consideration of what should be regarded as a normal nose in each individual case, and of the distinction between a temporary and a permanent obstruction or lesion.

Procedure of Election in Certain Cases of Enlarged Prostate.—In this article James H. Dunn advocates suprapubic enucleation in certain selected cases of prostatic disease, namely, that class of cases—relatively not very large—with large obstruction but few complications and comparatively young and sound physique. He claims that in a relatively sound man, even of advanced years, especially if the urine be uninfected, a skilfully executed suprapubic cystotomy is not a procedure of much danger. He believes that in these selected cases a skilled technique will reduce the mortality of suprapubic prostatectomy very materially below ten per cent.

Do We Obey the Code of Ethics?—R. G. Eccles, of Brooklyn, holds that the code of ethics of the American Medical Association is perfect in every respect, except where it forbids the prescribing of patent medicines. In the changed condition of things patented medicines, such as chloroform, are ethical, while the secret remedies are no longer patented. These preparations, whether advertised exclusively among physicians or not, which the author would have placed under the ban.

The Work of the American Pharmaceutical Association in Relation to the Materia Medica of the Future.—In this address F. E. Stewart, of New York, calls the attention of the profession to the work of the

American Pharmaceutical Association, and as chairman of that committee asks that aid may be given to make the pharmacy of the future what it should be, viz., a branch of medical science.

Diagnosis of Intestinal Perforation by Means of Ether Inflation per Rectum.—E. M. Sutton, of Peoria, reports a practical application of this means of diagnosis in the case of a gunshot wound of the abdomen.

Boston Medical and Surgical Journal, Dec. 28, 1899.

Surgery of the Bile Passages, Especially of the Common Bile Duct.—W. S. Halsted reports a number of cases in which operations for the removal of gall stones in the common duct were followed by truly splendid results, in view of the desperately emaciated and enfeebled condition of the patients. Briefly summarized, the cases were the following: Dilatation of the first part of the duodenum caused by constricting adhesions, with an ulcer on the confines of the pylorus; primary carcinoma of the duodenal papilla and diverticulum Vateri; dynamic dilatation of the first portion of the duodenum and of the pyloric portion of the stomach, gall stones in gall bladder, hydrops vesicæ; common and cystic ducts reduced to fibrous cords, dilated hepatic duct and gall bladder; choledochotomy performed twice, gall bladder shrivelled at first operation with two stones in duct, large and distended at second operation when only one stone occupied common duct; dense adhesions containing a small abscess; renal pains resembling intestinal colic—adhesions were absorbed with great rapidity after perforation and extrusion of stone; stone in ampulla ulcerated through walls of common duct and through its duodenal coverings.

Unlooked-for Dystocia in Certain Multiparæ.—E. S. Boland says in résumé of his article that certain multiparæ, after one or more easy deliveries, lose the power of natural parturition; this is due to failure of the expelling forces in the uterus and abdominal walls. Artificial delivery is imperative in such cases as promptly as a diagnosis is established. Infant mortality is high in artificial delivery by the natural passages. The human female is very tolerant of aseptic mechanical genital injuries. The author ends with the query, Is suprapubic delivery justifiable in these cases when a positive diagnosis is established?

Extraperitoneal Nephro-Ureterectomy for Tuberculous Disease.—A case is described by Edgar Garceau, in which nephrectomy was performed for pyelonephritis on October 25, 1897. The ureter was not removed, but the tuberculous ureteral stump caused abscess formation, which on November 24th was drained and the ureter removed. In October, 1899, the patient was in excellent health and strong enough to do an exhausting day's work. There are slight bladder lesions, and a few pus cells have been found in the urine, but the immense improvement in the patient's condition fully justified the operation.

The Closure of Rents Implicating the Anal Sphincter.—A. T. Cabot describes his method of operation upon a ruptured perineum, calling attention to the importance of dissecting out and suturing the sphincter-ani muscle with buried stitches of catgut.

X-Ray Examinations for Life Insurance Companies.—Francis H. Williams considers that an examination with the fluorescent screen gives the most trustworthy and complete evidence of the normal or abnormal condition of the chest organs.

The Philadelphia Medical Journal, December 30, 1899.

A Case of Successful Suture of the Vas Deferens Divided in a Hernia Operation.—John B. Roberts accidentally divided the vas deferens, which had been thinned by the pressure of a large hernial mass. He united the divided ends by making a slit in the lower, inserting the upper into the lower, and then closing the slit and holding the parts together by sutures. The operation seemed to be successful, to judge from the fact that there was no atrophy of the testicle six months or more later.

Further Thoughts on the Silver-Nitrate Injections in the Treatment of Pulmonary Phthisis.—Thomas J. May injects ♏ v. of a five-per-cent. solution of silver nitrate over the course of the vagi in the neck in the treatment of pulmonary tuberculosis. The results in some cases have been encouraging.

A Case of Tetanus Successfully Treated with Antitetanic Serum.—E. B. Adams adds one more case to the list of those in which orrhotherapy has been employed with success in tetanus.

Grave Secondary Anæmia Simulating Progressive Pernicious Anæmia.—J. M. Da Costa describes a case of secondary anæmia supposed to be due to achylia gastrica.

On the Significance of Bovine Tuberculosis and Its Eradication and Prevention, in Canada.—By J. George Adami. See MEDICAL RECORD, vol. lvi., p. 423.

General and Local Infection by the Bacterium Coli, with Report of Cases.—By J. N. Hall. See MEDICAL RECORD, vol. lvi., p. 244.

An Obstetric Tricyclic Calendar.—William L. Kantor presents a device by means of which the probable date of labor may be calculated.

A New Pile Clamp.—Arthur E. Hertzler shows an illustration of a new instrument.

The Lancet, December 23, 1899.

The Treatment of Surgical Tuberculous Affections.—In the second of the Harveian lectures, W. Watson Cheyne discusses the question of tuberculous peritonitis which he finds in about five per cent. of tuberculous cases examined post mortem. It may be due to various tuberculous foci elsewhere, but the most frequent source is infection from intestinal ulceration. The majority of his operative cases were in women, while the majority of cases as found on the autopsy table were in men. Reference is made to pathology, symptomatology, and complications. About fifty per cent. are cured by operation. The rationale of cure may be that the removal of a large amount of fluid may lead to an outpouring of serum, possibly bactericidal. Even in dry peritonitis the irritation of abdominal section and the breaking up of adhesions lead to a similar outpouring.

Observations Bearing on the Question of Influence which is Exerted by the Agglutins in the Infected Organism.—A. E. Wright and G. Lamb call attention to the fact that the agglutins are now regarded as bacteriotrophic and anti-bacterial. Divergent views obtain, however, on the question as to how far they exert an influence in warding off a bacterial invasion and restraining the growth of bacteria already active. As the result of a series of experiments made at the Army Medical School at Netley, the authors conclude that the agglutins are inoperative *in vivo* because their experiments establish the fact (or go far toward so doing) that the micro-organisms which cultivate themselves in the organism are as a matter of fact cultivating themselves in the presence of agglutins. This question is capable of being resolved by a quantitative determination of the amount of agglutins in the organs in which the micro-organisms are cultivating themselves. The experiments are along this line.

Gangrene Complicated by Glycosuria.—C. S. Wallace analyzes twenty-five cases and concludes that true gangrene occurs in diabetic patients unaccompanied by such arterial disease as would itself produce the gangrene. Glycosuria may precede the gangrene, and may be not a contraindication, but an actual indication for operation. The latter should be done before sepsis has set in, and the limb should be removed as near the trunk as possible. Sepsis may produce a glycosuria, while a pre-existing glycosuria may be aggravated by gangrene. There is no positive evidence that neuritis produces a glycosuria comparable to that of gangrene. The condition of the arteries may be similar to that associated with chronic renal affections.

Involuntary Reduction of Dislocation of the Shoulder.—E. I. Day records the history of a case of dislocated shoulder in a woman in whom reduction was attempted without an anæsthetic. Severe pain compelled a postponement, and for the succeeding night she slept sitting up in a chair. During the night she gave a sudden start and felt something move at the joint with intense pain, but immediately after she felt all right. Examination the following morning showed that the bone was in its right position.

Infantile Hemiplegia Associated with Aphasia.—Ernest Hutchinson gives the history of a boy aged two years who as the result of a fall experienced paralysis of the right arm, leg, and lower part of face and tongue, with inability to speak. He did well under a treatment similar to that given adults in similar circumstances, but the aphasia had persisted when the patient was last seen.

Lactation in a Male Infant.—G. M. Blair reports the case of a boy with highly developed mammæ as large as a walnut. Pressure caused milk to exude. The external genitals were normal except that only one testicle appeared in the scrotum. The child's general condition was bad, and he suffered from vomiting and emaciation.

Removal of a Hat-Pin from the Stomach.—J. Halliwell reports the case of a woman aged sixty years who accidentally swallowed a hat-pin about four and a half inches long. It was removed by abdominal section four days after. Operative details and recovery were without unusual features.

A Review of Surgery during the Past Hundred Years.—The Bradshaw lecture by H. G. Howes.

The British Medical Journal, December 23, 1899.

A Case of Scurvy-Rickets in a Boy of Twelve Years.—Edmund Owen looks upon rachitis as the prescorbutic stage of scurvy, and says that when he is told an infant or a child is the subject of scurvy he does not need to be told that the patient is also rachitic. The term scurvy-rickets was applied to the disease by Cheadle, but the author thinks the second part may well be dropped, the affection being called simply scurvy. When hemorrhages have occurred beneath the periosteum or into the planes of other connective tissues, the disease is no longer rickets, but frankly scurvy. Scorbutus is very rare in children over three years old, for by that time a child develops a taste for fresh fruit which he usually finds some means to gratify. Scurvy-rickets is more common among the children of the rich than of the poor, for it is the well-to-do mother who feeds her child on the prepared foods, the poor woman finding such fatal luxuries beyond her means. Mr. Owen has seen one case, however, in which the disease occurred in an infant who had been fed upon fresh cow's milk diluted with large quantities of barley-water. Even scalding the nursery milk with the view of freeing it of pathogenic germs materially detracts from its value as a food for infants. When infants are hand-fed the diet should be changed from time to time, no one kind of artificial food being relied upon exclusively. Another reason why the children of the poor are less likely to become scorbutic is that they get a taste occasionally of the food of their elders, and this, while possibly physiologically wrong, is not altogether without its recommendation.

On Primary Resection of Gangrenous Intestine.—Arthur E. Barker discusses the line of action to be adopted in cases of gangrenous strangulated hernia: (1) To incise the gangrenous loop and establish a permanent artificial anus; (2) to perform the same operation but subsequently to resect the intestine, reestablish its continuity, and close the fecal fistula; (3) to perform primary enterectomy and obviate the necessity of an artificial anus. The author's experience leads him to regard the last-named as the best course to pursue when the patient is not too exhausted. When there has been stercoraceous vomiting the stomach should be thoroughly washed out, before operation, with warm brandy and water. The patient should be wrapped in flannel or wool and be kept warm during and after the operation. In the after-treatment Barker advises the hypodermic transfusion of a pint of saline solution twice a day. Nutritive enemata are to be given every four hours, alternating with hot-water enemata at equal intervals.

Case of Syphilitic Disease of the Heart and Liver: Sudden Death.—Percival M. May reports the case of a man thirty years old who died suddenly after having suffered from intense precordial pain and vomiting. At autopsy syphilitic lesions were found in the liver and in the septum ventriculorum and other parts of the heart. Primary infection had occurred ten years before.

A Case of Snake-Bite Treated by Dr. Calmette's Antivenene.—Arthur Beveridge reports the case of a man, twenty-six years old, who was bitten on the ankle by a cobra. When seen an hour later he was in collapse. The wound was incised and pure nitric acid was applied, and an injection of 10 c.c. of antivenene was given. Stimulants were also given. The man recovered.

A Case of Rupture of the Heart.—Allan Kalenburg reports the case of a woman, forty-five years old, who was going up a steep hill with a load of thirty pounds on her head. She struck her foot against a stone and, failing to recover her balance, fell to the ground and died almost immediately. At the autopsy the heart, which was fatty, was found to be ruptured.

Fracture of the Spine in the Lower Dorsal Region.—Noble Smith reports the case of a man twenty-two years old who was crushed under his horse and suffered a fracture of the spine. An operation was performed four years and a half later, the patient being then paralyzed in the lower limbs. The result of the operation was a partial restoration of the power to walk.

A Case of Compound Depressed Fracture of the Skull.—John D. Gimlette reports the case of a Chinese coolie who suffered a fracture of the skull by a falling piece of quartz. He was trephined ten days after the accident. At this time he had hemiplegia of the left side. Eleven days after the operation power began to return in the paralyzed limbs, and the man eventually recovered entirely.

A Case of Poisoning with Liquor Morphinæ Hydrochloridi; Recovery.—Horace C. Colman reports the case of a patient with pulmonary tuberculosis who took a little over a grain of morphine hydrochloride in rather less than twenty-four hours, and presented quite marked symptoms of poisoning. Much benefit was derived from inhalation of ammonia.

An Unusual Case of Blood-Poisoning.—J. M. Pearson reports a case of septic poisoning in a woman eight days after childbirth. There were no symptoms indicative of a uterine origin of the trouble, but the uterus was nevertheless curetted and some small shreds of placental tissue were removed.

An Adult Infested by Oxyurides for Over Twelve Years.—E. Hawkins reports a case of this nature, in which, after many remedies had been vainly tried, a cure was obtained by the administration of four grains of cascara sagrada every seventh night for several months.

The Pharmacopœia in Its Relation to Medical Men.—The second of a series of lectures on "Pharmacy and the British Pharmacopœia," delivered before the Society of Apothecaries of London by Nestor Tirard.

The Surgical Treatment of Tuberculous Diseases.—By W. Watson Cheyne. See Medical Record, vol. lvii., p. 25.

Medical Press and Circular, December 20, 1899.

Suppurative Mastitis in the Newly Born.—Francis A. Winder relates a series of four cases of suppuration in the breasts of children shortly after birth. Three were girls and one was a boy. Discussing the subject of lactation in children, he says that it may be seen in male as well as in female children, and that it generally occurs very soon after birth. The quantity secreted is very small and tends to disappear spontaneously; it never oozes from the nipple, and it takes some amount of squeezing to cause it to exude, but if it is "drawn" more is secreted to take its place. It is this "drawing" which causes the breasts to inflame. There is always a history of interference, squeezing, rubbing, pressing the breast, etc. And finally, it is frequently a unilateral phenomenon. It is more frequently seen in the first-born of families. As to treatment the writer says, "Foment and leave alone."

Recto-Vaginal Hæmatoma.—Arthur Giles reports a rare instance of recto-vaginal hæmatoma following normal labor. There was pain beginning in the abdomen and later on referred to the rectum as well. On the morning after delivery the perineum was bulging and hæmatoma was diagnosticated, the tumor being of the size of a fœtal head, the skin being almost gangrenous. After careful cleaning an incision two and a half inches long was made over the most prominent point, and fresh blood and clots were washed out. No bleeding points could be detected. The cavity was syringed out with warm iodine lotion (ʒ i. to O i.) and packed with strips of cyanide gauze. There seemed to be no adequate cause for the hæmatoma, which in this situation is rare. The indication here seems to be to incise and pack early, and not to temporize as in hæmatomas of some other situations.

Cases of Amenorrhœa Treated with a New Salt of Manganese.—Dr. Murrell relates the case of a nursemaid, unusually anæmic, presenting a condition of uncomplicated oligochromæmia. Five grains of citrate of manganese were given three times a day. The following month the patient menstruated for the first time in nine months. A second instance of amenorrhœa treated with prompt results is given. The citrate is soluble and has advantages over binoxide and permanganate.

The Surgical Treatment of Tuberculous Diseases.—By W. Watson Cheyne. See Medical Record, vol. lvii., p. 25.

Some Notes upon the Tuberculin Test.—By Edward O. Otis. See Medical Record, vol. lv., p. 690.

Berliner klinische Wochenschrift, December 11, 1899.

The Scientific Establishment of Organotherapy.—A. Loewy and P. F. Richter make an earnest plea for the rescue of organotherapy from the semi-charlatanry into which it has in certain respects fallen, and for its establishment upon a firm, scientific basis. They recall the over-confident promises of Brown-Séquard and his suggestion of the phrase "internal secretion," and note the scepticism with which the profession has come to regard many forms of organotherapy, but from a review of some of the more important contributions to medical literature and from their own experiments they show that it has a true scientific basis which, while it needs to be more carefully determined in many directions, yet offers the certainty of positive therapeutic results. The greater part of the article is occupied with a description of the effects of the administration of ovarian extract (oöphorin) upon the female organism, showing that while extirpation of the ovaries is regularly followed by atrophy of the uterus and various nervous and psychical disturbances, the use of oöphorin after operation will prevent the occurrence of most of these untoward manifestations. They also commend the use of the preparation in chlorosis, claiming that it improves the blood state and leads to a regulation of the menstrual function.

Acute Lead Poisoning.—W. Zinn reports the case of a woman of thirty-three years who took in the dark by mistake a spoonful of a mixture called "silver-polish," which was afterward shown to be mainly oxide of lead. Six hours later she began to have the symptoms of mild abdominal irritation, which continued with varying severity for nearly three weeks, when she was seen by the author. He found the usual signs and symptoms of acute lead poisoning. The patient was placed on the customary treatment, but it was some ten weeks before her symptoms had entirely subsided. A reference is made to similar cases previously reported.

Certain Further Aspects of the Treatment of Tuberculosis.—E. Klebs calls attention to the gastric disturbances of tuberculosis, stating that in cases of pure achylia gastrica thyroid atrophy is often present. He inclines to the belief that this atrophy is due to the influence of the toxin of the tubercle bacillus. He has employed in these cases the fresh thyroid juice with most excellent results. A second point mentioned is that of mixed infection and the possibility of utilizing this principle in therapeusis. The author relates the histories of two cases of tuberculosis treated with injection of a substance isolated from typhoid cases. Marked benefit was noted in both.

Treatment of Whooping-Cough with Antitussin.—Max Heim commends the use of this remedy, claiming that it lessens the number and severity of the paroxysms, loosens secretion, may confine the malady to the catarrhal stadium, and is free from injurious effects. The remedy is a salve to be applied externally.

The Influence of Oöphorin on Albuminous Metabolism.—From experiments on a castrated dog, A. Loewy concludes that the internal administration of oöphorin leads to an increase of metabolism, and that at the expense of the non-nitrogenous substances in the body.

Münchener med. Wochenschrift, December 12, 1899.

Contribution to the Pathology of Syphilis of the Brain and Spinal Cord.—Theodor Struppler says that although earlier authorities thought that syphilitic affections of the brain developed only during the later stages of the disease, it is now acknowledged that they may occur at any time during its course, from a few weeks to years after the primary infection, occasionally even before the eruption. In such cases the suggestion might sometimes be made that these manifestations are due to reinfection, the first infection having been unnoticed. The following conditions are possible for the formation of a cyst: circumscribed gummata, induration of brain tissue, encephalitis, syphilitic arteritis with thrombosis, and encephalomalacia. Circumscribed gummata in the central nervous system are found chiefly in the meninges or in the cerebral cortex; in the cranial nerves, central ganglia, and ventricles. Heubner believed that simple encephalitis and softening of the brain, not dependent on diseased blood-vessels or new growths, frequently accompany syphilis. Oftentimes an exact differential diagnosis between specific encephalitis and encephalomalacia cannot be made intra vitam. The youth of the patient and the lesions found at autopsy in other organs are most important factors in forming a diagnosis. According to the investigations of Lamy, all syphilitic affections of the spinal cord are divided into spinal meningitis, meningomyelitis, and syphilitic myelitis, all of them being of vascular origin.

Involvement of the Anterior Abdominal Wall in Carcinoma of the Stomach.—Rudolf Seggel reviews this subject, and says that often gastric carcinoma is without symptoms—at least those referable to the stomach itself. As in the case of gastric ulcer, so in cancer, direct extension to the anterior abdominal wall is unusual. According to Strümpell, the extension of carcinoma to neighboring organs is just as rare. Murchison, in a series of three hundred cases, found only twenty-five of gastric fistula through the abdominal wall, and of these only six were carcinomatous. Lange, in two hundred and ten cases of cancer of the stomach, reports only one perforation of the abdominal wall. Cases of perigastritic abscess, originating from gastric carcinoma resulting from ulcus ventriculi and opening through the abdominal wall, have been reported. Still another mode of infection of the abdominal wall is by means of metastases through the lymph channels.

Syphilis of the Aorta as the Cause of Aneurism.—The teaching that aortic aneurism has been the result of endarteritis or arteriosclerosis has largely obtained, but Arnold Heller brings forward many arguments in favor of syphilis as the most usual cause of this affection. Clinical statistics support this view, and the results of antiluetic treatment in cases of aneurism also favor it. The syphilitic origin seems especially clear in cases occurring in youth and early adult life. According to statistics, the proportion of cases of syphilitic origin to all cases of aneurism is as follows: Heller, eighty-five per cent.; Malmsten, eighty per cent.; Rasch, eighty-two per cent.; A. Fränkel, thirty-six per cent.; Welch, sixty-six per cent.; Etienne, sixty-nine per cent.; and Gerhardt, fifty-three per cent.

Indications for the Transplantation of Skin-Flaps Without Pedicle.—Reuter, in a discussion of the relative merits of the Krause and Thiersch methods of skin transplantation, shows that although Thiersch's method will undoubtedly hold the chief place in the future, that of Krause is most valuable when there is a special necessity for preserving the elasticity of the part. Its value depends more on the recognition of the indications for its application than on the technique. It is especially useful in cases in which there is little danger of infection or of insufficient nourishmnt of the parts and in cases of contracture of joints from scars. Reuter cites one case in a child in which the skin-flap applied to the knee grew proportionally with the part on which it was planted.

The Munich Law Concerning the Hygiene of Dwellings.—Biberfeld discusses the possible working of a statute which provides that, if an apartment or living-room is found to be in an unsanitary condition, the tenant can leave at any time without giving legal notice.

A New Fermentation Saccharometer.—Theodor Lohnstein describes and pictures an apparatus for determining the percentage of sugar, which can be used with undiluted urine. The saccharometer is patented in Germany.

A Bicycle Satchel for Physicians.—Arthur Mueller describes an obstetrical bag which can be readily attached to a bicycle.

Deutsche medicinische Wochenschrift, Dec. 14, 1899.

Cholecystotomy with Waterproof Drainage of the Gall Bladder.—Poppert describes a new procedure which he has adopted with excellent results in the operative treatment of gall stones. The danger of the methods hitherto in use in the treatment of the gall bladder, especially when the latter is small, has been that of leakage into the abdominal cavity with resultant peritonitis. The author, after the gall bladder has been emptied, inserts a catheter and sutures the walls of the viscus firmly around it. Experience has shown that these sutures will hold absolutely for from ten to fourteen days, by which time adhesions will have formed, removing all danger of leakage. The gall bladder is not sutured to the external wound, but is left in its normal position, while the abdominal wound is carefully tamponed around the catheter. When the latter is removed there will be a fistulous tract leading down to the gall bladder, but walled off from the peritoneal cavity. This soon closes by granulation.

Room Disinfection by Means of Formaldehyde.—M. Friedemann presents a series of tables showing the results of disinfection experiments with formaldehyde, two different forms of apparatus being employed. The results obtained were encouraging, though very resistant bacteria and spores were not employed in the experiments. The main objection was the villanous odor, which rendered the rooms uninhabitable for two or three days after the disinfection had been effected.

The Formation of Sugar from Albumin.—Ferdinand Blumenthal presents an elaborate review of the literature bearing upon this question, and comes to the conclusion that we have as yet no entirely satisfactory and unexceptionable theory of glycogen formation in the economy.

Vratch, December 4, 1899.

The Plague Epidemic at Kolobovka in 1899.—A. M. Levin gives the history of this epidemic occurring during the past summer at Kolobovka, a village of thirty-five hundred inhabitants in the Astrakhan province, Russia. The disease was of a malignant character, twenty-three out of the twenty-four cases terminating fatally. Of these twenty-three deaths eighteen occurred within the first three days of the disease. Prompt measures of inspection, isolation, and disinfection were instituted, and the epidemic lasted only about four weeks, the first patient falling ill on July 16th and the last one on August 9th. On August 11th and the following days all the inhabitants of the village, except forty, were inoculated with Haffkine's serum in doses of 3 c.c. for men, 2 c.c. for women, 1 c.c. for children of school age, and from $\frac{1}{10}$ to $\frac{1}{3}$ c.c. for children under ten years of age. No ill effects followed the injections, and this first experiment of inoculation of an entire community was counted a success.

Rupture of the Perineum in Coitus.—K. K. Skrobanski reports the case of a healthy peasant woman, twenty-two years of age, who suffered a rupture of the perineum during the first attempt at coitus on her wedding night. The tear was about 2 cm. in depth and did not involve the anus. The wound was washed out and tamponed with iodoform gauze. Four days later the wound was nearly healed and the patient was allowed to return home, but was cautioned not to permit coitus for some time. She did not return, and when hunted up a week later was found to have disregarded the injunction of abstinence, but with no evil results. The author reviews the literature of this accident, and finds records of twenty-two cases collected by Neugebauer.

The Penetration of Formaldehyde into Objects in the Disinfecting-Chamber.—M. G. Verbalovski gives in detail the results of several experiments made to determine the efficacy of the Kareëff disinfecting-chamber. He found that the formaldehyde would thoroughly disinfect the interior of mattresses, pillows, upholstered furniture, etc., without injury to the fabric.

Bulletin de l'Académie de Médecine, December 5, 1899.

Upon the Existence of Arsenic Normally in Animals and Its Localization in Certain Organs.—Armand Gautier, as the result of experimentation upon animals and man, has found arsenic to be normally present in appreciable amount in the cell nuclei of the thyroid and thymus glands, in the skin, and probably in the pituitary gland, but absent from all other tissues. This discovery may have an important bearing on the treatment of diseases due to troubles of the thyroid gland, and should also be taken into account by toxicologists. Arsenic found in organs other than those mentioned would indicate poisoning.

Prophylactic Treatment of Syphilis.—M. Fernet takes exception to the way in which the out-patient clinics for venereal diseases attached to certain hospitals in Paris are conducted, especially to the publicity and to the overcrowding. He also complains that many persons of means apply for gratuitous treatment, whereas the clinics should be reserved for the really poor. He, however, disapproves of Fournier's suggestion that the venereal service in hospitals be under the charge of physicians selected by competitive examination, thus creating a new specialty in hospital service, which he considers to be against the interests of science and of physicians.

The Treatment of Functional Epilepsy by the Bromide of Strontium.—J. V. Laborde has found that 10 to 12 gm. of this drug daily, in divided doses, is efficacious in epilepsy.

Meditsinskoe Obozrenie, December, 1899.

Osteomalacia in Women and Its Treatment.—V. V. Uspenski advises total castration in the treatment of osteomalacia. In cases of pregnancy the removal of uterus and ovaries may be effected through the vagina in the early months, but Porro's operation is to be resorted to in the later months. In the early period of pregnancy, when a radical operation is not consented to, the best treatment is to induce abortion and follow that with a course of phosphorus. All the other modes of treatment—by salt baths, mud baths, sulphur baths, the internal use of mineral waters, nourishing food, a change of residence, weaning of the child (if the woman is nursing), the use of cod-liver oil, quinine, iron, lime salts, etc.—are uncertain and find application only as succedanea to the treatment by phosphorus or operation.

The Sense of Hearing in the Insane.—V. E. Larionoff tested the hearing in twenty cases of mental disease, in twelve of which there were or had been at some time auditory hallucinations. Two patients had fairly good hearing, but the others were either entirely deaf in one ear or could hear the watch only on contact or at a distance of from one to six vershki. In nearly every case bone conduction was absent both for the watch and the tuning-fork; yet nearly all could distinguish tones fairly well. The author concludes from this that there is a special musical centre in the brain, and this conclusion, he says, is confirmed by the results of his physiological and anatomical investigations.

Normal Pregnancy and Childbirth after Operation for Ectopic Gestation.—The course of normal pregnancy following the operative treatment of a previous extra-uterine gestation is, according to A. N. Solovieff, unquestionably more favorable than after an expectant plan of treatment. He contends therefore that, immediately upon a diagnosis of ectopic pregnancy being made, we should remove the fœtal sac in order to avoid those dangers which arise from the existence at the same time of the products of an intra-uterine and an extra-uterine pregnancy. The author reports a case of his own and cites many from the literature in support of this view.

Syphilitic Cirrhosis of the Liver and Chyliform Ascites.—V. Poliakoff reports a case of syphilitic cirrhosis of the liver, occurring in a woman forty-eight years of age, which was accompanied by a transudation into the peritoneal cavity of a milky-white fluid. This fluid was not chylous, as analysis failed to show the presence of fat. The author has found three cases of a similar peritoneal effusion in the literature, each of which was associated with a cancerous affection of the peritoneum. In none of these cases could the cause of the peculiar color of the effused fluid be determined.

The Nails of the Human Hand.—P. A. Minakoff has made an exhaustive study of the nails of the hand, some of the results of which he regards as of medico-legal importance. Among other things he asserts that the nails of the right hand in a right-handed person are wider by from one-half to two millimetres than the corresponding nails on the left hand, while in left-handed persons the reverse obtains, and in the ambidextrous the nails are of equal size on the two hands.

The thickness of the nails diminishes progressively from the thumb to the little finger.

A Case of Ovariotomy in the Fifth Month of Pregnancy.—I. S. Batasheff reports this case, in which the operation was successfully performed without interruption to the pregnancy.

A New Culture Medium for Tubercle Bacilli.—O. I. Bronstein has obtained very satisfactory results with Hesse's culture medium, as described in the *Zeitschrift fur Hygiene*, xxxi., 3.

A Review of Insane Asylum Reports in Russia for 1897.—V. C. Serbski analyzes the reports of seventeen institutions in different parts of Russia.

Revue de Thérapeutique, December 1, 1899.

Treatment of Affections of the Prostate and Seminal Vesicles in Acute and Chronic Blennorrhagia.—Jules Janet gives an exposé of the signs which permit a diagnosis of prostatic and seminal-vesicle implications in acute and chronic gonorrhœa: First, we must distinguish purely congestive from infectious prostatitis. The former is apt to come on after abundant washings with permanganate of potassium, giving difficulty in urination, a sensation of weight in the rectum, which persists between the washings. It is distinguished from the infectious form by the second test glass of urine remaining clear or clearing up rapidly under the influence of washings, and secondly in that this condition of the prostate does not interfere with treatment and does not prevent the permanganate washings from having their usual rapid effect. In case of infectious prostatitis we find (1) that the second test glass remains turbid despite the washings, and that we find quite lively gonococci, when perhaps there are few or none at all in the drop taken from the meatus; (2) that the treatment by permanganate does not succeed, and that recurrences are noted at the least suspension of washings; (3) that massage of the prostate followed by a washing is all that is necessary to clear up the urine of the second glass. The author then describes the symptoms of affections of the prostate and vesicles in chronic gonorrhœa. The article is to be continued.

Beer Yeast in the Treatment of Gastro-Enteritis, Particularly of Infancy.—E. Thiercelin and A. Chevrey report the result of experiences during the epidemic of last summer in Paris. It is thought that the presence of yeast in the stomach and intestines interferes with the development of germs and diminishes gastro-intestinal fermentation, or that its association with the gastro-intestinal germs determines a diminution of the virulence of the latter by a phenomenon of symbiosis analogous to but opposite to that which is produced in microbic associations when the virulence of the germs is great. In all the observations there was a rapid effect produced upon the diarrhœa. Levurin, which is looked upon as the active principle of yeast, gave equally good results, and would point to the action being due to the antiseptic properties of the yeast.

French Journals.

Treatment of Tinnitus.—After giving an anatomical description of the ear with illustration, and going over the various affections of the organ itself and of other organs capable of causing the symptom of buzzing, the various remedies employed are passed in review. Cimicifuga racemosa has been recommended by Robin and Mendel as a drug governing vascularity and a moderator of reflex irritation. It is used as a tincture (gtt. xv.–lx.), fluid extract (gtt. x.–xxx.), or cimicifugin (product of precipitation of the tincture by water (5–20 cgm.). These authors have found, with the exception of cases lasting over two years, that cimicifuga gives prompt and complete results.—*Bulletin Général de Thérapeutique, December 8, 1899.*

Autopsy of the Stomach.—Maurice Letulle, in a beautifully illustrated article, discusses examination of the stomach *in situ*, ablation, line of incision in opening, examination of the open stomach, cutting, coloring, preserving, etc.—*La Presse Médicale, December 13, 1899.*

Pertussis and Its Treatment.—E. Govin advocates aerotherapy, and his remarks upon local treatment can be summed up in the two words asepsis and antisepsis. —*Journal de Médecine, December 10, 1899.*

Anæsthesia by Nitrous Oxide and Oxygen.—R. Nogué presents a new inhalation apparatus which is illustrated by three drawings, and he cites instances in which it has been employed.—*La France Médicale, December 8, 1899.*

Expression and Digital Compression of the Prostate.—A. Guepin treats of massage in various forms as applied through the rectum.—*La Tribune Médicale, December 13, 1899.*

Localized Suppurations in Women After Delivery.—Grandmaison has recently studied three cases of localized suppuration after childbirth bacteriologically as well as clinically, and concludes that somatic causes have played the chief rôle. — *La Médecine Moderne, December 13, 1899.*

Il Policlinico, December 1, 1899.

Relative Toxicity of the Urine in Children and in Adults.—Ettore Santagelo states that in healthy adults the urotoxic coefficient, or the amount of urotoxins emitted during the twenty-four hours for each kilogram of body weight, is between 0.2 and 0.3. In healthy children the coefficient is between 0.3 and 0.4. The urine of children is less toxic than that of adults, but only absolutely so, for children in the twenty-four hours manufacture per kilogram of their body weight a larger amount of toxic principles than do adults in the same period of time and for the same weight. The physiological effects produced upon animals by the urine of healthy children are the same as those caused by the urine of adults. The toxicity of either adult or infantile urine is in inverse ratio to the total amount excreted in twenty-four hours, and in direct relation to the specific gravity, the depth of color, and the per cent. of urea of the urine. This points to the evident toxicity of urea. The toxicity of the urine in children suffering from ankylostomiasis differs but slightly from that of healthy children.

Polyclonia and Chorea.—Augusto Murri says that so far no essential distinctions have been established between polyclonia, tic, and chorea. This is probably due to the fact that these motor disorders all arise from one area in the brain. While many forms of choreic movements are now classified as symptoms merely, Sydenham's chorea must still be considered as a disease, because we do not as yet know with what morbid process it should be connected, but it is probable that it signifies some as yet unknown lesion in the "zone of Rolando."

La Riforma Medica, Dec. 4–7, 1899.

Experimental Researches upon the Action of Morphine on the Development and Course of Tuberculous Infection.—G. Tedeschi, desiring to ascertain the action of morphine in tuberculosis, inoculated a number of guinea-pigs with tuberculous sputum and then carefully noted the effect of certain given doses of morphine. The animals used are extremely resistant to morphine poisoning, but not immune. The lethal dose is about 0.06 to each 100 gm. of body weight, or 0.60 to each kilogram. The morphine was found to accelerate the disease instead of retarding it, but was less injurious in its effects the further advanced the disease. In practice, therefore, morphine should be resorted to in advanced tuberculosis only. Further studies upon this subject are desirable.

Toxic Psychoses due to Thyroidin.—Corrado Ferrarini reports the case of a young woman who developed symptoms of violent mental disturbance after the administration of thyroidin for the reduction of obesity.

Annals of Surgery, December, 1898.

Properitoneal and Interstitial Inguinal Herniæ.—Van Buren Knott has found only sixty-six cases of this nature on record. He relates a personal case occurring in a farmer aged sixty-four years in which operation was followed by an uneventful recovery. He was able to operate in five hours after the first symptom of obstruction had been experienced, but even here the vitality of the gut was so lowered by the extra pressure following its incomplete reduction, that the propriety of returning it into the abdomen was for some time in question. In all cases of inguinal hernia presenting an unusual location, or shape, of the sac, great care should be exercised that a reduction of a portion of the contents of the sac into another compartment of the same be not mistaken for a complete reduction into the abdomen. He believes that all cases of properitoneal or interstitial inguinal herniæ, whether strangulated or not, should be immediately subjected to an operation, as thereby the unusual dangers of this condition are minimized.

Operative Relief of Ectopia Vesicæ.—D. E. Mundell suggests the following method which he has successfully demonstrated on the lower animals: Transplant a portion of bladder wall of, say, a sheep to the lower lateral abdominal fascia of the patient. After a period of seven or eight days, the union of the two tissues is sufficiently strong to allow a plastic operation, whereby a skin flap with the bladder attached may be swung over upon the extruded bladder, and the edges of the attached piece of bladder sutured to the defective bladder. The skin flap will afford sufficient nourishment to the exsected bladder until union has occurred between the bladder edges, then the superimposed skin may be separated from the now perfect bladder. By employing a transplanted piece which has been removed from the lower portion of the bladder of the animal, the aggregation of the circular muscular fibres will approach very nearly to an ideal sphincter.

Nitrous Oxide and Ether by the Open Method.—A. H. Miller advocates the commencement of anæsthesia with nitrous oxide, and, as soon as anæsthesia is complete, the removal of the inhaler and the substitution of the ether cone. He has notes of one hundred and sixty cases in which no one has been conscious when the change was made or has experienced anything disagreeable from the anæsthetic. The average time required in his cases for anæsthesia has been 3.05 minutes.

Differentiation of the Urines.—F. Tilden Brown makes a plea for a more general employment of ureteral catheterization, claiming that it enables us to determine whether there is a urinary lesion present, and if so whether this lesion is in the superior urinary tract or the inferior. When a renal lesion exists we can determine which kidney is affected, what is the nature of the lesion, and what is the condition of the other kidney.

Persistent Thyro-Glossal Duct.—G. E. Armstrong has seen one instance of this in a boy aged six years. A small lump the size of a pea was situated in the median line of the front of the neck about three centimetres below the hyoid bone. It gradually became the size of a filbert, and the skin over it was red and inflamed. An incision discharged a colloidal material. The sac was scraped but refilled. Later the sac was again opened and the cyst wall and duct were dissected out. There was no recurrence.

Proper Wire for Introduction into an Aneurismal Sac.—J. C. Reeve, Jr., from experiments in passing wires of different kinds into a hardened bladder finds that a silver or gold wire, about .0085 inch in diameter, and of sufficient temper to retain its coil, would seem to be all that is required to fill, when carrying the positive galvanic current, an aneurism with clots, and is not so thin as to be in danger of breaking.

Mechanism of Fracture of the Neck of the Radius.—E. R. Corson has examined by the *x*-ray apparatus a case of this comparatively rare fracture. Its rarity is due to the fact that it enters only indirectly into the formation of the elbow joint. In the present case he was led to believe that the head was torn off from the neck, and he believes that this is the usual way in which the accident occurs.

Actinomycosis in Man with Special Reference to the Cases which have been Observed in America.—J. Ruhräh finishes in this article his elaborate study of this disease. There seem to be some sixty-five cases on record, all of which have been carefully analyzed. A voluminous bibliography is appended.

The Medical Examiner, December, 1899.

The Manner in which the Effect of Muscular Exercise upon the Heart and Blood-Vessels Alters the Expectancy of Life.—T. Sidney Short, after a brief description of the anatomy and physiology of the circulation and the effects of muscular exercise upon the human body, divides the takers of exercise into three classes: First, those whose muscles want exercise because they do not get enough. In these the heart muscle is not diseased but flabby, pale, and easily fatigued. Here exercise is a benefit and increases the insurance value of the risk. Too great exercise distends the heart because its walls have but little tone. Exercise must be moderate, frequently repeated, and regular. The second class consists of those who keep their muscles in good condition. Regular exercise is essential to keep them up to their normal state of health. The special danger to this class is a long continuation of slight over-degrees of strain. Long-continued stress of overwork of any kind gradually produces an effect which shortens their lives. The third class is made up of those who have some defect in the vessels. Exercise is not here to be wholly tabooed. Suitably arranged exercises can be taught one of this class until he has built up his heart to allow of his taking moderate exercise quite comfortably. When actual disease is present, exercise must be taken most cautiously, and all sudden strains absolutely forbidden.

A Study of the Head and Face of Interest to Medical Examiners.—William C. Krauss calls attention to the abnormalities of face, skull, eyes, and ears noted in a study of various types of degeneracy, and gives measurements of one illustrative case. The article is in essence a study of the practical application of the principles of modern anthropology to the work of the insurance examiner. Attention is called to the present incompleteness of the science, and the admission is made that no special type or types of cranial deformities or irregularities have as yet been found pathognomonic of any class or classes of degenerates.

Study of Four Hundred Cases of Tuberculosis.—The cases were all examined by C. A. McCollom for admission to one of the fraternal orders. He states that it takes five factors to make a "gilt-edge" risk: a full family age, clean family history, standard weight, clean personal record, and normal physiological condition. A minus combination of any three of these would constitute a questionable risk which might eventually develop tuberculosis.

The Use of Alcoholic Beverages as It Applies to Life Insurance.—P. J. Strathy makes three classes of drinkers—the tippler, the spree-devotee, and the man who is almost always temperate but has an occasional "festivity." If a man drinks frequently between meals, drinks early in the day (perhaps a cocktail before breakfast), he is not a fit subject for life insurance.

Ethics of Examining.—S. T. McDermith says that examiners should never compliment applicants upon their good physical condition, should never abuse the medical director at the home office if his recommendations are vetoed, and should give a full and free report of the pros and cons in a doubtful case.

Medicine, December, 1899.

Milk as a Carrier of Infection.—C. O. Probst describes the measures necessary for protection against milk infection. Since milk contains all the essential elements of food, its use is almost universal. It is an admirable vehicle for conveying to man many pathogenic micro-organisms. It may be contaminated by an infected atmosphere. Diphtheria, scarlatina, and typhoid fever are chiefly to be dreaded as agents of its infection after it has left the cow. Tuberculosis is perhaps a more important disease, and generally infects milk before it leaves the cow. There should be systematic, rigid inspection of the dairy itself, including the cows, their food and water supply, the stables, milk-house, and persons handling the milk. The permit system, depending on the results of inspection in each case, should be strictly enforced. There must be a revolution in the construction of cow stables. They must be light, clean, well ventilated, and spacious. Finally, the hearty co-operation of the dairymen is an important element of success in obtaining pure milk.

Malignant Tumors of the Eye.—William H. Wilder asserts that the malignant tumors affecting the conjunctiva are usually epithelial, although sarcoma sometimes appears at the sclero-corneal junction. Primary tumors of the cornea are extremely rare. New growths of the iris are not common. Of all tumors affecting the eyeball, those most to be dreaded occur in the choroid, ciliary body, and retina. There are four stages in the clinical history of these cases: (1) a period of early growth before there is any irritation; (2) a period of inflammation; (3) perforation of the eyeball and extension of the tumor outside the eye; (4) metastasis.

General Surgical Anæsthesia and Anæsthetics.—Ernest J. Mellish states that chloroform almost invariably kills by its effect primarily upon the circulatory system, and ether by its effect primarily upon the respiratory system. Anæsthetics act directly or indirectly upon all the tissues, interfering profoundly with metabolism. The anæsthetic should be selected according to the conditions present in the individual case. No person who has not a wholesome fear of anæsthetics can be trusted to administer them. The pupillary reflexes constitute the best guide in anæsthesia. Anæsthetic mixtures are generally less safe than the "straight goods."

The Treatment of Syphilitic Stenosis of the Larynx by Intubation.—Thomas C. Evans advocates intubation in syphilitic stenosis of the larynx for the relief of dyspnœa, adding that there is no shock nor hemorrhage nor danger of infection.

Dublin Journal of Medical Science, December, 1899.

Venereal Diseases and Their Therapeutics.—T. L. Swan says that the classification of venereal diseases into gonorrhœa, chancroid, and Hunterian chancre is unalterable, but that the three have nothing in common except locality. He describes the genesis and development of the soft sore, and notes the comparative absence at the present time of phagedæna. This he ascribes to the fact that as persons in civilized communities become immunized to a degree by a remote or recent inoculation by the microbes of the diseases of civilization, so persons showing no powers of resistance have either escaped the immunizing taint or it has become attenuated and lost. As to the treatment of syphilis he notes that the great difficulty is the length of time required to combat the periodic manifestations of the toxins. He prefers the intramuscular injections of the mercurial cream of Lambkin, the formula not being given. He adds a few words concerning two types of the disease occurring in individuals completely unprotected by influences which confer partial immunity, one malignant syphilis and the other syphilis tertiare precox. In the latter case, mercurials, iodides, etc., were without effect, but thyroid tablets given internally rapidly healed the rupial sores which covered the entire body.

Observations on the Treatment of the Third Stage of Labor, Especially as Regards the Delivery of the Placenta.—G. Cole-Baker has never seen in any text-book a description of what he regards as a perfectly satisfactory method of delivering the placenta and membranes. He applies a third ligature to the cord in addition to the conventional two, the third being two inches from the first and on its maternal side. The special points to which he calls attention are as follows: 1. The importance of the careful treatment of the third stage of labor, and unceasing control of the uterus during this stage; 2. The binder in many cases is superfluous; 3. The advantages of three ligatures on the umbilical cord; 4. Credé's method of expression relates only to the first step of the third stage; 5. Traction (vis a fronte) is equally good, if not preferable, treatment to "detrusion" in the second step of the third stage; 6. An ideal and perfectly satisfactory treatment for the third and last step of the third stage has yet to be described.

Innominate Aneurism.—J. Craig gives the notes of a case occurring in a man of sixty-five years. He was treated with morphine, saline laxatives, milk diet flavored with coffee, and a roast apple four times daily, and a daily dosage of gr. xv.-xxx. of sodium iodide in milk. All walking was strictly forbidden. At the end of eighteen months, except for a slight prominence and diminished resonance over the former site of the sac, all physical signs had disappeared and the patient was in excellent condition.

The Medical Chronicle, December, 1899.

The Dietetic Treatment of Disease.—J. Dreschfeld holds that in acute fevers it is well to give the patient an abundant amount of food, but not too much liquid food. In chronic, febrile diseases dietetic treatment is all-important, phthisical patients requiring thirty to thirty-five calories per kilo weight, so that quality should also be considered and much fat given. In gout, the nitrogenous diet is usually best suited to those cases in which the patient is stout, has dyspeptic symptoms, and passes urine not rich in urea. Some appear to do best on a vegetable diet. A diet rich in proteids and carbohydrates often gives rise to dyspeptic troubles. In diabetes the usual diet may often cause total disappearance of the urine, but fat and alcohol should be added to it. In chronic Bright's, the diet should contain a small quantity of proteids, and fat and carbohydrates give the necessary heat. In "dyspepsiæ" light and finely divided albuminous food is well borne by patients suffering from hyperacidity, and even when the hydrochloric acid is absent, if the motor power of the stomach is still intact. If not intact, small quantities of food in a concentrated form must be given. In order to obtain the proper nutritive value we should try to give fat in the various stomach affections. Butter, cream, and bacon are usually well digested, but cod-liver oil and pancreatic emulsion are sometimes better borne. Some functional derangements of the stomach are only types of neurasthenia and require forced feeding. These are cases in which there is pain after food, or persistent vomiting, with perhaps enteroptosis, displacement of the kidney, etc., and in which emaciatation takes place rapidly. Electrical treatment and massage are important aids, but often bodily rest, and the partaking of large quantities of milk, first alone and then in combination with carbohydrates and albuminous food, will obtain a cure.

Fractures of the Hyoid Bone and of the Laryngeal Cartilages.—J. E. Platt reports a case. The chief danger of such injuries, he says, lies in the interference with respiration, and resort to early trachelotomy would greatly diminish the mortality. If the fragments of a fractured hyoid bone be displaced inward, an attempt may be made to reduce them by a finger in the throat. The parts should be kept at rest, and, if the patient cannot swallow, nutrient enemata should be given. Accidents to the hyoid bone have originated in almos tall cases from some form of direct violence.

The Edinburgh Medical Journal, December, 1899.

Appendicitis.—Gilbert Barling reports one hundred and seventeen cases operated upon. In forty-two the operation was performed in a quiet interval, and only one death occurred. The remaining seventy-five cases he divides into four groups: 1. The "safe" abscess, with the pus so localized by adhesions that the surgeon opens into it without danger of infecting the general belly cavity. 2. "Non-adherent abscess" in which the pus is shut off from the general cavity, but the operator has to open the general cavity to seek it. 3. "Subacute," widespread suppurative peritonitis. 4. Acute fulminating peritonitis. Group 1 comprised nineteen cases with one death; group 2, twenty-one cases, no deaths; group 3, nine cases with three deaths; group 4, twenty-six cases with eleven deaths. The total mortality is twenty per cent., which the author considers to be in most instances the mortality of delay. The diagnosis of appendicitis being often difficult, the physician should see his patient at short intervals in the first three or four days of the attack. The great thing in recognizing a case suitable for operation is not to take any one point as essential to diagnosis, and to dwell not so much upon the absence of any one particular feature as upon the intensity of such symptoms as are present.

The Effect of Extreme Cold on Injury.—Henry A. Duffett reports two cases in which extreme cold had a beneficial effect on injuries by producing a form of dry gangrene. One was that of a sailor whose finger was injured by being caught in the cogs of a winch. It was wrapped in a not over-clean piece of lint, washed with ice-water. The cold was intense and the man was on deck constantly. A fortnight later, the author saw the patient, and found the joint black and shrivelled, insensitive and smelling foully. He amputated the finger; primary union occurred, and the man was at work in ten days.

Bacteriology of Typhus Fever.—Andrew Balfour believes that the diplococcus is derived from the blood, because it occurs so persistently in typhus and typhoid cases, and because of the post-mortem occurrence of an organism almost identical with that derived from the living blood.

Aconite Poisoning.—W. A. Potts reports the case of a man who swallowed half an ounce of liniment of aconite, and recovered under treatment with strychnine and whiskey.

Acromegaly.—G. A. Gibson reports a case which he describes at length. Treatment of this disease, he says, has been attempted in two directions—one the removal of the pituitary body, and the other the administration of extract of that body. Neither has given the slightest good result. The use of thyroid extract has frequently produced improvement, but, on the other hand, injurious results have been described. Remissions take place in most cases of acromegaly. The patient's strength must be supported, and any disturbing symptom treated. In Gibson's case the use of thyroid tabloids caused considerable improvement, accompanied by a steady loss of weight.

Atheroma of the Aorta.—John R. Ambler comments on the frequency of cases of this affection met with in post-mortem examinations. In one hundred patients in an asylum, the author found the condition in sixty-nine per cent. The average age of all cases in which atheroma was noted was: males 53.14 years; females 52.37 years. In general paralysis in which it was noted, the average age was: males 45.37 years; females 40.5 years. In phthisis pulmonalis, the average age was: males 41.18; females 36.46. Is this condition the result of impact of the blood, or of disease; and if so, what disease?

The Simulation of the Symptoms of Other Maladies by those of Chronic Renal Disease.—H. W. Syers thinks that unless the urine be systematically examined in all cases, renal disease may often be overlooked, as it simulates so many other affections. Its influence in the causation of cardiac lesions seems to be as important as that of acute rheumatism, and the effects even more disastrous. The arteries are also often affected, and inflammation of the pericardium may occur, although rarely. In middle-aged patients suffering from distention and pain after food, loss of appetite, and irregularity of bowels, it is never safe to omit an examination with cold nitric acid. Troublesome headache always calls for such an examination. Constipation alternating with diarrhœa is always suggestive of renal disease, as is uncontrollable or fecal vomiting. Tingling and numbness in one of the extremities with some headache and nausea may be the only early signs of cirrhotic kidneys, or there may be merely giddiness and swimming in the head. Various diseases of the chest may be simulated by kidney affections shown by modifications in the act of breathing. Anæmia is a well-recognized symptom of renal disease, and is sometimes practically the one feature in the case.—*Treatment, December 14, 1899.*

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 21, 1899.

William H. Thomson, M.D., President.

State Care of Consumptives.—On motion of Dr. C. E. Nammack, the following resolution, emanating from the Section on Medicine after its recent discussion of this topic, was adopted by the Academy:

"*Whereas*, The prevalence of pulmonary tuberculosis, especially among the poor, has been, and continues to be, the cause of more deaths among the citizens of this State than any other disease; and

"*Whereas*, The great value of treating this disease in special institutions, under proper conditions, has been demonstrated, both abroad and at home; and

"*Whereas*, The inadequacy of private endeavor, however well directed, in dealing with this enormous problem is admitted by all who have made a study of this question; therefore be it

"*Resolved*, That the New York Academy of Medicine recommends the establishment of State and municipal sanatoria for the treatment of pulmonary tuberculosis."

The Clinical Uses of the Sphygmograph.—Dr. R. Van Santvoord read a paper on this subject. He said that in the case of two vessels, one having twice the internal diameter of the other, it would take twice as much pressure over the latter to obliterate the pulsation in the vessel. One of the chief clinical uses of the sphygmograph was to enable one to detect high arterial tension in the early stage of its existence. Its presence was usually manifested by the flat top curve, and it was indicative of arterial sclerosis chiefly, although this was sometimes combined with contracted arterioles. A large number of sphygmograms were exhibited, and their meaning was interpreted. Several were pointed out in which the quality of the pulse, as determined by the finger on the radial artery, had been very far from the truth. They showed how very misleading the pulse might be, even to the touch of the experienced physician. His tracings also showed that excessively low tension might be of significance in chronic as well as in acute diseases. He had been puzzled repeatedly with complaints of faintness from patients shortly after taking a dose of nitroglycerin. This might be explained by an unusually rapid absorption of a dose which ordinarily caused no inconvenience. The chief objection made to the sphygmograph had been the different results obtained by different observers. It was true that the faulty application of the instrument would give unreliable results. The spring pressure must be carefully graduated, not only to the arterial tension, but to the calibre of the vessel. A series of tracings should be taken with a gradually increasing pressure on the spring and on the band holding the instrument against the wrist. For the latter purpose he had found it convenient to have a small tourniquet attached, one on either side of the instrument. It was well to remember that almost always when the first part of the curve was "nicked out" it indicated that the spring pressure was inappropriate. Failure to apply the middle of the pad directly over the artery sometimes resulted in giving a distortion to the tracing, resembling that given by too great tension of the spring. Occasionally arteries would be found which were too small to give a good tracing, and the same was true of cases in which the action of the ventricle was very weak. After an experience of fifteen years he had come to look upon the sphygmograph as very useful, and as presenting no more fallacies than other methods of investigation which no physician would think of discarding.

Dr. Louis Faugères Bishop said that the paper made it clear that the author had succeeded in obtaining more information from the sphygmograph than had many other physicians who used it, though perhaps less frequently. As the author had pointed out, one must be guided more by the shape of the tracing than by the actual amount of spring pressure in determining the arterial tension. He had personally always regarded as most nearly correct that tracing which gave the best picture. When there was a tracing without a dicrotic notch one could feel very sure that this defect was due to imperfect technique. Mention had not been made of the fact that the same tracings could be obtained by attaching a manometer to the cut vessel of an animal, an observation which was interesting as proving that the sphygmograph really did give a true picture.

Dr. S. J. Meltzer said that he had had some experience with the graphic method in connection with experimental research, although not so much with the sphygmograph. He would not trust himself to form any opinion from the form of a pulse tracing as to the character of the arterial tension. Statements had been lately made to the effect that the heart increased in size under exertion, and it would, therefore, be interesting to know whether, in the case in which the tracing had been taken from a person after exercise, an effort had been made to determine any coincident change in the size of the heart. No tracings had been exhibited in illustration of cardiac irregularity. For this kind of investigation the record should include a time-marking tracing.

Dr. H. W. Berg said that he had tried to make use of the sphygmograph, but had been unable to obtain tracings to which any diagnostic importance could be attached. The great difficulty seemed to be that in any given case tracings taken only a few minutes apart, with the same spring pressure, showed marked variations. Although twenty-six years had elapsed since Marey had first brought forward his instrument, and many competent observers had given their best energy and much time to the study of the sphygmograph, the instrument was still far from being practical and reliable. There was one exception to this statement, and that was the sphygmographic tracing of an irregular pulse, but even this did not add much to the value of the instrument in view of the ease with which such information could be secured from the finger on the radial pulse.

Significance of the Dicrotic Notch.—Dr. Andrew H. Smith said that he had used the sphygmograph a good deal some years ago, and had met with just the difficulties that had been emphasized by the last speaker. In some patients the artery was placed very deeply, and more or less overlaid by the tendons of the wrist, and, under these circumstances, it was very difficult so to adjust the instrument as to secure reliable sphygmograms. We had been taught to believe that the dicrotic notch was the result of a secondary wave taking place on the closure of the aortic valves, and yet sometimes a most marked dicrotic wave was obtained in cases of aortic regurgitation. It was not uncommon to be able to see, in the pulsation of the vessels of the neck, this dicrotic impulse, when the aortic valves were so much destroyed that one would not have supposed they could have produced such a result. He was inclined to think that, in some instances at least, the dicrotic notch was the result of a reflux of the blood in the opposite direction. If the conditions in the circulation beyond were altered, a change would result in the dicrotism, and in the general characters of the sphygmogram. For example, if the arm was ligated above the elbow, as for a venesection, the dicrotism would disappear, and all of the qualities of the high-tension pulse would be produced. In the same way, if the patient held his breath for some time, the tracing would show a very much smaller excursion. Again, it was not always easy to determine whether there was a sufficient degree of tension to give a slight excursion from tension, or whether this condition arose from the feebleness of the ventricular contraction.

Peculiar Tracings.—He recalled a case in which the sphygmogram had indicated forty beats to the minute, with fairly marked dicrotism and an enormous excursion. In this case, the rhythm had changed frequently, and, in the course of a single tracing, it had been possible to see distinctly where the dicrotic notch had increased in amplitude from one beat to another until it had finally equalled the amplitude of the regular stroke. The pulse had then changed from forty to eighty beats per minute, and it had been no longer possible to distinguish, either by the sphygmograph or by the finger, between the exaggerated dicrotism and the alternate beats.

Effect of Working in Compressed Air.—Some time ago he had employed the sphygmograph in observations on the men subjected to high air pressure while working in the caissons of the Brooklyn Bridge. This study had been exceedingly interesting, and had shown an increased amplitude, with more pronounced dicrotism and a greater frequency of the pulse. He failed to attach, however, much importance to the instrument, either as a means of securing a record or as an aid to diagnosis.

A Useful Instrument.—Dr. C. L. Dana said that he had succeeded in obtaining fairly uniform tracings and records with the sphygmograph which had been, at times, useful both for diagnosis and prognosis. He had confined his use of the sphygmograph almost entirely to persons who had reached the degenerative period of life, and in whom there were a certain steadiness and rigidity of the blood-vessels. Moreover, he had not been studying cardiac disease by this means, but rather the rigidity of the blood-vessels, the extent to which they were filled, and the strength with which the heart pumped the blood into them. Again and again he had found, in cases of apoplexy, a type of pulse giving an almost pathognomonic tracing. In these cases the vessels were dilated, but not well filled. These tracings seemed to him to show a need for strengthening the action of the heart, or at least for carefully watching the circulation. In certain classes of neuroses rather striking sphygmograms could be secured. Basedow's disease yielded a very characteristic tracing. The sphygmograph was also of some value in determining the quality of some of our drugs.

Application of the Instrument.—Personally, he never thought of keeping any record of spring pressure, nor did he strap the instrument on the wrist. The patient laid the hand on the table, and the examiner held the instrument on the wrist and endeavored to secure the best possible record. Three or four tracings should be taken under varying pressure. He was convinced that the instrument should be held by the physician, and not strapped to the patient.

Dr. Van Santvoord, in closing, said that, in some instances, the disappearance of the dicrotic notch was legitimate, and did not indicate faulty technique. He had not studied any of the tracings with reference to the effect on the rhythm of the heart of defects in the auricle or ventricle. In going over his records, in the preparation of this communication, he had been impressed with their very great uniformity under similar circumstances. Variations in the conditions would, of course, produce marked, but very readily interpreted, variations in the sphygmograms. He had not observed ordinarily marked variations in the tracings taken from the same patient under the same conditions at an interval of only a few minutes. He did not feel that he could take trustworthy sphygmograms without strapping the instrument to the patient's wrist.

Election of Officers.—The annual election resulted as follows: *Vice-President*, Dr. G. L. Peabody; *Trustee*, Dr. A. Jacobi; *Treasurer for the Trustees*, Dr. R. H. Sayre; *Treasurer*, Dr. H. L. Collyer; *Committee on Admissions*, Drs. C. E. Nammack and J. B. White; *Committee on Library*, Dr. Alfred Meyer.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, December 18, 1899.

Frederick Holme Wiggin, M.D., President.

Hysterectomy Without Preventive Hæmostasis.—Dr. A. Brothers presented a uterus containing a number of fibroids, in order to call attention to the method of hysterectomy without preventive hæmostasis—a method in vogue in Europe at the present time. This was the first case in which he had operated in this manner. The uterus had been seized per vaginam in the usual way, and the usual circular incision made, together with the upward dissection both anteriorly and posteriorly so as to open into the space in front as well as into Douglas' cul-de-sac. The uterus had then been seized higher and higher by traction forceps, and in that way the fundus was drawn down. Up to that time there had been no hæmostasis. In the present instance he had used clamps to the broad ligament, applied from above downward until three or four had been used on each side. In that case the indication had not been the presence of fibroids so much as the fact that the patient had been a sufferer from pelvic inflammation for thirty years. He had removed the uterus on one side completely and the uterine horn on the other side, leaving the diseased tube and ovary because of extensive and firm adhesions there.

Report of a Case of Alcoholic Cirrhosis of the Liver in a Baby.—Dr. R. Abrahams reported this case, that of a girl aged sixteen months, who up to the age of fourteen months had been in good health. Since that time there had been loss of appetite, increasing pallor of the face, constipation, and increase in the size of the abdomen. He had first seen the child on November 4th. The skin had then been dry and scaly, and the appetite capricious. There had been no hemorrhages from the stomach or bowel, and no jaundice. The abdominal distention had been extreme, the circumference at the umbilicus being twenty-six inches. Owing to the ascites the liver and spleen could not be defined. There was no effusion except that in the abdominal cavity. The diagnosis of cirrhosis of the liver had been made by exclusion. Syphilis had been excluded by careful inquiry and examination. An ascites from tuberculosis would develop more slowly than in this case. In the absence of œdema of the lower extremities and marked urinary signs and symptoms, interstitial nephritis had been excluded. It had been finally ascertained that since very early infancy the baby had been allowed to imbibe beer quite freely. For two weeks the child had been given two-grain doses of iodide of sodium, but without result. The ingestion of water had been restricted, the bowels kept relaxed, and the beer stopped. After a time paracentesis had been performed, and then it had been found that the liver was smooth and hard and extended down almost to the iliac spine. Since the tapping, early in November, there had been no return of the ascites. The liver had diminished slightly. The patient and photographs were exhibited.

Dr. H. Illoway said that numerous cases of alcoholic cirrhosis had been reported in children. Some physicians maintained that alcoholism was rarely a factor in the production of cirrhosis of the liver in children, yet personally he was firmly convinced that it was almost always the cause of this affection in young subjects. Dr. J. H. Musser, of Philadelphia had recently expressed the same opinion. Cirrhosis might develop almost any time after birth, but it was most common between the sixth and twelfth years. Mention was made by the speaker of a case of a child of two years, still at the breast, in which the mother had been accustomed to drink alcoholic liquors freely. Cirrhosis had also been ascribed to measles and scarlatina, yet in quite an extensive experience with these diseases he had never met with cirrhosis in children. It had seemed to him that beer had a more potent effect on the liver of young children than some of the stronger alcoholics.

Etiology, Diagnosis, and Treatment of Cystitis.—Dr. Ramon Guitéras read this paper. He said that cases of irritable bladder were often called cystitis, although really they were nothing more than the result of congestion of the neck of the bladder from a foreign body or from the irritating character of the urine. Acute cystitis was generally due to the extension of a gonorrhœa from the urethra during the third or fourth week, or to instrumentation in a case of posterior urethritis. Congestion or distention of the bladder wall, undue exercise, particularly bicycle or horseback riding, and exposure to wet and cold were important predisposing causes of cystitis. Frequent and painful urination, associated with the presence of pus or blood in the urine, were the chief symptoms of cystitis. Recto-abdominal palpation would reveal tenderness in the region of the trigone. Acute cystitis might be confounded with posterior urethritis, prostatitis, seminal vesiculitis, and vesical irritability. Posterior urethritis was usually an accompaniment of acute cystitis, and occurred before, and also after, the latter. In acute posterior urethritis the pus flowed back into the bladder, so that the urine would contain pus just as in a case of cystitis. When the urine was passed into three glasses, the last glass would be found to contain more pus than in a case of posterior urethritis. In a case of posterior urethritis the first glass would contain more pus than the other two, and would also show the presence of shreds. In cases of acute prostatitis there was pain in the rectum and on sitting, and rectal examination would reveal tenderness and enlargement of the prostate. In seminal vesiculitis rectal examination would show the vesicles to be enlarged and tender, and after the inflammation had subsided a quantity of detritus could be expressed into the bladder by massage. In chronic cystitis the patient would probably urinate ten or twelve times in the twenty-four hours, and the urine would be light in color and alkaline, and would contain some albumin or blood. When evacuated into three glasses the first and third would contain the most pus. In making the diagnosis of chronic cystitis, one must consider chronic posterior urethritis, chronic prostatitis, kidney lesions, and bladder irritability, as well as certain nervous affections. In cases of chronic posterior urethritis there were usually only shreds washed out, and these would be found chiefly in the first glass. In kidney lesions there was usually pain in the loin in addition to the physical signs of enlargement of the kidney. The pain of cystitis was more often referred to a point back of the pubes. In cystitis the pus was usually found associated with alkaline urine, while in pyelitis the urine was usually acid. In cystitis the pus was constant; in kidney disease it might be intermittent, and it was usually less abundant than in cystitis. Bladder irritability was distinguished from chronic cystitis by the absence of pus in the urine. Percussion and palpation would determine whether or not the bladder was enlarged, and palpation would reveal tenderness, enlargement, or the presence of calculi. The cystoscope would show a reddened and thickened appearance of the bladder in cases of ulceration. This instrument would also enable the operator to determine the presence or absence of calculi and tumors.

Treatment: In the treatment of acute cystitis, hot sitz-baths would be found of the greatest service. They should be given twice daily, as hot as can be conveniently borne. Hot rectal douches of saline solution were also beneficial. By the mouth the patient should be given alkaline diluents and antispasmodics. When the spasms and pain were severe suppositories of belladonna and morphine should be used. If the urethra was not too sensitive, bladder irrigations through the meatus were desirable. The best solution was the permanganate of potassium, beginning with the strength of 1 : 4,000 and gradually increasing until at the end of a week the maximum was reached—1 : 1,000. Subsequently nitrate of silver solution should be substituted, using at first 1 : 16,000 and slowly increasing it to 1 : 4,000. Sometimes it was better to make use of deep urethral instillations of five or ten minims of a solution of nitrate of silver, using a strength varying from one grain to the ounce to four grains to the ounce. Although in cases of acute cystitis it was not advisable to pass an instrument through the urethra into the bladder, such instrumentation was not usually contra-indicated in chronic cases. When the urine was ammoniacal nothing in the way of intestinal medication was equal to urotropin, given in doses of ʒ ss. three or four times a day. In cystitis due to stricture, it was well to dilate the stricture if possible, but if the stricture was very small and resistant it should be divided with a urethrotome, a Maissonneuve knife, or, if deeply situated, by external perineal section. When the prostate was very greatly enlarged enucleation should be done, but in the case of very moderate and hard hypertrophy of this gland he preferred the Bottini operation. Bottini's galvano-cautery knife not only reduced the size of the gland directly, but by destroying some of the blood-vessels diminished the blood supply, and so favored atrophy of the gland. When the cystitis was the result of tumor of the bladder, the tumor should be removed, if possible, by suprapubic cystotomy, cauterizing the base. In cases of malignant tumor of the bladder drainage would give relief.

Causes of Cystitis in Women.—Dr. Alexander J. C. Skene spoke of the etiology and treatment of cystitis in women. He said that the treatment did not differ from that of cystitis in the male, unless due to some other cause. What he would call the preventive treatment in women was by far the more important. The etiology was also quite distinct from that in the other sex. For anatomical and physiological reasons the bladder was far more exposed to injuries, and if he were to judge by his own experience he would say that the most frequent cause was trauma, either damage during parturition or surgical operations on the pelvic organs, or the use of instruments, such as the catheter. Cystitis in women was far more frequently caused by injury than by sepsis. The sepsis might be either from without or from within. Before the days of aseptic surgery the etiology of cystitis had been but vaguely known; subsequently it had been believed that cystitis was the result of the infection of the bladder by septic or specific germs, but this, he thought, was not the case. If this view was correct, then there should have been a disappearance of cystitis under aseptic precautions, but such had not occurred. Just as soon as it had dawned upon him that many cases of cystitis arose from the traumatism inflicted by the metallic catheter, he had substituted the rubber catheter. The result had been a very marked diminution in the number of cases of cystitis, although the same aseptic precautions had been taken in the use of both the metallic and the soft-rubber catheters. It was now very rare for him to see a case of cystitis after prolonged catheterization. He believed that cystitis could be produced by the decomposition of urine and the development of pathogenic germs, but this result was rare unless the mucous membrane had been injured by the catheter or by some surgical operation. Another class of cases coming under the same category were those in which the cystitis was the result of prolonged standing. This was far worse than long walking, because the latter stimulated the circulation, whereas prolonged standing gave rise to congestion and stagnation. These patients often complained of a feeling of weight and tenesmus, and were then seized with pain in the bladder and frequent urination. On examining the bladder in some of these cases he had found a small ecchymosis. With rest and simple treatment these patients would recover, but if they persisted in standing they would develop a well-marked cystitis. The most persistent and obstinate cases of cystitis that he had seen in women had resulted from a suprapubic cystotomy with the idea of draining the bladder. In many cases in which the vagina was rigid, drainage would be very imperfect, and unless the treatment was kept up the original inflammation would not be entirely cured. The patient being temporarily relieved by the drainage of the bladder, the fistula was usually closed, and then it would be found that the patient was worse than before. A piece of scar tissue in the bladder was almost sure, sooner or later, to break down and light up another attack of cystitis. Another cause of cystitis in women was physical exploration of the bladder, though done by the most scrupulously clean operators. He referred particularly to the dilatation of the urethra and catheterization of the ureters, and the use of the endoscope.

Methods of Diagnosis.—Very little damage to the mucous membrane would be sufficient to allow of the development of a cystitis. He contended that in nearly all cases a diagnosis could be made not only of cystitis but of the kind and degree of inflammation of the bladder, without making use of any of the instruments for internal exploration. For such information as he needed he relied upon a skilful analysis of the urine. It was very easy to exclude urethritis. The bladder having been allowed to become fairly well distended, the patient should pass a little urine to wash out the urethra, and then the urine should be collected and examined. If the bladder was washed out thoroughly, and then the next few drachms of urine secreted were found to contain the products of inflammation, it was almost positive evidence that the inflammation was in the ureters or kidneys.

Treatment.—For thoroughly cleansing the bladder he had found borax decidedly better than boric acid. It was important to remember that the fluid should be instilled—not injected—because the bladder should be allowed to fill very slowly. Care should also be taken not to allow the bladder to contract down upon the end of the catheter. The injection of an infusion of hydrastis, or of a very mild solution of nitrate of silver, was to be recommended in many instances. The stronger solutions of silver would certainly give temporary relief, but the ultimate result was not so good as when the solution was not stronger than one or two grains to the ounce. When a more decided effect was desired it could be more safely secured by the repeated injection of a mild solution. In addition to these measures he would make use of the constitutional treatment advised in the paper. However, when there were ulcerations such mild injections would not be sufficient. The ulcerated surface should be brought into view, and that particular area destroyed by a rather strong caustic application. Such an application to be effective must be circumscribed. In cases of cystitis caused by the presence of neoplasms in the bladder, he would recommend a method of treatment that had recently given him much satisfaction. This consisted in doing a suprapubic cystotomy, and then seizing the base of the growth, compressing it, and cutting it off with the cautery, or with the electro-hæmostatic forceps. This method, if properly carried out, was entirely bloodless, and left a most desirable stump, and one which healed in two or three weeks at the most.

Dr. Eugene Fuller said that all of Dr. Skene's cases of traumatism were examples of cystitis arising from infection. In the male much more difficulty was experienced in securing good drainage. Atony, traumatism, deficient drainage, calculi, and neoplasms might all act as causes to make the bladder receptive of germs. The most common mode of infection in the male was by an ascending infection from the urethra. In some severe cases of cystitis not only was the muscular coat involved, but the surrounding tissues were invaded. Here the bladder might become invested in dense adhesions and greatly reduced in size.

Washing the Bladder.—Dr. W. K. Otis emphasized the danger of mistaking disease of the kidney for disease of the bladder. Particularly in tuberculous disease the entire trouble might be located in the kidney, and yet the symptoms point directly to the bladder. In cases of chronic cystitis one must rely almost wholly on local treatment. In irrigating the bladder the effort should be made, not only to cleanse it thoroughly with an aseptic solution, but also to act directly upon the mucous membrane. When there was an associated posterior urethritis, the catheter should be introduced only just within the external sphincter. This would be known by the fact that on removing the syringe the fluid would not return out of the catheter, although fluid could be introduced into the bladder. Having moderately distended the bladder, the catheter should be removed, and the patient allowed to evacuate the fluid, thereby cleansing both urethra and bladder at the same time. When the disease was wholly within the bladder, a soft-rubber or a silk catheter should be employed. A total emptying of the bladder was secured by having the patient in the erect posture, and this should always be the position except when the person was too feeble. The double-current catheter was not to be recommended, as the fluid passed from one eye to the other without cleansing the bladder. Nor was it well to employ the irrigator. When the bladder was atonic, care should be taken not to distend the organ, and pressure should be made over the pubes so as to secure a thorough emptying of the viscus after the washing. Litholapaxy he considered the ideal operation in all cases of vesical calculus in which it was possible to introduce the necessary instruments. This operation was safer, and the convalescence was more rapid than after suprapubic cystotomy.

Dr. Guitéras closed the discussion. He said that trauma or anything else which caused congestion of the bladder should be looked upon as a predisposing cause of cystitis, the direct and active cause being infection. It was possible at the present time to sterilize even woven catheters by a short exposure to formaldehyde vapor.

Syphilis of the Nervous System, and the Use

and Abuse of Mercury and Iodine in Its Treatment.—Dr. William M. Leszynsky presented a paper with this title. He considered more particularly intracranial syphilis. Thorough treatment of syphilis in the early period after infection, he said, was generally considered to be the most effective way of preventing the disastrous phenomena of tertiary syphilis. One was forced to acknowledge, however, from clinical experience that even when such early and thorough treatment was carried out, the patient was not insured against the later manifestations, although usually when they did occur they were decidedly milder than in cases neglected in the early stages. All neurologists were familiar with the history of an initial lesion but an absence of recognized secondary manifestations. There was no known method by which the virus of syphilis could be eradicated so that the physician could assert positively that there would be no further manifestations. Recent exudative inflammations, gummatous growths, pachymeningitis, obliterative endarteritis, and periarteritis were the conditions which were most amenable to antisyphilitic treatment. In general, the results were observed within two or three weeks. The rapidity varied with the virulence of the disease, its duration, and the susceptibility of the patient to mercury and iodine. The preferable method of administering mercury was by daily inunction until the specific effect of the remedy was observed. Iodine, in the form of iodide of potassium, was given in saturated olution, beginning with ten minims three times daily, well diluted. Some patients could take readily as much as two or three drachms of the saturated solution three times a day. It had seemed to him that the action of iodide was more rapid than that of mercury, though he usually began with the mercurial inunctions. The use of the iodide should generally be continued until all active symptoms had subsided, though two or three months was about the average time. Much harm might be done to the general health by excessively prolonged and injudicious use of iodide and mercury. Thus, primary optic atrophy progresses more rapidly to complete blindness under such medication. Tonic measures of all kinds should be considered an essential part of the treatment. As a prophylactic measure small doses of the iodide should be administered for a short time about three or four times each year. When the diagnosis of syphilitic disease was doubtful too much dependence should not be placed upon the so-called therapeutic test. While it possessed at times a certain value, it was more often unreliable. It was well known that iodine promoted the absorption of non-syphilitic processes. It should also be remembered that syphilis could not be positively excluded, even when a case proved obstinate under antisyphilitic treatment. Patients with tabes who had never received antisyphilitic treatment since the onset of the tabetic symptoms should certainly receive a short course of such medication, but if this had already been done it was not only useless but positively harmful to repeat it. It was greatly to be deplored that many practitioners had accepted the opinion advocated so zealously by some, that without syphilis there would be no tabes. At the present time the prevention of syphilis was practically impossible.

Dr. Edward D. Fisher said that in all syphilitic disease of the nervous system the more acute the process the better was the response to antisyphilitic medication. For instance, in pseudo-general paresis under the use of one or two hundred grains of the iodide daily, in conjunction with mercurial inunctions, one frequently observed excellent results. Again, in all cases of ocular muscle paralysis coming on suddenly without any history of traumatism or rheumatism, it was fair to assume that the disorder was of syphilitic origin, and the treatment should be shaped accordingly. Tonics should always be administered in conjunction with antisyphilitic treatment. Spinal syphilis was frequently mistaken for tabes, the gummatous infiltration being in the same region, and giving rise to the same class of symptoms, except that tabes was never rapid in its course, whereas spinal syphilis frequently developed in the course of a very few weeks. In such a case he knew of no other treatment equal to the use of mercury and iodide. In cases of tabes exhibiting sudden exacerbations he would also make use of this treatment. Such symptoms were supposed to indicate the occurrence of a new gummatous infiltration.

Dr. Edward G. Janeway said that in suspected cases of cerebral syphilis the physician's first duty should be to try to determine the location and nature of the lesion. There might be, for example, a hyperostosis of the bones of the skull sufficient to give rise to marked symptoms. He recalled having seen an autopsy on a case in which a most distinguished neurologist had diagnosticated a tumor of the brain, and an unsuccessful attempt had been made to remove it by operation. No tumor had been found, but at the autopsy a syphilitic hyperostosis was found in the region in which it had been thought the new growth was situated. A gummous pachymeningitis was occasionally associated with hemorrhages, thus materially modifying the symptoms. Marked irritative phenomena might result from a very localized lesion on the surface of the brain, resulting in adhesion of the pia and dura. In two cases he had seen syphilitic hemiplegia from arterial obstruction at the end of five or six months; it was sometimes a precocious event. Sometimes very remarkable results were obtained from very moderate doses; in other cases, the mercurial and the iodide must be pushed vigorously. At times the iodide was not well borne by the mouth, and in such cases, or when the patient was in convulsions or was unconscious, the drug should be administered per rectum. When there was an individual intolerance to iodide of potassium, the iodide of sodium or the iodide of strontium should be tried, though he prefered the iodide of potassium whenever it could be taken.

Late Syphilitic Fever.—Incidentally the speaker mentioned the fact that there was sometimes a continued fever in tertiary syphilis, which was most apt to be mistaken for tuberculosis. In cases of this kind he had seen exceedingly good results from very moderate dosage; indeed, he had known such doses to succeed in some of the less urgent cases of cerebral syphilis.

Tabes and General Paresis.—He very firmly believed that the vast majority of the cases of tabes owed their origin to syphilis, and he held the same opinion regarding most cases of general paresis. In case of doubt he was in favor of giving the patient the benefit of the doubt by employing the therapeutic method of diagnosis.

Dr. Charles I. Proben said that it had been estimated that about two-thirds of all cases of syphilis failed to present tertiary manifestations. In cases of the degenerative type one could hardly expect to accomplish anything by antisyphilitic treatment. The latter acted on the granuloma tissue by producing fatty degeneration, and possibly also by acting on the germs in the blood. The lymphatic vessels were very early affected in syphilis, and in the clearing out of the lymphatics and of the blood-vessels, iodide was especially useful. When the patient was observed to be losing weight rapidly, the iodide should be reduced or withheld. This emaciation was most striking when iodide was given to a tuberculous individual.

Administration of Mercury.—Dr. Boleslaw La-

POWSKI said regarding the administration of mercury that in all severe forms of syphilis the quickest and safest method of giving the mercury was by inunction. Before beginning such a course of medication, the physician should first inquire whether the kidneys were able to eliminate the mercury. If these organs were found to be impaired, one must be very careful about administering mercury. Some cases of nervous syphilis did not improve until after prolonged treatment—perhaps not for three months. If there was reason to believe that scar tissue was present the specific medication should be persisted in for a long time, because it was well known that such tissue proved amenable to this remedy. His own opinion, based on a large experience, was that metallic mercury was the best form in which to administer this remedy, as it imposed less work on the system. The only exception he would make to this rule was when there was great urgency. In cases in which there was doubt, he would even be willing to make use of the rather dangerous intravenous injection of sublimate before saying to the patient that nothing further could be done.

DR. LESZYNSKY, in closing the discussion, took exception to the statement of Dr. Fisher, that iodide did no harm. It did harm in two ways, viz., (1) by interfering with general nutrition; (2) when given for a long time the patient became so accustomed to its use that, if urgent symptoms should develop the physician would be powerless to give relief. This was not theory, but fact. Cases of tabes with sudden accessions of symptoms were usually examples of pseudo-tabes. Most of the cases of cerebral syphilis in which he had used large doses of iodide of potassium had shown an increase in body weight. He had sometimes felt that he had hastened connective-tissue formation and destruction of nerve tissue by the administration of iodide. He had never made use of calomel injections, and would be loath to do so. Intravenous injection he did not think had been practised much on human beings; it was exceedingly dangerous.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, December 5, 1899.

FREDERICK PETERSON, M.D., PRESIDENT.

Multiple Sclerosis with Symptoms of Progressive Muscular Atrophy.—DR. GRAEME M. HAMMOND presented a case of multiple sclerosis occurring in the person of a man, thirty-eight years of age, exhibiting symptoms resembling those of progressive muscular atrophy. This combination, he said, was quite rare. The patient was a locomotive fireman by occupation, and had a good personal and family history. About one month after an attack of the grippe ten years ago his present trouble began. The first symptom had been a paralysis of the internal rectus of the left eye, and this had been followed by weakness of the left superior and the right internal rectus. At the present time, in addition to these symptoms, there was left hemianopsia. About one year ago there had been a sudden loss of smell on both sides. About six years ago he had begun to show symptoms of locomotor ataxia. The knee jerks were absent. Last January he had noticed weakness in the little and ring fingers of the right hand. This weakness had extended to the other fingers, and had been accompanied by atrophy. The atrophy was now well marked in both upper extremities, and fibrillar twitchings could be noticed in the affected muscles. These muscles responded slightly to the galvanic current, but not at all to the faradic. This history was very characteristic of multiple sclerosis. In 1897 a similar case had been reported in one of the German journals. In the case presented, true intention tremor and scanning speech were not present. It had occurred to him that the patient might be suffering from a progressive muscular atrophy engrafted upon a multiple sclerosis, but it was also possible that the sclerotic changes had taken place in an unusual position in the anterior horns. The optic nerves had remained normal.

DR. B. SACHS said that his impression was that the case might be almost anything else than multiple sclerosis. This diagnosis did not seem to him justified in the absence of nearly all of the cardinal symptoms. The case was certainly puzzling, but he was reminded of a case of tabes with progressive muscular atrophy, and he believed the president of this society had reported such a case some time ago.

DR. JOSEPH COLLINS said that he hesitated to make this diagnosis after a hasty and superficial examination; nevertheless he could not but feel that this was a case of locomotor ataxia plus progressive muscular atrophy. It was possible that it was an example of syringomyelia and tabes, for he had had such a case under observation for a long time.

DR. GEORGE W. JACOBY agreed with the last two speakers, for certainly, he said, the symptoms in the upper extremities and the optical symptoms resembled those of a nuclear affection, while the symptoms presented by the lower extremities were like those of tabes. It was, of course, rather presumptive to make a diagnosis after Dr. Hammond had studied the case so carefully.

DR. FREDERICK PETERSON thought this patient presented all the symptoms of locomotor ataxia. Atrophies of this kind were not very uncommon in locomotor ataxia. Several years ago he had exhibited to this society a case of typical locomotor ataxia with three symmetrical quadrants of vision lost, so that the person saw out of only one-quarter of each eye. He therefore looked upon the case as a locomotor ataxia presenting the unusual symptoms already cited.

DR. HAMMOND replied that at first he had also looked upon his case as one of locomotor ataxia with ocular symptoms, but on studying it more carefully he could not find the slightest indication of syphilitic infection, the man having indeed been singularly free from previous illness of any kind. He was temperate in his habits, was not neurotic, and presented an unusually good personal history. Again, his tabetic symptoms had not been at all prominent; the Romberg symptom was hardly noticeable, and there was none of the bladder or sexual symptoms of tabes. The fact that there had been lesions of the optic, the third, and the olfactory nerves, coming on respectively at intervals of several years, he looked upon as proof that this was a sclerosis affecting these different nerves. An affection of the posterior columns in disseminated sclerosis was not at all unique. The atrophy in the hands was, however, decidedly unique.

Intracranial Growth. — DR. PHILIP MEIROWITZ presented a man aged thirty-eight years, who had come to him on December 1, 1899, complaining of amblyopia of the left eye. He was entirely blind in the right eye from an injury inflicted with a piece of steel. The disturbance of vision had first appeared in the summer of 1898, and had reappeared four months ago. These "blind spells" had come on several times a day, and had lasted about eight minutes each time. They had continued altogether for about six weeks, and had been unaccompanied by pains. A tremor in the right upper extremity had also developed about the same time as the trouble with the eyes. Jerking of the right arm had been quite marked at night. Vertical headache had been present and quite troublesome some months ago, but it no longer occurred. About the middle of last July he had been seized with attacks of vomiting after taking food, and had improved under milk diet and the administration of iodide of potassium. About this time he had had a sudden loss of consciousness, and again two or three months ago. There was no distinct history of syphilis. Examination showed dilatation of the left pupil and good reaction to light, with absence of nystagmus. Tremor of the right arm was quite marked, and was aggravated by movement. His gait was good; the knee jerks were exaggerated; there was no ankle clonus. There were no sensory disturbances. Dr. Valk had examined the eyes with the ophthalmoscope, and had found a papillitis. There were no mental dulness and no impairment of the memory. The speaker expressed the opinion that there was an intracranial growth, and believed that its location in the cerebellum would account for most of the symptoms. He was inclined to believe that it was a syphiloma, because of the effect of treatment with the iodide, and the lack of definiteness regarding a possible syphilitic infection.

Dr. S. B. Onuf said that the patient had been under his care at the time that he had received the iodide. There had then been a staggering gait, a marked intention tremor, increased knee jerks, and ankle clonus on the right side. His eye showed marked choked disc and a number of retinal hemorrhages. He had at first hesitated between a diagnosis of tumor and multiple sclerosis. Dr. Coffin had expressed the opinion that the shape of the hemorrhages—small and wedge-shaped—pointed rather toward syphilis. The man had then been put upon rapidly increasing doses of the iodide, and had improved promptly. The dilatation of the pupil and the intention tremor were notably controlled by this treatment. He did not doubt that the trouble was syphilitic, but could not accept the theory that all of the symptoms could be explained by one syphiloma.

Dr. Meirowitz replied that Dr. Francis Valk, in his recent ophthalmoscopic examination, had found the retina entirely normal. The absence of disturbance of speech and of nystagmus, and the presence of papillitis, seemed to him sufficient to exclude multiple sclerosis. It was, of course, quite possible that there were a number of lesions, but when the symptoms could be explained by one lesion, this course seemed the more rational.

Two Cases of Tumor Compressing the Cauda Equina; Removal; Recovery.—Dr. B. Sachs reported these cases (see page 7).

Dr. Joseph Collins said that the cases presented should be a cause for much congratulation of the reader of the paper, as well as of the surgeon who operated. The history of the first case seemed to him to have pointed unequivocally to the presence and location of a intraspinal tumor, and he was glad that Dr. Sachs had had the courage to urge operation. He was reminded of a case seen by him in which he had endeavored to have a glioma operated upon, but the surgeons had arrived too late to be of assistance. He felt sure that the mortality in these cases was not so great that neurologists should not be on the alert to diagnose them and urge operative intervention.

Dr. Peterson added his congratulations to those of the last speaker. It seemed to him that tumors in this particular locality were more difficult of diagnosis than in other portions of the cord. One important feature of the paper was the aid that the sensitive area or the deformity had given in establishing the diagnosis.

Dr. Sachs, in closing, emphasized the point that even if the sensory changes were very slight, they should be reckoned with in making the diagnosis. This had been well exemplified in the first case. Another point insisted upon was, that he had managed by pressure upon a definite point to elicit the same pain as that of which the patient had complained. This had been extremely well marked in the first case.

Dysphrenia.—Dr. William Hirsch read a paper with this title. He said that the term "dysphrenia" had been applied to the secondary or sympathetic psychoses in contradistinction to the idiopathic or mental diseases, such as mania and melancholia. The secondary psychoses which were produced by bodily diseases were not characterized by the same uniformity of symptoms that marked the idiopathic variety. In the secondary psychoses there were frequent remissions with perfect lucidity during the course of the disease. Outbreaks of violence might be quickly followed by stupor. The speaker said that a further characteristic which he would call attention to was the occurrence of somatic symptoms, as loss of pupillary or patellar reflexes, rise of temperature, irregularity of the heart action, and certain vasomotor phenomena, such as œdema. In the secondary psychoses, the interstitial tissues, and particularly the blood-vessels, were the ones first and mainly affected. This was in accordance with the accepted pathology of the systemic spinal diseases. The changes in the interstitial tissues were produced by the diseases starting outside of the brain, such as the acute febrile diseases. There were a few cases in which, purely from the mental symptoms, one was justified in making a diagnosis of dysphrenia, even though ignorant of the exact nature of the underlying bodily disease. A case of this kind was then reported by Dr. Hirsch. The patient was a young and neurotic girl, seen by him first on September 5, 1896. She had then presented the condition of hallucinatory confusion. After an interval of quiet, on February 17, 1897, she became violent, and developed hallucinations of hearing and sight. At this time the temperature was normal. After about ten days she became stupid; her pupils were contracted, and the pulse was 60. After about one week, automatic movements of the hands and head appeared. On March 14th menstruation came on, and she quickly became normal, and remained well for ten days. In April, 1897, she was given thyroid extract, and quickly recovered. She remained well for nearly two years. On February 2, 1899, she unexpectedly developed the same violent symptoms as before. She showed some transitory improvement again under the administration of thyroid extract, but soon passed into a condition of dementia. After about three months she became quieter; the pupils and patellar reflexes returned; the temperature became normal, and her breasts, which had been much enlarged, returned to their natural size. Since that time her mental state had been good. The clinical features of this case evidently did not correspond to any primary psychosis. A loss of reflexes was generally considered as indicative of permanent change, but it was not impossible that this symptom might exist in functional disturbance. In the case just reported he believed that the menstrual disturbances were not the cause, but a symptom of the disease, as in the fourth, or worst, attack menstruation had had little or no effect on the mental state. The speaker suggested that the term "originary dysphrenia" should be applied to those cases which, in their clinical aspects, resembled those known to be produced by toxic or infectious agents, but in which no cause for such infection could be found.

Dr. Brown said that he had been deeply interested in the paper, and had seen a number of somewhat similar cases presenting apparently a physical basis for the mental disorder. In some cases of even very severe mental disease the mental symptoms would clear up during the later stages, for example, of a tuberculosis.

Dr. Mary Putnam-Jacobi asked Dr. Hirsch if he looked upon general paresis as a secondary psychosis, and also in what way the case of dysphrenia reported by him differed from recurrent attacks of hysterical insanity; also how far the failure to distinguish personality was really a mental symptom and how much the result of personal caprice.

DR. B. SACHS said that probably all present had seen cases similar to the one described. He had himself had under observation a number of women between the ages of fifteen and twenty years who had passed through very remarkable periodical mental changes. He had been much impressed with the suddenness with which these changes had occurred. All of these patients had been members of strongly neuropathic families. They had passed quickly from a condition of mania to one of depression. A patient now under his care had regularly had periods of six months or more in which she had been in a condition of maniacal excitement, and had then very suddenly passed into a condition apparently normal, but really only a stepping-stone to a period of excitement. It was questionable, in his mind, whether the class of cases spoken of in the paper represented a distinct entity in mental diseases. Such marked physical changes as had been described in the paper had not come under his observation.

DR. PETERSON expressed his belief that dysphrenia would be a convenient term for those cases which it would be difficult to describe under other names. The trouble was that these terms in psychopathy were usually founded upon clinical symptoms, with but little reference to the pathology, so that after a time the word came almost to include all insanity. Last summer, at Heidelberg, he had found about four varieties of insanity recognized, viz., paresis, senile dementia, katatonia, and dementia precox. About fifty per cent. of the cases in Germany at the present time were called katatonia, and the remainder were included under the term dementia precox.

DR. HIRSCH closed the discussion. He said that it was certainly remarkable how many insane patients would pass through a disease like typhoid fever without developing any mental symptoms—indeed, the patient whose history had been given had just passed through a typhoid fever in this way. He, too, recognized the great evil that had resulted from introducing names into psychiatry; but dysphrenia was not a new name, and certainly was useful in connection with a case like the one reported, which could not be well placed in any other classification. Dr. Sachs had referred particularly to circular insanity—to cases essentially chronic in their nature—but he had been discussing cases that were really acute. The mental disease consisted of a series of psychopathic conditions. The diagnosis of dysphrenia could be made only from a detailed history and long study. By a primary psychosis he meant a mental disease originating in the parenchyma of the organ; by a secondary psychosis one originating in the interstitial tissue; hence general paresis would be a secondary psychosis.

Blindness in Finland.—The different degrees to which blindness prevails among various populations is always a matter worthy of study. J. Widmark has investigated the subject as regards Denmark, Sweden, Norway, and Finland (*Nordiskt Medicinskt Arkiv*, August; *New York Journal*, October 25th). He finds that for every ten thousand inhabitants there are 5.3 blind persons in Denmark, 8.3 in Sweden, 12.8 in Norway, and 15.5 in Finland. The preponderance in Finland, which is not observed among children under ten years of age, is attributed to the great prevalence of trachoma. Curiously enough the "endemic" affects only the natives.—*Sanitarian.*

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE WAR—THE TWO ADJOURNED DEBATES: TUBERCULOSIS AND TABES—GUY'S HOSPITAL GROUNDS—THE LATE DRS. STARK, HAMILTON, HICKS, AND PRENDERGAST.

LONDON, December 15, 1899.

THE war is absorbing all our conversation. Even when we meet to discuss medical and other peace topics, as soon as the debate is over groups are asking one another their views of the latest telegrams. It seems therefore an unfortunate time for the two set discussions of our two leading societies to have extended over three evenings each. Still this wealth of material must be utilized, and news from the war has not at this date reached, nor can it for some time reach, a point when its surgery can be fitly considered.

To our debates, then. That on tuberculosis was concluded on Tuesday, having been resumed by Dr. Sidney Martin, who said that although tuberculosis was so prevalent mankind must be considered immune, as healing was common. In the lungs reinfection from without was frequent. The primary attack might be recovered from. In an interval of a few months to many years a second attack, varying in seat, would occur; so again a third attack. Of course either might be fatal. The result would be determined by the extent of the damage and the virulence of the infection. Such points were important in discussing treatment; so too was that of secondary infections, as streptococcus, in regard to which hygienic surroundings and pure air were the best preventives. Drugs could not be discarded. Antiseptics by mouth or subcutaneously were futile. To increase the patient's resistance was the chief aim. Open air did this; so did rest during febrile states, and judicious, not over-feeding. Destruction of sputum and boiling of milk prevented re-infection.

Dr. J. E. Pollock remarked on the decline of consumption in this country, and said open air was no new treatment. He had recommended it in a paper in 1865. Fresh air was best in the open if the temperature suited the patient and sunshine was to be had. Sanatoria were good for the poor, but had disadvantages for those who could afford more care and comforts or change of climate.

Dr. Drewitt insisted on the difference between fresh air and draught. Ventilation should have more attention. Diet was not sufficiently considered. Carnivorous birds were not so liable to tubercle as the seed-eaters—a fact to consider. Scotch-oatmeal feeders, he said, were scourged by tuberculosis.

Dr. Washbourn said at first phthisis was a purely tuberculous process when the natural defences could limit it. Impure air brought secondary invasions—the great risk, *e.g.*, pneumococcus and streptococcus.

Dr. Walters said catarrhal patients needed a higher temperature than others and were more affected by draughts.

Dr. P. Weber dwelt on the importance of a flesh diet, Dr. S. Watson on climatic influences, and Mr. P. Gould on surgical tuberculosis, in which, he said, the social position of the patient was most important in prognosis.

The president (Mr. Bryant) added his conviction of the extreme importance of fresh pure air in operative cases and no doubt in others also.

Dr. Fowler replied at length, maintaining his views and expressing himself most hopefully if only the treatment was carried out for the benefit of the patients and not exploited commercially. He held that there was no pathological basis for the belief in the importance of septic organisms. Their action would produce septicæmia, and in the vast majority of cases there was no evidence of this. The rectal temperature he had known to explain non-progress and so be a guide to a puzzling case. The open air produced a veritable air-hunger, and so rendered patients apt to neglect the direction to avoid draughts. He preferred carbohydrate and fatty food to nitrogenous. The treatment should be continuous night and day and extend over long periods. The difficulty usually was to get doctors and patients to realize how long it must be.

The Pathological Society's debate on the relation of tabes to general paralysis of the insane was resumed by Sir William Gowers, who found little to criticise in Dr. Mott's paper. The preponderant relation of tabes to syphilis he considered was now admitted as fact. In his last one hundred private cases syphilis was unquestionable in sixty-eight and probable in twelve. In the remaining twenty cases it was possible, as there had been exposure to the ordinary risk and in some cases gonorrhœa had been taken. In six cases of juvenile tabes he had met with, the evidence of inherited syphilis was clear. His experience confirmed Dr. Buzzard's, that when the two diseases were associated tabes preceded paralysis. The theory that the changes in the posterior columns depend on the meningitis was strenuously advocated twenty-five years ago, though perhaps not precisely in the form suggested by Dr. Bruce, but it had been abandoned for good reasons, *e.g.*, the inconstancy of the extra-neural changes or the failure to account for some of the most remarkable facts of tabes. The question of the identity of tabes and paralysis he regarded as very much one of words, but he asked whether common causation could create identity in diseases differing widely in symptoms? Does not the common use of the word disease refer to a definite aggregation of symptoms rather than to causation? As to the question asked by Dr. Mott, whether the toxic agent lowers the durability of the nerve elements so that some other factors induce a premature decay, Sir William Gowers had long taught that that is the secret of the incidence of degenerative diseases. An average normal man he thought inherited equal vitality in all his structures, and went to pieces at last like the "one-hoss shay" in mature, equable, and senile decay. At the other extreme were patients whose structural elements were deficient in some part of the muscular or nervous system, so deficient in some cases that they decayed as soon as they were completely developed.

Dr. Savage admitted that in both general paralysis and tabes the evidences of destructive changes were similar, but thought that it did not prove that exactly the same causes had been at work. The débris in a wrecked house was the same, however the fire originated. On the clinical side the toxic element affected the least stable and most developed tissues. All the symptoms of general paralysis might be seen in the various stages of alcoholic intoxication, and similar symptoms occurred in plumbism and in influenza. The same parts were affected by the poison. Only in the more stable poisons or in those which had a specially pernicious effect on the tissues did decay ensue. He was convinced that syphilis played a most important part in both diseases. He observed that tabetic symptoms often preceded general paralysis by years, but he had also seen many patients who had had tabes and insanity for many years without becoming general paralytics. Many tabetics improved in their ataxy with the development of mental symptoms. In an asylum patients are met with suffering from general paralysis, having every degree of ataxy. The ataxic symptoms were very rare in females. Though not quite convinced that the two diseases were one, he admitted they had similar causes and left similar pathological débris. He thought a toxic cause was the chief one and syphilis the most common toxin. In some cases he believed there might be an autotoxin from rapid brain changes as in acute delirious mania.

Dr. Ferrier favored the view that the two diseases were the same, probably due to the same cause—syphilis either hereditary or acquired. All other assumed causes had been found wanting. The pathological process was sclerosis, whether inflammatory or not, and the question remained why in one case the cortex was affected and in another the posterior columns.

Dr. Payne said that the specimens now shown by Drs. Mott and Batten supplied the anatomical proof of Fournier's clinical conclusion, that the two diseases were closely related and probably identical. A common syphilitic origin went far to prove identity. Once diffuse cirrhosis of the liver due to syphilis was not admitted; other instances of diffuse inflammation produced by syphilis had been admitted in recent years only. He had seen primary lateral sclerosis improve under antisyphilitic treatment.

Dr. Hale White said that while there were two groups in which syphilis affected the cortex and the cord, so there were cases in which the first effect was seen in the peripheral nerves. That the same cause might damage sometimes one part, sometimes another, was seen in lead poisoning.

Dr. Batten gave an account of his investigations, illustrating it with specimens and lantern slides, and promised to bring before the society some further researches on the subject. He dealt on this occasion with the condition of the peripheral nerves and the origin of the degeneration of the posterior columns. As to the latter he held there was considerable evidence in favor of Dr. Bruce's suggestion. He said degeneration of the posterior columns occurred in cases of cerebral tumor, and in some cases was limited to those columns, the roots being unchanged.

The debate was at this point again adjourned.

While excavating in the grounds of Guy's Hospital lately the workmen came on an accumulation of human bones and a number of tobacco pipes. Some years ago a large number of skeletons were removed from the grounds when digging the foundations for additional buildings. It is conjectured that the hospital was built on the site of a burial ground for victims of the great plague.

Dr. Stark, who was killed by a shell at Ladysmith, was a well-known naturalist who was engaged in classifying the plants and fauna of South Africa, and on the outbreak of war offered his services to the army. Probably you have read that the only words he spoke after being hit by the shell were, "Take care of my cat." It has been conjectured that the last word was not completed, and should be catalogue.

Mr. Edward Hamilton, of Dublin, died on the 7th instant, aged seventy-five years. He had been three times president of the College of Surgeons there, viz., in 1875, 1892, and 1893. As a teacher and a surgeon he long held a most important position, and all through his career received the respect of all who knew him. Few men could be more esteemed by his brethren and by his fellow-citizens.

Dr. Henry Hicks, F.R.S., whose death occurred on the 18th ult., was well known as a geologist. He was president of the Geological Society, 1896-98, and received the diamond jubilee medal in 1897.

The death is also announced of Inspector-General Prendergast, in his ninetieth year. He had a distinguished career, and was present at the chief battles in the Crimea.

It is one thing to write and another thing to have readers. The test of what a man can do is the number he can interest in his work.

THE PATHOGENESIS OF GENERAL HÆMACHROMATOSIS (DIABÈTE BRONZÉ).

To the Editor of the Medical Record.

Sir: Apropos of the article of Dr. H. W. Berg, in a recent issue of the Medical Record, permit me to make a few remarks regarding the pathogenesis of diabète bronzé, or, as it is now properly termed, general hæmachromatosis. The characteristic features of this disease consist: (1) in the deposition of an enormous amount of an iron-containing pigment in the liver, pancreas, gastro-intestinal canal, skin, lymphatic glands, etc.; (2) in hypertrophic cirrhosis of the liver and the pancreas; and (3) in the onset of diabetes mellitus, which appears either periodically or only as a terminal event. Regarding the source of the iron-bearing pigment, all writers seem to agree at present that it is derived from the hæmoglobin which was separated within the blood-vessels from the red corpuscles by some pathological process. As to the nature of this factor the diverging opinions can be classified under two heads. Some, perhaps the majority, of the older writers consider the diabetes as the primary cause of the group of symptoms, and assume that the excess of sugar in the blood is, in some way or another, responsible for the destruction of the red cells. Another group of authors, consisting mostly of recent writers on the subject, believe that the destruction of the red blood corpuscles is caused by some unknown agent, and that the degenerated hæmoglobin is deposited in the cells of the liver, pancreas, etc., causing an interstitial inflammation of these organs, which subsequently leads to a "pancreatic diabetes."

The purpose of these lines is to put forward a new suggestion; but, before doing so, I wish also to offer some discussion of the hypothesis set forth by Dr. Berg in his interesting paper on diabète bronzé. The hypothesis belongs to the first category; it simply assumes that the excess of sugar in the blood causes the separation of hæmoglobin from the stromata of the red cells within the circulation. It seems to me, in the first place, that this hypothesis does not fit Dr. Berg's own case, inasmuch as pigmentation of the skin of his patient appeared eighteen months before the diabetes set in. Then if it be true that the excess of sugar in the blood always causes a solution of the red cells, why should there be among the great number of cases of diabetes only so very few—twenty-four—cases of the bronzed type? Again, of the great number of investigators on the character of the blood in diabetes, nobody has ever observed the presence of any unusual number of "shadows," red cells without hæmoglobin. The weakest point, however, of this assumption I believe is its reasons. I shall discuss only one point. Because Brasol has shown that when sugar is injected into the circulation it causes a passage of fluids from the tissues into the blood-vessels, and because the addition of water to blood dissolves out the hæmoglobin from the red-blood globules, Dr. Berg comes to the conclusion that red cells must become dissolved in diabetic blood. Was the dilution of the blood in Brasol's experiments caused by the entrance of water into the blood-vessels? Dr. Berg himself uses the expression "fluids from the tissue," which is an isotonic fluid, and does not dissolve red cells. The physiological process in the experiments of Brasol is simply as follows: The introduction of a very concentrated solution of sugar, forty to fifty per cent., into the circulation increases considerably the osmotic pressure within the blood, and causes a stream of the tissue-lymph into the blood-vessels till the hypertonic blood serum becomes isotonic. At no time during this process are the blood cells bathed by hypotonic fluid, and it is a hypotonic fluid alone which can separate the hæmoglobin from the stromata of the red cells.

The suggestion which I wish to offer is as follows: In general hæmachromatosis there is an enormous amount of iron-bearing pigment deposited in nearly all the organs of the body. This iron comes from the red cells. But examination of the blood has not revealed any noteworthy diminution in the number of the red cells nor a reduction of hæmoglobin. Nor is the presence of hæmoglobinuria noted in any of the described cases. In short, there is no indication of a pathological condition of the blood. On the other hand, blood diseases, even pernicious anæmia, do not produce hæmachromatosis. Neither did the experiments with the blood destroying poisons lead to real hæmachromatosis. All this seems to speak against the assumption that a pathological condition of the red cells is at the bottom of this disease. From where, then, is the enormous storing up of iron in the organs of the body coming? I answer, that the seat of the trouble is perhaps located in that part of the mechanism of the iron metabolism which is entrusted with the removal of the iron from the body. Only very small amounts of iron are absorbed, and about the same quantity is excreted again, mostly by the mucous membranes of the intestines. Perhaps, then, by some fault in this mechanism the organs and cells of the body retain all or most of the iron which reaches them on its normal round through the body. This hypothesis has the merit that it is accessible to an experimental test. If the assumption is correct, an analysis of the fæces would reveal any deviation from the normal. S. J. Meltzer, M.D.

166 West One Hundred and Twenty-sixth Street,
New York.

"IS STATIC ELECTRIFICATION A SPECIFIC FOR ORGANIC AND STRUCTURAL NERVOUS DISORDERS?"

To the Editor of the Medical Record.

Sir: Dr. Rockwell asks this question in your last issue, after reading my article in your issue of December 9th.

The question, as put, utterly misrepresents the spirit, meaning, intent, and facts of my article. Electrification is the production of an electric charge; electrization is to subject the human body to the action of electric currents. The former would not disturb a timid child; the latter may force a giant into fixed contortions or kill him. My entire article, as its title states, was devoted to the use of currents (and incidentally sparks) and therefore to electrization. Will any one deny that electrization will affect organic and structural diseases? The "specific" and "panacea" ideas we leave to our critic.

However, as to one point, Dr. Rockwell may be taken seriously. He denies my originality as to the static induced current. He has in his possession "an old, old book by one named Mauduyt," etc., which gives "in descriptive and illustrative detail what is now called the static induced current."

I have also in my possession a dozen or more "old, old books," among them this same author, Mauduyt, and plenty of new ones, all of which give exactly what Dr. Rockwell refers to as given in his Mauduyt. I have searched these books long and carefully to find any allusion to the form of current which I named the static induced current. So have many others. Nowhere is there any reference to a current which will produce a continuous muscular contraction, namely, physiological tetanus, similar to that produced by the faradic current. These authorities deal with the spray, sparks, and mainly with shocks from Leyden jars. To graduate the length of the spark from a Leyden jar and thus to define the limit of the shock, the Lane electrometer, which is simply a Leyden jar with modified metallic connections and other contrivances, were used. The result was a single spark from the jar and a single muscular contraction. It is to this Lane electrometer form of Leyden jar that my critic undoubtedly refers. Let us see what Mauduyt, his own authority, actually says of it. I translate: "Its advantages are (1) to furnish a sure and fixed measure of the force of the shocks; (2) to give them at a strength which is agreeable; (3) to preserve this strength as long as is thought suitable, and to be able to augment or diminish it at will; (4) to determine and regulate their course." Not a word is said of a tetanizing or, so to speak, faradic current, such as the static induced current is, in these conclusions from Mauduyt (nor elsewhere in his writings).

If Dr. Rockwell will produce any record or instance, prior to my publication in 1881, of a current derived from electrostatic apparatus, which has in any one's experience produced physiological tetanus, namely, continuous muscular contractions, as does a faradic current, then I will withdraw any claim to originality for the discovery of the static induced current I have ever made. If, on the other hand, he cannot sustain his statement, let him frankly say so.

William J. Morton, M.D.

December 27, 1899

A REVIEW OF THE HISTORY AND LITERATURE OF APPENDICITIS.

To the Editor of the Medical Record

Sir: In a review of the "History and Literature of Appendicitis," by Dr. George M. Edebohls, in your issue of November 25, 1899, referring to the various operative measures he says: "The expedient adopted by Wyeth of operating at two sittings represents an unnecessary compromise." This "compromise" is in my opinion so essential to the safety of the patient in a large proportion of certain forms of appendicitis that I desire to state my position clearly, and with emphasis. I hold that in many instances unnecessary dangers are incurred by the boldness of certain operators in the efforts to remove septic accumulations from the peritoneal cavity. To advise in all cases a free dissection for the removal of the remains of a diseased appendix and the plastic exudate, which with the mesentery and contiguous intestinal loops form the wall of an abscess resulting from infectious appendicitis, is to encourage a dangerous practice.

In the earlier hours of infection, when the amount of septic matter is small, and the adhesions and area of infection are limited, a complete operation which will require no more than the "gridiron" incision of McBurney can often be done with perfect propriety and with safety by a skilful operator. In my experience, these cases are, however, very rare. When there has been a considerable exudate measuring with the agglutinated mass three or four inches in the various diameters, these complete operations cannot without grave risk be safely accomplished unless the incision through the abdominal wall is enlarged in order to give the surgeon complete control of the septic area, and thus prevent spreading the infection to uninvaded portions of the peritoneal cavity. Enlarging the incision by division of the muscular fibres is very objectionable, for the reason that it weakens the abdominal wall, and not infrequently results in ventral hernia. When an abscess has formed, and this abscess can be opened directly through any part of the abdominal wall in which adhesions exist which enable the operator to drain the septic contents off without entering the general peritoneal cavity, I hold it is better practice to do this than to attempt removal of the infectious mass. The vast majority of these patients recover, and only a very small proportion of them have a second attack. Should a second attack occur I should carry out the same line of practice, and insist upon a removal of the diseased appendix after the acute infection had passed, and in what we call the quiescent period.

In the larger abscesses, in which no adhesions have occurred between the mass and any part of the abdominal wall, I make it a rule, after making the gridiron incision and discovering this condition, to insert gauze in such a way as to keep the wound open, and to secure adhesions between the mass and the peritoneum at the margins of the incision, waiting twenty-four to forty-eight hours to institute drainage For this second operation cocaine anæsthesia is sufficient.

One other point I would like to bring up. Dr. Edebohls says: "Ligation of the stump, though still very generally practised, cannot be considered a perfectly safe procedure." There does not seem to me to be much force in this criticism. It may be asked if any method of closing the opening in the appendix or cæcum can be considered a perfectly safe procedure. With one or two exceptions I have practised simple ligation of the stump with a silk thread in all of my cases. In the other instances in which the gangrene had extended so far as to involve the cæcum, I have been compelled to resort to the Lembert silk suture as practised in ordinary intestinal wounds. Dr. Edebohls mentions two cases, one by Dock and one unpublished case, in which leakage and fatal peritonitis followed slipping of the ligature. If we consider the thousands of cases in which the ligature has been used with only, so far as known, two such fatal cases, it does not seem to me to be a very bad record for this method. I believe that the intestines, and in fact all of the organs within the abdomen, should be submitted to the least possible manipulation and traumatism in all surgical procedures. The insertion of sutures or of Dr. Dawbarn's purse-string suture after inversion of the appendix, all require more manipulation than the simple ligature, and in my opinion offer no greater guarantee of safety to the patient. I have never had an accident after the ligature, nor do I know of any accidents which occurred in the work of my colleagues in my long connection with the hospital service in this city. After tying the appendix close to the cæcum where the tissues are sound and removing the diseased organ, I curette the little funnel-shaped portion of the divided appendix which is beyond the ligature, and then thoroughly cauterize it with a mercuric chloride tablet. I again curette the funnel-shaped stump in order to remove any excess of the mercury. The results so far have been such in all cases as to justify my own continuance of this method.

John A. Wyeth, M.D.

New York.

Medical Items.

No Indian Lunatics.—Commissioner William A. Jones, after careful study of the subject, has come to the conclusion that "a full-blooded Indian lunatic never lived." He holds that insanity was not known to the red man until he began mixing with the whites. —*Catholic News*.

Hungarian Punishment for Bigamy.—Bigamists in Hungary are compelled to submit to a queer punishment. The man who has been foolish enough to marry two wives is obliged by law to live with both of them in the same house.

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Original Articles.

THE RELATIVE INTENSITY OF THE SECOND SOUNDS AT THE BASE OF THE HEART: A STUDY OF ONE THOUSAND CASES.

By SARAH ROBINSON CREIGHTON, M.D.,

NEW YORK.

Most modern text-books on physical diagnosis state or imply that in the normal heart the aortic second sound is louder than the second sound heard in the pulmonary area. The following quotations exemplify the prevailing view: "On account of the more powerful recoil in the aorta, the aortic is the predominating sound."[1] In F. C. Shattuck's book,[2] the matter is stated in this way: "The sound is, in health, somewhat louder and sharper here (*i.e.*, in the second right interspace near the sternum) than it is over the corresponding point in the left side." In Da Costa's "Physical Diagnosis,"[3] we read: "The second sound of the latter" (the aortic valve) "when compared with that of the former" (the pulmonary valve) "is found to be sharper and more accentuated." Musser states that[4] "In health, the pulmonic second sound is not so loud as the corresponding sound of the aorta." Guttman[5] says: "In normal conditions of the heart, the aortic second sound has the same intensity as the pulmonic, or even a somewhat greater intensity." Gerhardt[6] makes a somewhat different statement from any of the above. "Normally," he says, "the second sounds (in the aortic and pulmonic areas respectively) are equal."

In the works on diseases of the heart, I find very meagre statements about the condition of the second sounds at the base of the normal heart, except the following from Bramwell:[7] "The aortic second is louder and more accentuated than the pulmonary"; and from Sansom,[8] who says: "The sound audible in this direction" (*i.e.*, over the pulmonary area) "is normally less intense than that heard on the aortic side." Nearly all the other writers convey the impression that they believe the aortic second sound to be the louder in health; for example, Broadbent[9] writes: "In the pulmonic and aortic areas, accentuation of the second sound is the point especially to be observed as denoting increased pressure in the pulmonic or systemic circulations respectively." Whittaker[10] writes: "A strong accentuation of the second pulmonary sound, in the absence of other cause, may suffice to establish the diagnosis" (of mitral stenosis). Osler makes no explicit statement on the subject, so far as I can see. Cutler[1] says, "The second sound is loudest over the second left interspace or third rib and over the second right intercostal space, both close to the sternum"; and later on in the article, "The pulmonic second sound" (in cases in which the heart has been uncovered by retraction of the lungs) "is often louder than the aortic second." André Petit[2] says: "The reinforcement of the second sound at the pulmonary valve reveals an excess of pressure in the pulmonary circulation, and should put one on the track of some obstacle to the emptying of the left heart, particularly of the auricle in mitral stenosis."

Among books on children's diseases, Rotch and Starr say nothing in particular on this subject. Holt[3] makes a definite statement, namely: "Normally, the loudest of the heart sounds is the first sound at the apex; the weakest sound is the second sound at the aortic orifice." Hochsinger,[4] also, asserts that "in infants and young children the second sound is weaker in the aortic area than in the pulmonary area. It is loudest in the second left intercostal space."

It will be seen that Holt and Hochsinger are the only ones of all these writers who definitely state that the pulmonic second sound is louder than the aortic second sound, in health. All the others record precisely opposite observations, with the exception of Gerhardt, who found both second sounds equal in intensity. The statements of the majority of the writers just quoted are all the more amazing when one observes that, as long ago as 1885, so careful a student as Vierordt proved experimentally that, contrary to the idea of all the writers just quoted, the pulmonic second sound is frequently louder than the aortic second sound in the healthy heart.

Vierordt measured the relative intensity of the different heart sounds in the following manner: Over a given valve area (for example, the second right chondro-sternal articulation) he placed, one after another, layers of gutta-percha of uniform thickness, and noted how many were needed to prevent the transmission of the heart sounds to the ear. Then, by repeating the process over another valve area, he was able to record in quantitative form any difference in the relative intensity of the sounds in the two areas, as measured by the number of layers necessary to obliterate them. These experiments showed that in only five out of thirty-six cases was the aortic sound louder than the pulmonic. Once they were equal. The average results of his estimation were as follows: Between the ages of four and ten years the intensity of the pulmonic second was to that of the aortic second as 7.78 is to 6.26; eleven and twenty years, as 6.60 is to 4.92; twenty-one and forty years, as 5.68 is to 4.81; forty-one and fifty years, as 5.39 is to 5.46.

Möller,[5] using similar methods, found that in twelve cases the aortic second was, on the average, stronger than the pulmonic, the ratio being 2.32 to 2.24. Five of his twelve cases showed an aortic second stronger than the pulmonic second; four cases showed a pulmonic second stronger than the aortic second; in three cases, the aortic and pulmonic second sounds were equal. On the other hand, Schreiber,[1] who worked with Möller and investigated the same number of cases, found that, on the average, the pulmonic second was the stronger (2.25 to 2.07). In nine of the twelve, the pulmonic second was the louder.

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[1] Tyson: "Physical Diagnosis," p. 120.
[2] "Auscultation and Percussion," p. 61.
[3] "Physical Diagnosis."
[4] "Medical Diagnosis," p. 358.
[5] Eulenburg's "Encyclopedia," p. 89.
[6] "Auscultation and Percussion," fourth edition, Tübingen, 1884.
[7] "Diseases of the Heart," p. 138.
[8] "Diagnosis of Diseases of the Heart and Thoracic Aorta," p. 189.
[9] "Diseases of the Heart," p. 24.
[10] Article on "Diseases of the Heart," in "Twentieth Century Practice of Medicine," vol. iv., p. 242.

[1] "The American System of Medicine," vol. ii., p. 344.
[2] "Traité de Médecine," vol. v.
[3] "Diseases of Infancy and Childhood," p. 561.
[4] "Die Auscultation des kindlichen Herzens" (Wien, 1890), p. 16.
[5] Möller: Dissertation, "Ueber die Intensität der Herztöne," Königsberg, 1879, p. 26.

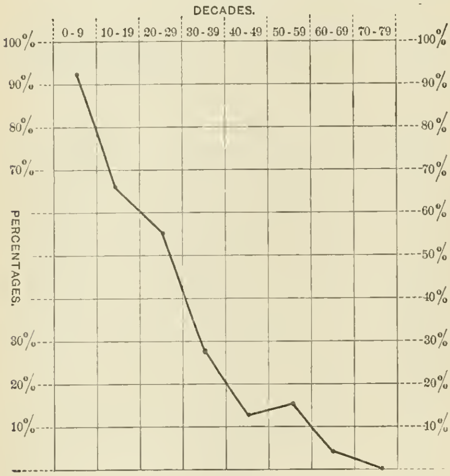

Chart 1.—Showing the Per Cent. of Accentuated Aortic Second Sound in each Decade. Based on 1,000 cases.

Personal Experience.—In view of the discrepancy between the measurements of Vierordt, Schreiber, and Möller, and the statements handed on from one modern text-book to another, it seemed to me worth while to investigate the matter in a considerable number of cases. Accordingly, during the summer of 1899, in Dr. Richard C. Cabot's clinic at the Massachusetts General Hospital, one thousand cases were examined. The cases were distributed in the various decades as follows:

Under 10 years	123
From 10 to 19 years	130
" 20 " 29 "	207
" 30 " 39 "	181
" 40 " 49 "	182
" 50 " 59 "	109
" 60 " 69 "	50
" 70 " 79 "	18
Total	1,000

Among these were 24 cases of general debility, 51 cases of malaria, 63 of gastro-intestinal disorders, etc. The remainder were divided among such affections as the anæmias, neurasthenia, sciatica, etc.

In the 1,000 cases examined, the pulmonic second sound was the louder in 291 cases; the aortic second sound was the louder in 486 cases; while the two sounds were of equal intensity in 223 cases. When we come to examine these figures more in detail, we find that the younger the patient the more apt is the pulmonic second sound to be accented. Thus an accented pulmonic second sound was shown:

Out of	123	cases	under 10	years,	by	111	or	90+	per cent.
"	130	"	from 10 to 19	years,	by	87	"	66.9	"
"	207	"	" 20 " 29	"	"	111	"	53.1	"
"	181	"	" 30 " 39	"	"	51	"	27.6	"
"	182	"	" 40 " 49	"	"	24	"	13.1	"
"	109	"	" 50 " 59	"	"	16	"	14.6	"
"	50	"	" 60 " 69	"	"	2	"	4	"
"	18	"	" 70 " 79	"	"	0	"	0	"
	1,000								

On the other hand, accentuation of the aortic second became more common with each decade. An accented aortic second sound was shown:

Out of	123	cases*	under 10	years,	by	only	4	or	8 2	per cent.
"	130	"	from 10 to 19	years,	by		33	"	25.5	"
"	207	"	" 20 " 29	"	"		72	"	35.5	"
"	181	"	" 30 " 39	"	"		100	"	54.9	"
"	182	"	" 40 " 49	"	"		136	"	74.9	"
"	109	"	" 50 " 59	"	"		82	"	75.4	"
"	50	"	" 60 " 69	"	"		46	"	92	"
"	18	"	" 70 " 79	"	"		17	"	94	"
	1,000									

* In eight the second sounds were equal.

Exhibited in tabular form, these figures give the curves shown in Charts 1 and 2.

In each of these cases the heart was normal, so far as could be determined, and we eliminated all patients having diseases which are ordinarily supposed to alter the heart sounds in any way, except pulmonary phthisis. Nine-tenths of these patients had walked a considerable distance to the out-patient department and were by no means seriously sick, while many of them were healthy individuals, assistants in the clinic, interpreters, or relatives accompanying patients.

Effects of Exercise and Position.—Many were experimented with to ascertain the effects of exercise and position on the second sounds. Exercise does not seem to alter the relative intensity of the aortic and pulmonic second. In a few instances, the aortic was louder in the upright position, while the pulmonic came out with greater force when the patient was lying down.

Accentuation in Youth.—In children under four years, the accentuation at the pulmonary orifice is very striking; between the ages of ten and twenty, it is less so, and from twenty years on, there is seldom any marked difference between the sounds until after the fortieth year, when the aortic second begins to come out sharply.

Tentative Explanations.—Such are the facts. It is, of course, well known that in the fœtus at term the wall of the right ventricle is nearly if not quite equal in thickness to that of the left. From this time on, the thickness of the right ventricle diminishes, until at two years it is often actually thinner than at six months intra-uterine, despite the great increase in the size of the heart as a whole.[1] This fact, viz., the

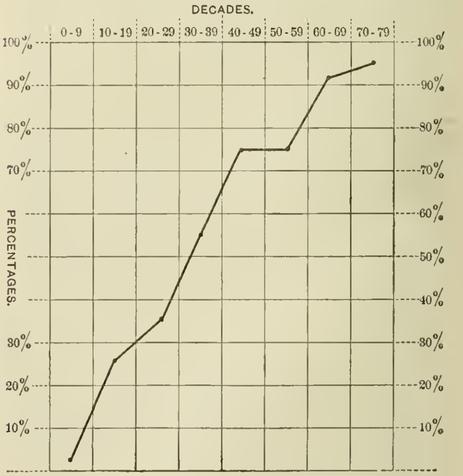

Chart 2.—Showing the Per Cent. of Accentuated Pulmonic Second Sound in each Decade. Based on 1,000 cases.

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[1] *Ibid.*

[1] Gibson : "Diseases of the Heart and Aorta," p. 8.

relatively great thickness of the right ventricular wall, must be taken into consideration in very young children, and probably assists in accounting for the great accentuation in the pulmonic second sound at that age. It may be further suggested that, in children up to nine years, the accentuation of the pulmonic second, which I have shown to be normal, is to be accounted for partly by the fact that the lungs are not fully expanded before that age. Rotch says:[1] "At what age the lungs reach their full expansion forward has not been determined. It would appear that it is not before five or six years, and it is probably still later." We know that in any disease causing a rise in blood pressure in the pulmonary circulation, such as phthisis, pneumonia, emphysema, etc., we have an accentuation of the sound produced at the pulmonary valves. It seems that the lack of expansion of an otherwise normal lung may well produce the same effect as consolidated tissue. The reason for the pulmonic accentuation from ten years on is not so easy to understand, but whatever the explanation may be, the results of these one thousand cases would seem to show that, up to the time of full physical maturity (twenty-fifth to thirtieth year), the recoil of the blood upon the pulmonary valves is more forcible than that which closes the aortic valves. This difference diminishes progressively with growth until full maturity, when the normal condition would seem to be equality in the recoil of the blood against both sets of valves. We may suppose that this situation holds until degeneration of arteries, and all the many changes which follow the gradual wearing out of various parts of the body, increase the resistance in the systemic circulation. The latter has many more pitfalls to encounter than the pulmonary circulation, especially in the tissues of the kidney and liver, which offer splendid ground for degenerative changes. Autopsies certainly prove that it is rare to find perfect kidneys after forty years of age.

Conclusions.—1. Accentuation of the pulmonic second sound is almost invariable in young children and frequent in youth.

2. After the fortieth year of life, the reverse is the case, and it is then rare to find a pulmonic second sound as loud as the corresponding aortic sound.

3. Between the ages of twenty and thirty years, there is no marked accentuation of either sound.

4. In view of the above facts, it is obvious that when one speaks of an accented pulmonic second sound as corroborative of a diagnosis of heart disease, such accentuation must mean an increase in the loudness of the sound over that normally to be expected at the age of the patient in question. A comparison with the aortic second is not sufficient to settle the question.

5. Further, when we speak of an aortic second sound as accented, we must mean (in case of patients over forty years) more accented than it normally is. Once more, the simple comparison with the pulmonic second sound will not settle the question. The comparison must be with an ideal standard carried in the mind.

6. In interpreting the meaning of an accentuation of the pulmonic second in suspected mitral stenosis, one must bear in mind the age of the patient. The presence of a pathological accentuation of the sound can be determined only in relation to the degree of accentuation which is to be expected at the age of the patient in question.

Erysipelas.—Moist applications of a two-per-cent. solution of creolin frequently cause very rapid subsidence of the inflammation and fever.—M. Wolf, *Wiener med. Presse*, October 8, 1899.

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[1] Rotch: "Pediatrics," p. 75.

ACQUIRED NON-MALIGNANT STRICTURE OF THE RECTUM: CAUSES, SYMPTOMS, AND TREATMENT.

By W. DUFF BULLARD, M.D.,
NEW YORK.

By the great majority of observers, syphilis has been regarded as the most common etiological factor in stricture of the rectum. No convincing argument, however, has yet been brought forward which proves beyond conjecture that syphilis finds in the rectum structures more readily yielding to its ravages than tissues in other portions of the alimentary canal.

Before proceeding to the discussion of the subject proper of this article, I shall endeavor to give a brief résumé of what has been said by various authors upon diseases of the rectum with especial reference to syphilis as a causative factor.*

White,[1] of Bath, the first English surgeon, I believe, who wrote a work on stricture of the rectum, makes no mention of the venereal poison as a cause of stricture. This is also the case with Mayo[2] and Frederick Talman,[3] and even Mr. Syme, in a paper on diseases of the rectum, does not allude to it. Indeed, it would appear that the earlier English writers have passed over in silence any venereal disease as a cause of stricture. Thus, as early as 1815, Richerand[4] speaks of "condyloms internes" of the rectum. Others have spoken of tubercles in this organ causing stricture, but Bushe[5] says that "neither Morgagni, Desault, Tanson, White, Copeland, nor Calvert say that these tubercles depend on any specific cause." Both Richerand and Delpech, however, assert most distinctly that they depend upon the venereal poison. Bushe, in a short chapter on venereal ulceration of the rectum, says: "This ulceration may arise from the direct application of the venereal poison, or it may coexist with other secondary symptoms." He does not, however, speak of this disease as causing stricture. South,[6] among the numerous causes enumerated as giving rise to stricture, includes that of syphilis, and says: "The immediate cause of stricture of the rectum is always a more or less extensive inflammation or continual irritation of the rectum, in consequence of which there is a secretion of plastic matter, thickening and elongation of tissue."

According to Copeland,[7] Desault saw stricture so frequently in combination with other symptoms decidedly venereal, that he did not hesitate at once to put his patients under a course of mercury, and, he says, with a success that fully warranted him in considering it as very frequently a symptom of the venereal disease. It must be stated here, however, that at the same time Desault resorted to local treatment by means of the bougie. Copeland further remarks that stricture is much more frequent than physicians imagine, and it is not so frequently of a cancerous origin as authors would lead us to believe. Curling,[8] in speaking of chronic ulceration of the rectum, says: "Mr. Avery exhibited a specimen of ulceration of the rectum in a female, the history of which clearly showed the connection of the lesion with syphilis and its probable occurrence as one of the secondary phenomena of the disease. When the patient died she had numerous indelible marks of syphilitic eruption on the limbs and trunk, and was suffering from sore throat." It appears that Mr. Curling is not a believer in the so-called "syphilitic stricture," for when speaking of stricture he remarks "that Desault supposed they were of syphilitic origin, but his observations in reference to that point are not satisfactory." Mr. Quain,[9] while speaking of ulceration and stricture as a result, does not allude to venereal disease as a cause.

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* For many of the references given in the text, acknowledgment is due to Erskine Mason.

In looking over some of the standard authors on general surgery, I find Chelius[10] includes syphilis as one of the causes of stricture. Erichsen makes no mention of any venereal stricture, but speaks of having met "that form which occurs low down several times in young women otherwise perfectly healthy." The same is true of the works of Fergusson, Pirrie, and Druitt. Gross[11] says: "A syphilitic stricture is occasionally met with in the lower bowel, caused not by any constitutional taint, but by direct inoculation with chancrous matter." Mr. Henry Smith[12] regards this disease as due to constitutional syphilis, and advocates "the exhibition of small doses of mercury and the iodide of potassium" in the treatment of the same. Lancereaux[13] confirms the ideas expressed by Gosselin; and Bumstead[14] is an advocate of the disease being chancroidal and not syphilitic. Berkeley Hill,[15] on the other hand, while giving an accurate description of this stricture, says: "Many observers, among whom is Gosselin, do not regard this as a product of the syphilitic diathesis," but he does not give his own opinion. I infer, however, that he entertains the more modern view in reference to this subject when he says: "In the treatment of syphilitic stricture of the rectum specifics are of little value."

Among the more recent authors I find that Dr. Van Buren[16] regards the chancroid, especially when it takes on a phagedenic character, as the only mode in which any form of the venereal disease is certainly known to give rise to strictures of the rectum. On the other hand, I find Mr. Allingham,[17] in referring to ulceration of the rectum, uses the following language: "I have no doubt that a good many are of syphilitic origin. They may be the result either of secondary or tertiary syphilis, and other syphilitic lesions will be observed; but sometimes the ulceration of the bowel with a syphilitic history is the only symptom present." With reference to stricture of the rectum he says: "I am of the opinion that some strictures are syphilitic in their origin, and when they are, the patients generally do well." For these cases he advocates anti-syphilitic treatment.

Again, Hamilton[18] remarks: "The most common cause of stricture of the rectum in public practice is syphilis and chancroid. At Charity Hospital these cases are constantly under observation, and they are observed to be particularly frequent among women. Gosselin[19] concluded from his observations on twelve patients, all women, that the affection known as "syphilitic stricture" was due to the local sore, "the chancroid," rather than to constitutional syphilis. Mason[20] states that the deductions he would make are: "The disease appears peculiar to females; it occurs chiefly between the ages of eighteen and thirty-five years. The locality of the stricture, as a rule, is between one and two inches from the anus. Anti-syphilitic remedies possess no beneficial influence over the disease. This disease is more frequent than is generally supposed." Though unwilling to deny that a stricture of the rectum might occur as the result of a syphilitic ulcer, he believes that such an occurrence must be exceedingly rare; and, therefore, the term "syphilitic stricture" is an improper name. Hence the disease, being due to the chancroid, should be known as the "venereal," or rather "chancroidal" stricture. He reports thirty-one cases, all in women.

Bäumler[21] states that: "A number of authors look upon 'chancres' as the sole cause of the stricture. Others, among whom are A. Guerin and Verneuil, urge the syphilitic nature of the process upon which the disease depends. Virchow leaves it undecided, since he has had no opportunity to examine the early stages of the process. It must, however, be admitted that secondary ulceration of the rectum may extend upward from affections about the anus, and also that gummata may occur in the rectum. Moreover, if stricture of the rectum is found in young women, it is probably due to 'chancre' cicatrices: if it is met with in old women and men, the inference should be that it is either caused by cancer or by a syphilitic infiltration with its consequences. Only in those cases in which no cicatricial tissue has been formed, *i.e.*, where the contraction is due to the infiltration alone, will the results of anti-syphilitic treatment contribute anything toward rendering the diagnosis more certain."

The "chancres" referred to in the above quotation are evidently intended to mean only the local sore—chancroid.

Cooper and Edwards[22] state that "syphilitic ulceration is most often due to the disintegration of gummatous growths and is therefore connected with the tertiary stage of the disorder." They also state that "a history of syphilis is obtainable in from twenty to thirty per cent. of all cases of stricture of the rectum." In a rapid examination of their book, it was noted that no mention was made as to whether they found stricture occurring more frequently in women or not. The Allinghams[23] say: "In our experience, certainly half of the cases of stricture with ulceration have been syphilitic of a late secondary or tertiary type." No mention of stricture of the rectum occurring more frequently in women is here made, and they do not deign to mention how it is possible to distinguish between a stricture of the tertiary type and one of the secondary.

Matthews[24] says: "I have already stated that I do not hold to the theory of chancroidal ulceration and consequent stricture, as advocated by Ziegler, Mason, Kelsey, Van Buren, Gosselin, and others. Nor do I subscribe to the belief that the stricture is caused by the contraction of the cicatrix of the healed ulcer. . . . I believe that strictures in a syphilitic subject are the result of a syphilitic neoplasm which becomes organized into firm tissue. . . . Indeed, so firm am I in this belief, that if it is a question between cancer and no cancer, and it is decided that it is not malignant, ninety-nine out of every hundred cases will, in my opinion, prove to be syphilitic."

Allingham, in tabulating his cases of stricture, says: "Thus out of the total number of ninety-nine cases of stricture, fifty-two or more were syphilitic."

Matthews, although he mentions many cases of stricture seen in his own practice among women, also attaches no importance to the fact, for he does not anywhere state that women are more commonly affected, as least so far as the writer could see. All the authorities in the same way either ignore this peculiarity in the etiology, or state that it is simply a disease of women, and rest their argument there. It seems curious to the writer that so many observers should pass over this peculiar feature with so little reference, and continue along the lines laid down, when the facts in the case do not warrant such a course.

Kelsey says: "Of the existence of syphilitic ulceration of the rectal pouch occurring in the late secondary or tertiary stage of the disease, there can be no more doubt than of the existence of the same condition in the fauces or trachea. . . . I believe it to be a rare condition . . . and one that in no way accounts for the condition of hypertrophy of the surrounding tissues and stenosis so commonly described as 'syphilitic stricture' of the rectum." Again, quoting Fournier's description of the so-called ano-rectal syphiloma, he says: "The disease commences as an infiltration of the rectal wall by the neoplasm; the deposit is entirely submucous and occurs by preference in the rectal pouch, and always encircles the whole calibre. . . . There is no contraction and no ulceration until later. As the deposit increases in amount, the mucous membrane over it loses its vitality and becomes ulcerated, and the deposit itself finally degenerates into fibrous tissue, retracts, and causes stricture."

Such a process as Fournier describes is unknown in any other part of the body, and equally unknown as any process characteristic of syphilis. Nor is it in any way amenable to anti-syphilitic treatment, the condition being simply a chronic hypertrophic proctitis independent of syphilis. The weight of evidence is decidedly in favor of the possibility of the causation of stricture by phagedenic chancroids; but that any large proportion of strictures are in any way due either to chancroids or syphilis has never been proved, while recent clinical and microscopical study is all against this time-honored theory. The views of Dr. Kelsey are, in the opinion of the writer, not sufficiently radical. The author would go still further and say that not one in a thousand cases of stricture is caused either by chancroid or syphilis, and that what Dr. Kelsey designates "chronic hypertrophic proctitis" can be explained frequently, not as the effect of inflammation starting in the rectal wall, but as the direct result of some mechanical cause external to the rectum and encroaching upon its calibre.

After reviewing the writings of the many authors above referred to, it would seem that no two of them agree as to the frequency with which syphilis and chancroids act in the production of stricture of the rectum. All are, however, of the opinion that the disease is more frequent in women.

In the writer's opinion, the primary syphilitic lesion occurs in the rectum only in victims of passive pederasty or by means of direct contagion. There is very little destruction of tissue produced by a chancre, and the tendency is for it to run its course to spontaneous healing in from four to six weeks. Mucous patches may also occur in the rectum as a secondary manifestation of syphilis. As is well known, the fauces and pharynx are the parts most frequently affected by this type of the disease. The symptoms here are more aggravated by irritants, such as tobacco, alcohol, etc. Men are more subject to these irritations. Why should the female rectum be the structure in which the mucous patch proceeds to stricture, while the male organ escapes? Mucous patches in the fauces produce decided symptoms. Let the syphilographer tell us how many patients suffer from symptoms of ulcerated mucous patches in the rectum at this stage of syphilis. The writer believes their answer will be that no case showed symptoms of rectal disease which were not present before the syphilis was contracted. But if we admit that mucous patches occasionally do occur in the rectum, will they cause stricture of the rectum without first presenting well-marked symptoms of acute ulceration with its muco-purulent discharge and tenesmus? No. The mucous patch is distinctly an ulcerative lesion, and rarely extends deeper than the mucous membrane, and always responds to cleanliness and anti-syphilitic treatment. These rectal strictures, however, do not respond to anti-syphilitic treatment at any stage of their development.

Most authorities look upon tertiary lesions and the ano-rectal syphiloma of Fournier as the cause of most non-malignant strictures of the rectum. The ano-rectal syphiloma is supposed to be a diffuse infiltration of all the lower part of the rectal wall, causing an hypertrophy which narrows the canal. Such a process occurs, but it is, in the writer's opinion, neither caused by, nor characteristic of, syphilis. In his opinion, it is due to prolonged irritation acting in the rectum, or more frequently to external causes, such as will be subsequently described under the head of stricture from cellular deposit.

Several authorities claim to have seen gummata as circumscribed swellings in the wall of the rectum; but, if such is the case, the writer can see no reason why such deposits in this locality should not as readily respond to anti-syphilitic treatment as they do in other parts of the body. However, authorities state that they do not respond to specific treatment. Therefore the author believes it is safe to say that no lesion in the body is syphilitic that does not respond to specific treatment. Furthermore, he is convinced that syphilis *per se* is not a causative factor in stricture of the rectum. The more frequent occurrence of stricture in the female rectum can be accounted for by reason of the greater liability to traumatism to which the latter is exposed. Every coitus and every pregnancy affect the rectal wall, and every inflammatory process in uterus, tubes, or ovaries may exert a pernicious influence.

The author is of the opinion that the great majority of observers have been led to consider syphilis the causative factor in the production of rectal stricture by the fact that this condition has been most frequently observed in syphilitic subjects. To the author's mind it appears much more rational to assume that syphilis is not immediately responsible for such lesions for the following reasons:

Endarteritis is a well-recognized state in syphilis. This change in the vascular system, combined with the resultant low state of nutrition, renders the mucosa of the rectum less resistant to irritants and trauma. Under these circumstances, small losses of the epithelial covering, which would readily be restored in healthy individuals, remain unhealed and constitute the beginning of simple inflammatory or ulcerative conditions. Examples of this are offered in the indolent healing of wounds and in the delayed union of fractures in syphilitic subjects.

The production of a stricture of the rectum is characterized by a progressive narrowing of the lumen of this viscus. The varieties of lesions that tend to produce such a condition may be divided into two large classes:

I. Lesions external to the bowel, producing mechanical obstructions and circulatory disturbances resulting in involvement of the rectal wall.

II. Lesions originating in the wall of the bowel itself.

Lesions external to the bowel operating to produce rectal stricture are of more frequent occurrence in the female than in the male subject.

This is undoubtedly due to the fact that in the former the rectum lies in closer proximity to the organs of generation, which are more subject to radical changes than in the latter. Disease of the vulva or vagina, as manifested in the cicatricial contraction following old non-syphilitic ulceration, chancroidal disease, extensive gonorrhœal inflammation, and, most common of all, traumatisms, as illustrated by the ruptured perineum, directly affect the rectal wall. Enlargement of the uterus in pregnancy or any disease of the adnexa, if allowed to progress, interferes with proper performance of the rectal functions. Pressure is exerted upon the elastic rectal wall, thereby producing a rounded spur which projects into the lumen of the bowel. If there be added to this a constipated habit and the straining necessary to force the hardened fæces beyond this spur, the continuity and integrity of the rectal wall are menaced. This condition, if unrelieved, obstructs the circulatory efforts of nature which are essential to the sustenance of the mucosa. The mucosa gradually loses its elasticity and vitality, until, by constant irritation, the stools erode the epithelium covering the spur. Ulceration now takes place, and the steps between this stage and stricture of the rectum are short.

This sequel can, perhaps, most frequently be observed in patients suffering from adherent retroflexed uterus; but it may also result from the action of any mass encroaching upon the normal calibre of the rectum. Nature, apparently realizing the dangers to which the rectum is exposed, endeavors to overcome them by dilating the canal into what is called the "rectal pouch." If, however, this "rectal pouch" is surrounded by a plastic exudate from a contiguous pelvic peritonitis, cellulitis, peri-prostatic or pelvic abscess, the power of adapting itself to the mass of fæces is lost. Under these circumstances the pressure necessary to push a stool beyond the obstruction may be likened to an attempt to force semi-fluid material through an old stiffened section of rubber hose having a partial kink in its calibre. Dilatation occurs above the kink until sufficient pressure is exerted to force a passage or to burst the tube. The inflammatory deposit may so interrupt peristaltic action as to give rise to obstruction.

Stricture resulting from such a condition is likely to consist of an hypertrophy of all the walls of the bowel for three or four inches above the point where the lumen of the gut is encroached upon by the inflammatory deposit. This results from Nature's efforts to force the contents of the rectum through the adherent and obstructed portion of the bowel. Later, when dilatation results from constant pressure above, ulceration and pocketing occur. This, however, is observed only in those well-advanced cases in which treatment had not been applied or in which the real trouble had not been recognized.

Chancroids frequently occur at the anal margin and cause fissures and ulcers about the anus. The author, however, does not believe that they are the cause of stricture except in those cases in which the action of the sphincter is impaired or in which they are allowed to progress to the phagedenic type, and the induration that follows such an extensive process causes a migration of leucocytes into all the neighboring tissues that later become organized into firm tissue. The function of the rectum is to expel all irritating substances and not to draw them in. If chancroidal poison was carried directly into the rectum we surely would find that nearly every prostitute had a stricture of the rectum.

II. Lesions occurring in the rectal wall.

Tuberculosis is sometimes the cause of stricture of the rectum. The rectum is rarely the primary focus of the disease, but when the system is lowered by tuberculosis of the lungs or the like, the bacilli find a locus resistentiæ minoris in the peri-rectal tissue or in the folds of the mucous membrane itself. If they lodge in the peri-rectal tissue, a tuberculous abscess is formed with subsequent ulceration and stricture. If the mucous membrane is first involved, then ulceration at once begins and spreads rapidly, leaving areas of hard indurated and granulating tissue. This ulceration is most intractable to all forms of treatment, and the infiltration of the rectal wall results in a wide, dense stricture composed of fibrous bands, and large areas the seat of ulceration. The diseases of the colon, such as dysentery, typhoid, amœbic colitis, etc., produce ulceration in the rectal wall as elsewhere in the alimentary tract. These ulcerations may not heal readily, and a fibrous stricture results.

He also believes that gonorrhœa exerts no influence in the formation of stricture of the rectum except from direct contagion.

Hemorrhoids is a lesion that exerts the most potent influence. These varicosities, when they become engorged, inflamed, and strangulated, obstruct the passage of stools. They may slough off the surrounding tissue. The ulcer thus left is generally at first superficial and of little consequence; but if left neglected it gradually extends through the whole mucous membrane to the submucous layer of the rectal wall. A partial stricture is likely to result from subsequent cicatrization.

Abscess and fistula in ano are the most common diseases of the rectum. Abscesses usually press upon the rectal wall, as is shown by the excruciating pains suffered by the patient at stool. If the abscess ruptures externally, then small damage is done to the rectal wall. If the abscess discharges internally, a marked ulceration occurs about this opening from the irritation of the infective material carried over its surface by the fæces. Granulation of the abscess cavity takes place and frequently results in the formation of a large, soft mass of exuberant granulations protruding into the rectal calibre. This mass causes a necrosis of tissue in that part of the rectal wall contiguous thereto. These strictures are soft, prone to hemorrhage, and easily dilated under appropriate and judicious treatment.

Prolapse of the rectum, especially when it originates in childhood, tends to narrow the rectal canal as the result of the thickening of all its walls incident to its repeated fall and reduction, and thus causes stricture.

Surgical operations within the rectum and in the neighboring tissues are quite a common cause of stricture of the rectum. Many such cases are reported from all types of operations; perhaps the most common are those following surgical interference in hemorrhoids and fistula in ano.

During the past winter the writer saw two such cases. One, a woman operated upon for hemorrhoids six years before at a large New York hospital (probably Whitehead's operation was done) showed absolutely no sphincter, the anal orifice being a square opening with no contractile power whatever. Two inches up in the rectum a fibrous stricture was felt and then seen through a speculum. Dilatation was not attempted, as the patient, when first seen, was suffering from an acute attack of obstruction. At the subsequent operation, the stricture was found to extend upward into the bowel for five inches. The whole stricture was divided posteriorly and the wound packed after irrigation and cleansing of the bowel. The recovery was uninterrupted. Several details of interest in this case will be reported in a later article. The second case occurred in a man who consulted a well-known (so-called) rectal specialist of New York City. This gentleman injected some fluid into the rectal wall for the cure of hemorrhoids. A slough and ulceration followed, and the patient, becoming dissatisfied with the way he was progressing, forswore all physicians after six months of treatment. Eighteen months later, he was frightened at his condition and called at my office. He presented an easily dilatable stricture, giving to the touch the feeling of a number of hard polypoid masses surrounded by soft, friable tissue. This condition improved greatly under dilatation and local applications.

Pessaries, glass enema tubes, a fall upon the buttocks, bones, pins, and foreign bodies of various kinds that have become impacted in the rectum, are all likely to cause ulceration and subsequent stricture.

The symptoms occasioned by stricture of the rectum can be discussed in two classes: I. Before ulceration occurs. II. After ulceration occurs.

I. Stricture of the rectum presents very few symptoms before ulceration takes place. Alternating constipation and diarrhœa, a sensation of fulness in the abdomen and of weight in the pelvis, may be all that is present. Every physician should feel that such a condition, not responding to the usual treatment in such affections, is sufficient to call for a careful and thorough rectal examination. Occasionally a patient will not present even so many symptoms as above mentioned. The only trouble that would attract attention to the rectum as the cause of difficulty may be a slight throbbing pain at the anus and a feeling of nausea after a stool.

The stools of a patient suffering from stricture of the rectum are necessarily different in character from those occurring in the healthy subject. They usually consist of small, hard, rounded lumps of fecal scybala not unlike a number of grapes separated from the common stalk. The so-called "ribbon-shaped" stools are rarely seen, and then only in those cases in which the stricture is at the anus or is forced down to it by the act of straining. They are of little diagnostic value, as they may be caused by a spasmodic contraction of the sphincter when no stricture is present. As the stricture becomes dense, and the tissue organized into fibrous bands, the symptoms become more severe. There are now distention of the abdomen, impairment of digestion, eructation of gases, and distress after eating. Fecal masses can be felt in the transverse and descending colon. The patient now begins to suffer from tenesmus, and is obliged to go to stool time after time to pass but a few lumps of fecal matter and an excessive amount of muco-purulent material from the irritated mucous membrane of the bowel. The fecal masses begin to act as foreign bodies and cause a catarrhal inflammation of the whole intestinal canal with its attendant mucous discharge and septic absorption.

Relief is temporarily obtained from the use of cathartics, but the process repeats itself again and again, exhausting alike the patient and the intestinal functions. If the patient becomes constipated, acute obstruction may occur and a fatal issue result, unless operative interference is at once instituted. This is more likely to occur if the stricture is in the sigmoid or high up in the rectum, where the intestine may twist upon itself in its peristaltic efforts to push the obstruction onward, than if it is low down in the rectum where all the force is concentrated upon a mass held steadily in position by the surrounding organs and a tight meso-rectum.

II. After ulceration begins.

As a rule, the writer believes that ulceration is the first step in the production of a stricture of the rectum, and consequently cases with as obscure symptoms as detailed above are the exception and not the rule.

The symptoms of ulceration of the rectum should at once attract the attention of the physician. Pain, muco-purulent discharge, and tenesmus are characteristic. The patient is called to stool any number of times in twenty-four hours, to pass only a few scybala surrounded by a quantity of slime and muco-purulent material streaked with blood. If the patient consults a physician when these symptoms are first noticed and proper treatment is instituted, most patients should be cured, and the sufferer escape from the formation of stricture of the rectum. Only too frequently, I fear, the general practitioner prefers to temporize with a serious condition that needs the care of a specialist as much as does a new growth of the larynx. An ulcer of the rectum will rarely respond to internal treatment, even if it be supplemented by the use of an occasional suppository. Treatment locally to the diseased area, and that alone, is essential. A few additions to the physician's regular armamentarium and some training should suffice to render local treatment of an ulcer of the rectum possible in every physician's office. The result should be nearly as satisfactory as is the treatment of an ulcer anywhere upon the limbs or body, instead of being a "bête noire" as now. The writer believes that, could the general profession realize the importance of local treatment and apply it in ulcer of the rectum, non-malignant stricture of the rectum would become a rare condition, instead of a comparatively common one as it is to-day. If the ulceration is neglected, it gradually extends, the symptoms grow more severe, and the patient becomes exhausted from the constant drain on the system and the tenesmus. Nature endeavors to remedy the evil, and cicatricial bands and inflammatory deposit narrow the rectal calibre. Then appear the symptoms of deranged intestinal functions, the abdominal soreness and pain, distention, eructation of gases, nausea, occasional attacks of vomiting, localized areas of peritonitis surrounding the diseased mass, chronic obstipation and septic absorption, until the patient succumbs to acute obstruction or exhaustion.

The presence of stricture of the rectum can easily be discovered if the physician understands the use of the numerous instruments at his disposal. The Kelly tube and Kelsey's modification of the same can be used to explore for stricture as high as the middle of the descending colon. Great care should be taken not to attempt to force any instrument by an obstruction. The instrument should be removed and an attempt made to pass a soft-rubber bougie. It is better at first to use a large size, a No. 8 or 10. This large size will distend the folds of mucous membrane. If this soft instrument seems to catch, some soap-suds or olive oil should be injected through the opening in the centre of the bougie, and another attempt made very gently to pass the bougie onward. If resistance is still met with, there is very good reason to believe some obstruction exists. The bougie should be removed and notice taken how many inches of it were introduced before the obstruction was reached. A Kelly tube may then be introduced about the same distance as the bougie, its obturator removed, and with the assistance of an electric head-light the distal end of the stricture can easily be observed, and its calibre accurately measured. A hard-rubber olive-headed bougie on a small flexible metal stem can then be introduced through the tube directly into the lumen of the stricture. It is not desirable for diagnostic purposes to force a large size through the stricture. It is safer to pass one that is nicely adjusted to the lumen of the stricture. By this means the depth of the stricture and any excessive narrowing of its calibre higher up can readily be determined. The resistance to the return of the bougie after it has passed the upper limit of the stricture determines its proximal end as readily as in the case of a urethral stricture. With some experience, the operator can detect the exact nature of the stricture, whether of a dense fibrous type or of partially organized tissue with an excessive amount of ulceration. The metal stem on the bougie employed by the writer is very small. As soon as the olive head has been introduced into the stricture, the walls of the stricture can be perfectly viewed through the tube as they are gradually distended by the onward passage of the bulbous head.

The treatment of these strictures should be governed by the peculiar conditions present in each individual case. When the stricture is found to be quite wide and thick and of large calibre, with considerable ulceration, the treatment should be directed toward curing the ulceration.

Stimulating, cauterizing, and protective applications should be made directly to the ulcerating areas. Healing will usually attend the conscientious and skilful use of such applications. The inflammatory deposit about the stricture, which is constantly increased by the irritation of infective materials upon the ulcers, will begin to be absorbed, and the bowel wall will become less rigid and more amenable to gradual dilatation. As soon as the irritation is overcome, nature will cause the disappearance of a surprisingly large amount of this partially organized material. Just in proportion to the physician's success in overcoming this irritation and infiltration of tissue is the prognosis good or bad. The longer the duration of the disease the more fully organized the tissue will be, and the less will it respond to the efforts of nature to absorb it. The prognosis, then, in an old case should be guarded as to complete or rapid recovery. The author believes that the vast majority of cases in which the patient is not already suffering from chronic obstruction, when first seen can be made more comfortable by the above briefly outlined treatment than by any operation at present at our disposal. When the disease has progressed to such an extent that the stricture is of a very narrow calibre, the patient greatly reduced and suffering from chronic obstruction, radical treatment is at once demanded. Here, operation is the lesser of two evils.

There are several classical methods to relieve these advanced cases.

The operation known as posterior proctotomy is the most generally useful. This operation consists in an incision made in the posterior wall of the rectum from the upper limit of the stricture backward and outward, dividing all the tissues involved in the stricture, including the sphincter and all the cellular tissue between the rectum, the coccyx, and the external gluteal fold. Such an incision is best made in the median line behind. The bowel should then be thoroughly irrigated with some mild solution until the greater part of the fecal masses in the rectum and colon has been entirely removed. The wound is then tightly packed with sterile gauze. The extensive oozing may be controlled by using very hot irrigating fluids, and careful packing of the entire wound cavity. The care of these cases after operation is by far the most important part of the treatment. Any surgeon can make an incision through the rectal wall, but how to treat the incision afterward so as to get the best possible result does not seem to be thoroughly understood. Much of the benefit to be derived from the operation is lost by permitting rapid healing, as, unless that part of the incision that is expected to form a portion of the bowel passage is not covered with mucous membrane, the contraction of the cicatrix will overcome the best efforts to preserve the calibre of the bowel as large as was intended. In other words, every means at our disposal must be employed toward extensive production of mucous membrane.

Granulation from the bottom and sides of the incision should be prevented as much as possible while the slow-growing epithelium-covered mucous membrane extends down over the sides of this incision to meet that of the opposite side. If the mucous membrane will grow on this cellular tissue which constitutes the bottom and sides of the incision, much will be gained, as there is practically no contraction after this form of healing. So it is desirable to have this wound heal not by primary or secondary union, but by third or last union.

The after-treatment of a typical case will be briefly described. Twenty-four hours after the operation the gauze packing is all removed, great care and gentleness being observed in order to avoid hemorrhage, and the bowel thoroughly irrigated with solution of bichloride of mercury 1 : 10,000, at about the temperature 110° F. This should run into the bowel from a douche bag at the height of about four feet above the patient. The irrigation should be kept up until the return flow is clear. One-half the amount of gauze taken out is then replaced with fresh gauze covered with sterile vaseline and placed in the incision. This is allowed to remain *in situ* for twenty-four hours, and is then removed and a smaller amount replaced. The bowels are not moved for three days; then a half ounce of licorice powder is given to soften thoroughly the fecal mass. When the bowels are inclined to move a large soapsuds enema is given, so that no irritation will be felt by the patient when the mass passes through that part of the bowel presenting only a raw surface. After the bowels have moved satisfactorily the patient is allowed to get out of bed and to return to his home when his general condition warrants the exertion. The stools are kept soft by any laxative, and a daily movement is induced. Directly after the movement, the bowel should be carefully irrigated with the antiseptic solution as already mentioned.

The real work on the case now commences. The patient should be seen in the morning after the irrigation, and the condition of the wound carefully inspected by speculæ and artificial light. Granulation will probably have already commenced. The encroachment of this process on the calibre of the bowel opening must be stopped. It can be controlled by light cauterization with the electric cautery, preceded by an ethyl-chloride spray or by a two-per-cent. solution of eucaine "B," applied on a camel's-hair brush. If the granulating areas are not extensive, covering the wound cavity with bismuth subnitrate or any other inert dusting-powder will accomplish the same result. Along the edges of the mucous membrane, great care must be observed in no way to arrest its growth by too free cauterization. This process should be supplemented by stimulating applications to the edges of the mucous membrane if there is any delay in its growth.

The anterior wall of the bowel, if it has been the seat of ulceration and cicatrization, must also be treated, and any further spread of ulceration or contraction prevented by the use of applications and bougies. As a rule, from six weeks to three months are needed to heal this wound properly. At the end of that length of time, the patient should be nearly cured, but about once a month before retiring the patient should introduce a soft-rubber bougie that has been fitted to the rectum and allow it to remain in place all night. This bougie must not be passed oftener than once a month, or it may cause some inflammatory action which will start the ulceration afresh.

Another method is forcible divulsion of the strictured tract by any of the powerful specula and dilators at our command. This method is mentioned only to be condemned as dangerous and unsurgical. It is impossible to tell how far the effects of such a divulsion may go. It may tear through the wall of the rectum into the cellular tissue and a septic peri-proctitis result, or the tear may extend into the peritoneum and a septic cellulitis or peritonitis result in the premature death of the patient.

If the local disease is so far advanced as to contraindicate an attempt to bring about a cure of the local trouble, the descending colon can be opened either in the left inguinal or lumbar region, constituting the operations known as left inguinal or lumbar colostomy. Either of these operations will give immediate relief to the sufferer. It is not my purpose here to give a description of these operations, as they have been fully described in numerous works on general surgery, as well as in several works devoted entirely to rectal diseases. It will be sufficient to state that a very good technique for the inguinal operation (the preferable) can be found in the "Twentieth Century Practice of Medicine" or in Dr. Kelsey's book, "Surgery of the Rectum, and Pelvis."

Briefly summarized, the conclusions the author would draw are:

1. The majority of rectal strictures are of non-syphilitic origin.

2. Syphilis may be a predisposing, but it is not an immediate, cause of stricture of the rectum.

3. Trauma is the chief immediate causative factor in the production of rectal stricture.

4. The proper and intelligent local treatment of non-syphilitic ulceration of the rectum will minimize the occurrence of rectal stricture.

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POST-PARTUM HEMORRHAGE, ITS PREVENTION AND TREATMENT, WITH THE REPORT OF AN UNUSUAL CASE.

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In spite of recent advances in modern obstetric science, post-partum hemorrhage remains one of the great dangers to the parturient woman. Asepsis protects her from the invasion of disease, but in post-partum hemorrhage we have a source of morbidity and mortality that often brings the patient into great danger with but little warning.

We must recognize as the most frequent cause of post-partum hemorrhage the patient's exhaustion. This is of two sorts, local and general. The local exhaustion which threatens her with bleeding is seen in the relaxed condition of the uterus. The general exhaustion which underlies the local condition is observed in those cases of protracted labor in which the mother fails to expel her child spontaneously. Less frequent causes of post-partum hemorrhage are the retention of a partially detached placenta or of a portion of the placenta and membranes within the uterus, lacerations of the genital tract which open blood-vessels, and a profoundly altered condition of the patient's blood.

The prevention of post-partum hemorrhage calls for the careful avoidance of exhaustion. This can be effected only by a thorough examination of each patient before labor or in the earliest stages of labor, to ascertain the presence or absence of an insurmountable obstacle to delivery, and to recognize if possible any complicating condition which may render the labor unusually long and difficult. Much has been said regarding the value of palpation and auscultation in diagnosis, making vaginal examinations infrequent, and thus avoiding septic infection. In the same way very much may be done to avoid exhaustion and hemorrhage if an accurate examination is made before labor, ascertaining the relative size of mother and child, the position of the child and its presentation, the position of the placenta, the muscular vigor and development of the mother's uterus and general muscular system, and the presence or absence of abnormal distention of the uterus through multiple pregnancy or polyhydramnios. We cannot too strongly insist upon the fact that to be forewarned is literally to be forearmed in the prevention and treatment of post-partum hemorrhage.

The complications recognized as predisposing to hemorrhage must each be met in its appropriate way. In the case of marked disproportion between the pelvis and the probable development of the child, induced labor furnishes the practitioner with a safe method of delivery. If the womb be over-distended by multiple pregnancy or by excessive fluid, the physician will leave instructions with his patient that he be summoned early, and will take care to avoid the rapid emptying of the uterus. If the mother's general muscular system and uterus are deficient in tone, she may take appropriate tonics during pregnancy, and during labor the physician will be on his guard to prevent exhaustion.

In dealing with the more unusual causes of post-partum hemorrhage, considerable difficulty is at times experienced. In syphilitic patients we expect a partially adherent placenta, which, becoming but partially detached, gives rise to hemorrhage at labor. In a patient who has had gonorrhœa during pregnancy, adhesion of the membranes may cause slow dilatation and interfere with the prompt and complete emptying of the uterus. If a patient be seen early in her pregnancy, and if we find her the victim of malarial poison, of profound toxæmia, or of specific disease, we may, by the liberal use of iron and arsenic, so improve the condition of the blood as entirely to avoid post-partum hemorrhage. Each case of pregnancy and labor demands its individual study, and no case can be successfully treated without considering the prevention of this important complication.

In the conduct of labor, much can be done to avoid hemorrhage. It is well, if possible, to locate the placenta. This may be accomplished by palpation and auscultation, and should a suspicious oozing of blood occur, a thorough vaginal examination should be made immediately, the hand being introduced as far as possible toward the brim of the pelvis.

Remembering that exhaustion is the great cause of bleeding, the patient's strength must be carefully preserved. During the first stage of labor, she should receive liquid food in small quantities, as frequently as she can take it, and, if necessary, stimulus as well. Loss of sleep during the first stage of labor must be reduced to a minimum by the use of appropriate sedatives. Gr. x. of hydrate of chloral given in syrup and water, either by the mouth or by the rectum, may be repeated three times at hourly intervals to advantage in many cases. In other patients, gr. xx. of bromide of ammonium gives good results. In other patients, gr. x. of trional taken with broth, soup, or with a tablespoonful of whiskey in hot water, causes several hours of refreshing sleep. Care should be taken that the bladder and rectum be frequently emptied, that unnecessary irritation of the bladder and delay in labor may thus be avoided. A warm bath at the beginning of labor often lessens the irritation and pain which the patient suffers. An experienced nurse will carry her patient through the first stage of labor in good condition by those arts of nursing which conduce so much to her comfort. Obstetric nurses should be trained to utilize the best postures for patients during this stage of labor, and thus suffering may be reduced to a minimum.

A prolonged first stage of labor must occasion anxiety to the physician. He must assure himself that no insurmountable obstacle to the birth of the child is present. If dilatation of the cervix seems practically impossible without assistance, he will find the use of an elastic rubber bag filled with antiseptic fluid of the greatest advantage. I employ most frequently McLean's double bag, because it affords us the greatest amount of dilatation with but one insertion of the bag. By filling one half of the bag at first and then the other from one to two hours later, we obtain, in from two to three hours, a practical dilatation of the os.

During the second stage of labor, especial attention must be given to maintaining the general strength of the patient. She should be placed in such a posture as to favor the mechanism of labor. While the head is passing through the pelvic brim, in cases in which the back of the child is directed to the left side of the mother's pelvis, she should lie upon her left side. In second positions, when the back is toward the right side of the mother's abdomen, the patient should lie upon her right side. When the head has reached the pelvic cavity and is coming down upon the pelvic floor, patients sometimes do better in the semi-sitting posture, resting the body upon the tuberosities of the ischia and bending the trunk forward, while the hands grasp firmly the back of a chair placed in front of the patient. In some cases of difficult labor, we have succeeded by placing the patient upon a padded slop jar, the trunk of the body bending forward.

The decision to interfere during the second stage of labor requires careful observation and good judgment. Thanks to aseptic precautions, it is undoubtedly at the present time safer for the patient to interfere during the second stage of labor as soon as her expulsive powers show signs of exhaustion. I call attention to the phrase "signs of exhaustion" as distinct from an exhausted condition itself. It is the duty of the practitioner not to allow the patient to become exhausted. We have formerly been taught that the head of the child must remain two hours upon the pelvic floor before the use of forceps is justifiable. It is, however, impossible to make a hard and fast rule for these cases, and I have no doubt that many patients have suffered from exhaustion and hemorrhage because of too long delay through some arbitrary standard. When the head has reached the pelvic cavity, the membranes having ruptured, the cervix being fully dilated, and the presentation and position favorable for the use of forceps, delay must not occur.

The instrumental termination of labor must usually be conducted under anæsthesia, and here a choice and method of administration of the anæsthetic have an important bearing on post-partum hemorrhage. For the use of forceps, I distinctly prefer ether. Deep anæsthesia is never necessary in the use of forceps, and while the patient should be sufficiently under the anæsthetic to be insensible to pain and to relax her limbs, she should never be in the semi-asphyxiated condition often observed in prolonged operations under ether. The administration of ether for the use of forceps demands as much skill and care as does the administration of ether for the removal of an ovarian cyst. It is a tribute to the faithfulness and care of practitioners that so few accidents from anæsthetics occur in obstetric practice. But the burden of responsibility thus often assumed by the practitioner alone is excessive and unjust alike to him and to his patient. Whenever possible, the anæsthetic for the termination of labor should be given by a thoroughly competent person, and one who will follow down the uterus with the hand during delivery, and who understands the manipulation of the womb necessary to prevent relaxation and hemorrhage.

When the physician has determined to end labor instrumentally, he must consider the possible traumatic lesions which may expose his patient to the dangers of post-partum hemorrhage. He may naturally raise the questions, "Shall I allow the patient to recover from the anæsthetic and to expel the placenta spontaneously, or shall I immediately remove the placenta before the patient fully rouses? If lacerations occur, shall I not be in a better position to repair them if I empty the womb completely and repair lacerations before the anæsthesia is entirely removed?" In this regard, I believe that the safest course is, after the delivery of the child, to continue the anæsthesia in a partial degree, allowing the patient to rouse and become partially conscious and to assist in the expulsion of the placenta. This may be done without loss of time, and the result is usually satisfactory. So soon as the child is delivered, the anæsthetist remains with the patient ready to administer the ether again. Having cleansed his hands, the physician in charge, compressing the uterus gently as the patient wakes and rouses, may urge her to bear down, and in from ten to twenty minutes after the birth of the child, the placenta may readily be expressed by Credé's method. When this has been done, the physician should determine whether or no laceration of the cervix accompanied by hemorrhage is present. In suspected cases, it is well to introduce a speculum with tenaculum forceps and to examine the cervix. In some cases, digital examination of the cervix will detect the presence of a laceration sufficiently great to demand suture. If there be no such laceration, the pelvic floor and perineum must next be subjected to scrutiny. If it is necessary to take stitches, enough ether may be administered to the patient to make her controllable, and the suture be immediately performed.

Before the insertion of the suture in the pelvic floor and perineum, if relaxation of the womb is threatened, it will usually become apparent. The womb will fail promptly and vigorously to contract, the patient will have a greater flow than is natural after childbirth, and the physician may be in doubt as to whether or not hemorrhage will occur. I believe that the interests of the patient are best served by taking all possible precautions against hemorrhage when a doubt arises. In such cases, therefore, I am accustomed, upon the appearance of relaxation of the womb, immediately to douche the uterus thoroughly with hot salt solution or with boiled water only, and to tampon it with iodoform gauze. I have yet to observe a case of infection which could be traced to this manœuvre, and I have yet to be disappointed in it as a means of assisting in the prevention of hemorrhage. So soon as this is done, the patient should receive a hypodermatic injection of gr. $\frac{1}{15}$ of sulphate of strychnine. After this, lacerations in the pelvic floor and perineum may be repaired under anæsthesia, giving as little ether as possible, but holding the womb to prevent its relaxation.

As soon as the patient has recovered from the anæsthesia sufficiently to swallow, ʒ ii. of fluid extract of ergot should be taken by the mouth, or, if the patient is nauseated, an injection of ergot should be made beneath the skin. It is possible to obtain for this purpose aseptic ergot which can be readily injected and directly absorbed. To control the womb, the physician must remain beside his patient, holding the uterus firmly, but not fatiguing the uterine muscle with unnecessary and useless manipulation. In grasping the womb, care should be taken that pressure is exerted upon the anterior and posterior walls, and that the tube and ovary are not included in such compression. Pressure should always be avoided upon the fundus of the womb, for inversion of the uterus with its dangers has followed the "dimpling" of the fundus. Under the treatment described, the patient usually reacts from labor in a satisfactory condition, the uterus remaining well contracted, and shock and relaxation of the womb being avoided. Should these measures, however, not be entirely efficient, gr. $\frac{1}{30}$ sulphate of strychnine with gr. $\frac{1}{200}$ of atropine may be injected. The injection of ergot may also be repeated, or ergot may be administered by the mouth. The patient's head should be kept low, and if the pulse is lacking in volume, a rectal injection of freshly made coffee, well diluted, will be found of advantage. As soon as the danger of relaxation is past, if the physician fears its recurrence, the nurse may apply compression to the uterus, using three towels made into firm rolls eight inches long and three inches in diameter. The womb should be brought by the hand downward and forward, one of these rolls being placed above the fundus and one on either side, and the usual obstetric binder applied from above downward.

It is, however, exceedingly important that a patient threatened with hemorrhage should not be left by her physician while the danger exists. It is the duty of her attendant to be sure that she has fully reacted from delivery, that the pulse is slow, its volume good, its tension good, the womb contracted, and the general condition of the patient satisfactory, before she can be left to the care of the nurse alone.

As regards the further treatment of such a case, the external parts are kept scrupulously clean and disinfected with bichloride of mercury 1 : 4,000 after each emptying of the bladder or rectum. The patient is catheterized if needed, and if stitches have been taken, the stitches are cleansed by irrigation with bichloride 1 : 8,000 or with lysol one per cent., and are then powdered with boracic acid. Sterile napkins or napkins soaked in bichloride 1 : 2,000, and dried, are constantly worn. In from twenty-four to thirty-six hours after delivery, the gauze is removed from the uterus and the womb thoroughly douched with decinormal salt solution at a temperature of 105° to 110° F. To secure involution, the patient is given by the mouth gr. $\frac{1}{40}$ strychnine sulphate, and gtt. xx. fluid extract of ergot every six hours for the first forty-eight hours after delivery, beginning at such a time as the judgment of the physician may dictate. The frequency of the administration of these medicines is lessened as the condition of the patient suggests. The use of the catheter is avoided if possible, but the bladder is not allowed to become distended.

I have devoted considerable space to the prevention of post-partum hemorrhage, believing that, like septic infection, its prevention is more satisfactory than the actual treatment of the condition. In the presence, however, of post-partum hemorrhage occurring immediately after labor, the physician must quickly differentiate between a relaxed condition of the uterus and hemorrhage from a tear in the cervix, pelvic floor, or vaginal tissues. If the womb is well contracted, and the blood is bright in color, coming constantly in a small stream, its source will be found in a torn vessel in the cervix, pelvic floor, or vaginal walls. An examination should be made immediately to determine the cause of the hemorrhage, and stitches should be taken to control it. In this connection, I must call attention to lacerations in the anterior vaginal wall near the urethra as a source of hemorrhage after labor. I have seen this condition several times, and recall one instructive case as follows:

A primipara had just been delivered, by her physician, of a child by a comparatively easy application of the forceps. The placenta was removed by expression and the patient was apparently in good condition. Trickling hemorrhage, however, persisted, the cause of which was not evident to the medical attendant. The womb was well contracted, and, fearing some tear of the cervix, the vagina was immediately tamponed with gauze. The hemorrhage, however, increased, and, upon seeing the patient, I found its source to be a laceration in the anterior vaginal wall, which had opened small vessels around the urethra, extending downward from the base of the clitoris. The pressure of the vaginal tampon increased the stasis of blood and maintained the hemorrhage. The lacerations were very slight, but the vessels had been much enlarged during pregnancy, hence the bleeding. When the vaginal tampon was removed, and the parts were thoroughly irrigated with hot sterile water, the bleeding at once ceased. The patient made a good recovery.

If, however, no tear of the cervix, pelvic floor, or vaginal tissues can be found, and the womb relaxes, it should be grasped by the hand and a vaginal douche of hot sterile water, two quarts at 110° F., should be administered. Gr. $\frac{1}{30}$ sulphate of strychnine with gr. $\frac{1}{200}$ of atropine should be given hypodermatically, when, in the majority of cases, the bleeding promptly stops. Should further relaxation occur, we should immediately tampon the uterus with aseptic or iodoform gauze.

Many cases of post-partum hemorrhage following relaxation of the womb occur after the physician has left his patient and when she is in charge of the nurse. Physicians should leave with obstetric nurses written orders, stating what may be done in the event of hemorrhage before the physician arrives. It is my habit to allow a competent obstetric nurse, should hemorrhage occur before I can reach the patient, to act as follows: First, she should remove the obstetric binder, massage the uterus until it contracts, and grasp it in the manner described; second, still holding the uterus, with any aid available, she should give the patient a hot vaginal douche of two quarts of sterile water or bichloride solution 1 : 8,000 at a temperature of 110° F.; third, she should cause the patient to swallow two teaspoonfuls of fluid extract of ergot. Upon the appearance of hemorrhage, the nurse should send for the physician, but should remain grasping the uterus until the hemorrhage has entirely ceased, or until the physician arrives. Nurses should be cautioned not to fatigue the uterine muscle by useless manipulation, but, having brought it to contract by massage, to hold the womb steadily but gently in a contracted state. Post-partum hemorrhage is not very frequent when care is taken to avoid it, in my experience, and in most cases my nurses succeed in stopping the bleeding before my arrival.

Failure of the womb to remain properly contracted, persistent oozing hemorrhage in the absence of a laceration which accounts for the bleeding, must suggest to the physician that a portion of the placenta or membranes or a large clot remains within the uterus. Much stress was formerly laid upon turning out the clot to cause post-partum hemorrhage to cease. If precautions are taken to avoid hemorrhage, a large clot seldom forms. In the presence of the symptoms described, it is, however, the physician's duty to explore the interior of the womb and to be sure that it is empty and clean. This may be done with the finger, with the hot douche, or with the hot douche given through the blunt curette. Difficulty is often found in attempting to use the finger from the fact that it is hard to explore every portion of the uterine cavity in the recently emptied womb with the finger. The finger is unfortunately in many cases too short. Very often a thorough intra-uterine douche will bring away whatever is retained. In the giving of this douche, if the cervix is shut down tightly, it should be dilated gently with the finger. I prefer a glass douche tube, containing a groove along its posterior aspect, and made of especially chosen glass, which enables me to boil the tube thoroughly before using. Boiled water, decinormal salt solution, or lysol one per cent. is chosen for this purpose. I do not employ mercurial solutions within the uterine cavity unless the case is complicated by some septic condition. When the uterus is large, the functions of the finger and tube may be combined by the use of the blunt curette. The surface of the interior of the womb should be thoroughly but gently gone over while the hot fluid runs freely through the curette. If oozing continues at the conclusion of the douche, it is well to pack with gauze as described. I am quite aware that to interfere with the uterine cavity during and immediately after labor is an important procedure, but by boiling the instrument employed, by thoroughly cleansing the hands, by the plentiful use of hot dilute antiseptic fluid, and by selecting the gauze employed for the tampon carefully, I have seen none but good results follow this procedure.

If the patient is kept externally clean by antiseptic solutions, and if sterile napkins are worn, the gauze packing may safely remain without disturbance from twenty-four to thirty-six hours. It should then be removed, and the uterus thoroughly but very gently douched with decinormal salt solution at a temperature of from 105° to 110° F. This procedure requires no anæsthetic, occasions but little manipulation, and is usually well borne by the patient. For such purposes, I employ the simple glass douche tube already described, and have found it satisfactory.

In the case of highly anæmic and neurotic women, the nervous system plays an important part in causing hemorrhage. The following case of unusual hemorrhage illustrates the preceding statement:

Mrs. C——, aged forty, a married woman, was delivered of a healthy child in normal labor at the Jefferson Maternity, some two years before her recent labor. Her recovery was without complications, and she left the institution in good condition. She was recently admitted to the Maternity in labor, and in a highly exhausted condition. A macerated fœtus and its appendages were delivered; the placenta was removed by the hand, the uterus thoroughly emptied and packed with antiseptic gauze. The fœtus had been dead for some time and was considerably decomposed. The patient was given appropriate stimuli and reacted well from delivery. In view of the highly decomposed condition of the child, it was thought best to remove the gauze at the end of twenty-four hours and thoroughly irrigate the uterus. This was done, and upon removal the gauze was found to have a slightly offensive odor. Some hours afterward, the patient had a sudden and severe hemorrhage. It was controlled by removing a clot from the uterus, thoroughly irrigating it, and again tamponing with gauze. She rallied promptly from this, and apparently did well. After the removal of this packing, a further hemorrhage occurred, which was promptly controlled by the use of the blunt curette with hot antiseptic fluid. It was feared that some portion of membranes or placenta was remaining within the uterus, but none could be found. After this bleeding, the patient did well for ten days, when it was thought justifiable to take her to the obstetric clinic in the same building upon a stretcher. She did not seem especially agitated during the clinic, as she was subjected to no manipulation, and attention was simply called to her anæmic condition and the history of her bleeding. Shortly after returning to the ward, another hemorrhage occurred, much less in quantity but still distinct in character. This yielded promptly to a hot vaginal douche, and the administration of strychnine and ergot. Involution had proceeded normally; the womb was small and movable, and the source of the hemorrhage could not readily be ascertained. A fourth bleeding, slight in character, also occurred. Two blood counts were made from this patient, and are as follows: November 6th: Hæmoglobin thirty-seven per cent.; red cells, 3,450,000; white cells, 6,000. November 15th: Hæmoglobin, forty-five per cent.; red cells, 3,500,000; white cells, 2,800.

An examination of the pelvic organs at the time of writing gives the following results: The pelvic floor is in good condition. It has been slightly lacerated in previous labors, but the lacerations have been closed and have healed. The womb is slightly retroverted, movable, slightly larger than normal, but involution has proceeded quite as well as in the majority of multiparæ. There is a whitish secretion of mucus in the vagina. Upon examining the cervix with a speculum, the mucous membrane is healthy in color. There is no extensive laceration, and no sign of ulceration is present. The external genital organs show no positive evidence of specific infection.

The patient's general condition is greatly improved. Obstinate hemicrania, from which she suffered at first, has largely disappeared, and she is convalescent at present. Her treatment in addition to the local treatment described has been as follows: She has taken three times daily, before eating, a mixture of Fowler's solution, gentian, and simple elixir, the dose of Fowler's solution varying from one and a half to three drops at each administration. After eating, tincture of chloride of iron has been administered in increasing doses until she has taken thirty drops three times daily. Attention has been paid to the condition of the intestinal tract, and purgatives of various sorts with saline laxatives have been given as needed.

The question of syphilitic infection enters naturally into consideration in this case. The statement was made by some one knowing the patient's circumstances before admission, that her husband had become recently syphilitic and had infected her. At the time of the patient's labor, no lesion was discovered in the genital canal indicating specific disease. The presence of a macerated fœtus points strongly to syphilitic infection of the ovum, with the resulting changes in the endometrium and decidua commonly seen in these cases. There can be no reasonable doubt that this condition of the maternal tissues had something to do with the patient's repeated hemorrhages. That she herself is syphilitic in the usual sense of the word and in the acute stage cannot be proven.

I may summarize this case as follows: A multipara became, during her pregnancy, anæmic and reduced in strength through hard work and the presence of a macerated fœtus within the womb. We must suppose that the endometrium and decidua became extensively altered, very probably through syphilis of the ovum, and that its blood-vessels were in an unusually friable condition. The expulsion of the macerated fœtus was followed by relaxation of the womb and hemorrhage at varying intervals in spite of the persistent administration of tonics and stimulants, strychnine and ergot being given in large doses during the first ten days of the patient's puerperal period. During this time, she had four hemorrhages without apparent cause. Each was immediately controlled by methods described. Her convalescence has covered a period of between two and three months, her gain in hæmoglobin being practically one per cent. daily during the time of her most rapid recovery. She had a rise of temperature after delivery, indicating sapræmic absorption, but this rapidly declined to normal.

Medicine in Whiskey Bottles.—It will be remembered, says the *British Pharmaceutical Journal*, with what indignation the parish beadle in "Oliver Twist" related the rejection of some stuff in a blacking bottle intended for a sick pauper woman. "Nous avons changé tout cela," but there still remain a few features of the ancient system which have lately been responsible for a poisoning fatality. An old lady in Ireland had been for some time attended by the dispensary medical officer for an affection of the knee-joint. Some time ago she got a lotion which contained poison, and took the lotion by mistake for whiskey. She exhibited all the symptoms of belladonna poisoning.

THE QUESTION OF LEGAL CONTROL OF PROSTITUTION IN AMERICA.[1]

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NEW YORK.

DELEGATE FROM THE UNITED STATES GOVERNMENT.

In discussing the question of legal control of prostitution in America (the United States) we approach a subject that is almost entirely new. In but one instance, and but for a short time, have there been laws enacted by a State for the regulation of prostitution, with a view to prevent disease. This solitary experiment occurred in St. Louis, in 1872. A law, drafted upon the lines of that in operation in Paris, was enacted by the Missouri legislature, the object of which was to regulate and bring under control prostitution in the city of St. Louis. The provisions of this law—I quote freely from the appendix of the new edition of Sanger's book on prostitution—were substantially as follows: All prostitutes plying their avocation were registered. These were divided in three classes—the inmates of houses, the occupants of rooms outside of such houses, and those known as "kept women," or mistresses. There was no distinction whatever between these classes. In the eyes of the law, the "kept woman" was quite as much a prostitute, and subject to the provisions of the law, as her less fortunate sister in the common disorderly house. No registered woman was permitted to change her abode without first giving notice to the authorities, so that her whereabouts was constantly known. Many of the more vicious and corrupt practices of the business were absolutely prohibited, and practically suppressed. Soliciting, either on the street or from windows or doors of houses of prostitution, was severely punished, a second offence generally resulting in a deportation of the offender from the city as a vagrant. No carriage or public conveyance was permitted to stop or stand in front of a house. No red lamp of sin was tolerated; in short, no light of a color calculated to attract attention was allowed in hallway or parlor. The front doors of all houses were kept unlocked, thus admitting, at all hours, not only the patrons but the police as well. In fact, every barrier between the authorities and the vicious class was, as far as possible, removed.

The city was divided into three districts, both in respect to sanitary and police regulations. A physician of recognized standing, called "social-evil examiner," was placed in charge of each of these districts, whose duty it was to compel weekly medical inspection of each and all the registered unfortunates. A nominal fee was collected weekly from the inmates of houses and rooms, and a larger fee from the proprietors of houses. The money thus collected went indirectly back, to a great extent, to those contributing it, as it was largely devoted to the maintenance of a hospital open at all times to the members of this unfortunate class.

Apparently well-informed writers, as well as many of the leading physicians of the city, could discern salutary effects after the law had been in operation but a short time. Venereal diseases decreased in a marked way, and the evil itself was lessened, many of the members of a bad class preferring to leave the community sooner than subject themselves to the requirements of the new law. This latter movement, this shifting of prostitution, can be ranked only among the salutary effects if viewed from the selfish point of a comparatively limited area, a city, or even a State. The sanitation of the United States was surely not improved through it. The *Missouri Medical Record* (May 15, 1874), in an article printed a few weeks after the repeal of the law, stated that the system had operated most beneficially in the interests of the community, as well as the welfare of the prostitutes; that many of the inmates of the hospital, influenced by the ministrations of good men and noble women, have been seeking a "purer, a better" way, and have become so fully aware of the physical advantages arising out of the law that not a few of them voluntarily subjected themselves to the inspection, at their own expense, after the abrogation of the law. It is to be regretted that the absence of statistics detracts so much from the scientific value of these observations.

For about a year only this law remained on the statute books of the State. The incidents—I quote the language of a St. Louis law journal (*Morning Advertiser*, January 12, 1895)—attending its repeal were dramatic. Throughout the State there was a moral uprising against what was regarded as the licensing of vice, and the lobbies of both branches of the legislature were taken complete possession of by the clergy of the various denominations, and earnest co-workers of the other sex. A petition praying for the repeal of the obnoxious law, signed by more than one hundred thousand good people, was presented. The document was cumbersome. A wheel-barrow, decorated with white ribbons and accompanied by a group of innocent young girls, attired in spotless white gowns, was brought into service, on which the gigantic and emphatic protest against the licensing of vice was wheeled up to the clerk's desk to be read. There were, of course, counter-petitions from the cities, and conspicuous among the signers of these latter were members of the medical profession. But the overwhelming sentiment was against the law, the members, without exception, representing a country constituency voting against it.

Thus ended the short-lived and solitary experiment, and we may well ask why, during a period of almost thirty years, not one of the many States which constitute the Union has again approached this subject, and why, to-day, the enactment of a social-evil law in the United States is as remote as ever.

Assuming State intervention to be desirable, there are difficulties opposing its introduction, and these are public opinion, probable lack of constitutional power, and also the difficulty of uniform regulations.

As to the law, it must be remembered that every State of the Union that is known as the United States of America is a separate and distinct sovereignty. Each State has its respective constitution. The United States, a federal government, has its constitution. Excepting so far as each State has surrendered its sovereignty, each is as distinct the one from the other as Greece from Italy. The federal constitution embodies power which each State altogether has surrendered. Back of the constitution of the United States lie the sovereign people, who can change that constitution. This, however, is exercised exceptionally.

Every law, then, that is enacted by any or all of the forty-five separate sovereignties may have to stand the test of each State constitution, and ultimately that of the United States, and such would be the case when a law is passed that in any way infringes upon individual liberty. The law of the United States, generally speaking, is based upon the law of England. It breathes forth that spirit of individual rights, personal liberty and freedom, that reverence for the sanctity of the private home and life within it, that has ever been the pride of Englishmen and Americans. The constitution of the United States (in the Fourteenth Amendment) provides that "no State shall deprive any person of life, liberty, or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the law." That amendment limits the powers of the individual States. Any law regulating prostitution must be so formed as not to violate that amendment. Most of the State constitutions contain similar provisions, and all laws must be subject to them, and under scrutiny of the highest State courts. It may, therefore, very reasonably be a question whether any effective laws could be passed that would not violate either the State or federal constitutions or all of them.

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[1] A contribution to the transactions of the International Conference for the Prevention of Syphilis and Venereal Diseases, held in Brussels, September, 1899.

There is a further difficulty. The federal government has only the powers enumerated in the federal constitution. In that constitution there is no provision, I am advised, that would permit of a federal regulation of prostitution. Accordingly there is no power to compel an unwilling State to pass such regulations, and it can be readily seen that, unless a vast majority of the forty-five States adopted the same, or similar, regulations, no beneficial consequences could ensue. This is no imaginary or purely academical difficulty. In matters wherein public sentiment is in accord, uniform laws throughout the States are wanting. I am advised that in this great commercial community the laws pertaining to commercial paper differ in different States, leading to much embarrassment. Such is likewise the case in regard to many other laws, commercial and criminal. Here, then, is a practical difficulty, that of uniform legislation; and this leads us to the next consideration—that of public opinion. Public opinion is largely public sentiment. Public opinion, of necessity, must be in accord throughout the Union in order that the individual State legislatures should enact uniform laws on this subject. It is not necessary to analyze public opinion in America. Let it suffice to say that in no country of such magnitude does public opinion exert so much direct influence on those who are placed in authority, both to make and administer the laws. This condition of affairs will assist us in enacting regulations, if public opinion be in accord, but all the indications are that it is in opposition to the matter under discussion.

First, there is the sentiment that prostitution should not, upon moral grounds, receive recognition by the State. That view is shared by very many people. It is that sentiment that permits street-walking in London. Here it is that more or less strong laws are enacted punishing adultery, fornication, street-walking, and the various States have a variety of penal laws against such crimes. Separation by a husband or wife from the other is allowed by the courts because of disease communicated. Impotence is a ground for annulment of the marriage. On the whole, however, the sentiment exists that abhors State interference, on moral grounds. That disease is communicated is said to be fit punishment for sexual indulgence.

Another sentiment is based upon personal liberty. Each citizen is conscious of his position as one of the sovereign people, and those in power are his servants, and there at his will. The administration of such laws as would have to be enacted to prove effectual would be a practical impossibility. The natural privacy that accompanies indulgence in sexual intercourse is invaded. As illustrative of the above sentiments, as well as the further one that such regulations debase the individual, is the short and calamitous life of the laws enacted in 1870 in Missouri. Amid wild enthusiasm, where young girls in pure white, bedecked with flowers, paraded, symbolical of purity and chastity, was the law repealed.

Public sentiment looks, however, to therapeutics as the solution. The Americans are progressive and ready to learn. Could it be demonstrated beyond a doubt, by the experience of other countries, that the result of such regulations is, as a matter of fact, highly beneficial, and that mankind is not debased thereby, public sentiment would doubtless change. That time, however, has not yet come, and the United States will, I feel, still stand by and watch the experiments made abroad before adopting measures foreign to the spirit of its people and its laws.

Copaiba in Diabetes.—Dr. Bettmann (*Berliner klinische Wochenschr.*, S. 479, 1899) has observed that the administration to diabetic patients of copaiba, even in small doses, causes an increase in the excretion of sugar; the urine contains double, sometimes treble the quantity normally excreted. Turpentine and essential oils have a similar action.

Observations on the Relation of the Uterus to the Thyroid Gland. — Dr. Charles R. Dickson (*Charlotte Medical Journal*, October, 1899) summarizes as follows: In treating diseases of the thyroid gland in women it is wise to inquire into the condition and habits of the uterus, and to devote some attention to it as well as, if not instead of, the thyroid. Very active measures should be omitted before puberty, during menstruation and pregnancy, while the climacteric is a time for especial suspicion.

The Influenza Heart.—After mentioning the various forms in which influenza manifests itself, Dr. Robert Saundby (*Birmingham Medical Review*, November, 1899) says that among the more frequent sequelæ we must reckon affections of the heart. These are more frequent than is suggested by the number in which the relationship can be strictly proved, for the initial attack of influenza which has set up the cardiac disturbance may pass unrecognized. The cardiac troubles of influenza may be either functional or organic. The functional troubles are alterations in the cardiac rhythm, tachycardia less often than bradycardia. These conditions have not been always obvious. The alteration of the pulse in many cases has been variable, or has been absent, except at certain times or under special conditions. The patients complain of weakness or faintness on exertion, or may express themselves as only generally weak and inapt for their ordinary business. On examination the pulse may be too quick, feeble, and small; more often it is slow, irregular, and intermittent, but is subject to great variations. The irregularity may be noticeable only in the early morning, and disappear later, or be brought on by exertion, fatigue, digestion, the use of alcohol, tobacco, tea, etc. He has noticed that these patients referred their symptoms rarely to their hearts, so that without examination such cases may be overlooked. In the other group, where there is definite organic disease, the heart is dilated, and there are all the indications of insufficiency of the left ventricle, breathlessness, œdema of the feet, etc. There is always danger of the functional cases becoming organic—that is, of the neuro-motor mechanical derangement resulting in muscular degeneration. The mischief probably begins in the cardiac ganglia or nerve, but when the intoxication is sufficiently intense and persistent the myocardium sooner or later becomes implicated. Dilatation is due to a subacute myocarditis. With proper care compensatory hypertrophy takes place. There is a marked tendency to recurrence of the cardiac trouble whenever a renewal of grippe infection occurs. The cardiac enlargement is, as a rule, easily made out, and dulness may extend to beyond the anterior axillary line. There may be no murmur; occasionally there is a systolic murmur at the apex transmitted to the axilla associated with an accentuated pulmonary second sound. The urine is free from albumin. Gastric complications are very common.

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THE HOUSING OF THE POOR.

THIS is a difficulty which becomes more embarrassing and increases in importance year by year. Indeed it would be no exaggeration to say that it is one of the paramount questions of the hour. Legislators and philanthropists are at their wits' end to devise a satisfactory scheme to house the working-classes, and to dispose of the surplus population. The rush of people from rural districts in commercial countries to the large towns shows no tendency to abate, and the consequence is that in unwieldy, overgrown cities like New York and London, the working and pauper classes are for the most part compelled to live under conditions which are not only in a high degree prejudicial to their own health, but also constitute a standing menace to the physical well-being of the entire community. The point that it is to the interests of the public as a whole for the poorer classes to be housed in a sanitary manner, and that their environment generally should conform to the requirements of modern hygiene, is one that does not seem as yet to have been thoroughly grasped and its true significance appreciated by municipalities. In order that a nation should prosper it is necessary that its individual members should be sound physically and mentally. To gain this end, disease must be eradicated as far as is possible, and to curtail the spread of disease the most effective measures must be taken to insure to every one the means of living in healthy surroundings. The obstacles in the way of successfully accomplishing this object are undeniably hard to overcome, but they are not insurmountable.

The problem of housing the poor in London has so thrust itself to the front that thoughtful men have decided that it must be promptly faced, and methods of various kinds have been suggested as a solution. It is true that in the British metropolis the municipal authorities and county council have taken up the matter vigorously, and have effected many improvements Acres of unsavory rookeries have been cleared away, and on the site fine, well-built sanitary dwellings have been erected. Unfortunately this remedy is but partial. The people ousted from the old houses are not able to afford the rents demanded in the new buildings, and are thus compelled to settle in some other poverty-stricken and overcrowded district. A suggestion has recently been advanced that houses for workmen should be built outside the boundaries of London, and which might be reached by trains run at specially cheap rates. If such a plan could be successfully carried out, undoubtedly a great part of the working population could be housed more healthily and at a less cost than in London itself. However, at present red tape blocks the way to this scheme, and until existing laws are repealed the poor must stay within the limits of London.

The situation of the working-classes of New York, so far as house accommodation is concerned, is said to be—by those who have had experience of these matters—much worse than in London. It is computed that the population in the tenement district of the former city is twice as dense as in the most crowded parts of the latter. At the time when there was no restriction on immigration, the scum of the nations came to New York, herding like cattle in the poorer portions of the town. The efforts of the organized charities in the direction of improving the lot of the poor have been attended with much success, but little has been done toward the provision of clean and healthy homes.

The report of the tenement-house committee of the Charity Organization Society has just been published. This committee was formed in 1898 with the object of considering the necessity and advisability of taking action looking toward the improvement of the condition of the tenement houses in the city. Two bills to amend some objectionable points in the charter were introduced into the State legislature, but were not manipulated through that body. The committee also framed a series of proposed ordinances, which, while in no respect conflicting with any sections of the present charter, would at the same time have greatly bettered the state of the tenement dwellings. The Building Code Commission did not see their way to, or were not desirous of, adopting any of these suggestions, and thus so far the labors of the tenement committee have been of no avail. However, although discouraged, its members have no intention of giving up the struggle, and as the sentiment of the intelligent part of the community would seem to be with them, there is reason to hope that in the end their philanthropic efforts will have a satisfactory issue. It is a decided slur on the rich and influential inhabitants of New York that the poor should be forced to live under conditions so insanitary.

THE SANITARY ASPECT OF THE WAR IN SOUTH AFRICA.

DESPITE the healthfulness of the South African climate it cannot be reasonably anticipated, with so large a body of men living under the conditions to which soldiers in the field are compelled to submit, that disease will not claim its share of victims. The exigencies of war do not permit an approach to perfection in the sanitary arrangements of camps, but unless every effort is made to place these upon as satisfactory a basis as possible, disastrous results will inevitably follow.

The truth of this statement is so fully recognized that it would be idle to multiply instances in proof. The state of some of our camps during the Spanish war is a sufficiently striking object-lesson. The surgeon-general of the United States army, referring to this feature, speaks as follows: "The sanitary condition of the permanent camps before the war was excellent, but the new camps formed on the outbreak of the war, and filled with undisciplined volunteers, speedily became hot-beds of disease, especially of typhoid fever, from which they suffered severely in July and August."

The British troops in Africa are disciplined, and, moreover, the greater portion of them have had experience of tropical climates, but with all these facts in their favor unceasing vigilance will be needed on the part of their medical officers to ward off and hold in check the maladies common to South Africa at this season of the year. Enteric fever is very prevalent, particularly in the high lands, and February, March, and April are the months in which it is most rampant. Dysentery and diarrhœa are said to be epidemic in the Transvaal before the rainy season. Parasitic diseases due to eating uncooked vegetables and some forms of uncooked meat are of frequent occurrence. In addition to these complaints indigenous to South Africa an outbreak of smallpox is reported at the Cape, while at Delagoa Bay and vicinity are many cases of bubonic plague.

The duty of supervising the sanitary arrangements of the camps will, it appears, devolve upon the army surgeons. The London *Lancet* says: "No special sanitary officer is appointed to the forces, nor is any such appointment provided for in war establishments, but the medical arrangements entail ceaseless vigilance over his particular charge upon every medical officer, who is thus constituted an ex-officio sanitary officer." It is therefore clear that the already confessedly insufficient British army medical corps will have a most onerous task to undertake successfully the double duty of attending to the sick and wounded and of insuring the proper sanitation of the camps. Indeed, the question as to whether its members will be equal to the strain has been mooted in some of the British journals. The London *Practitioner* makes the following suggestions: "For the protection of the forces in South Africa against the dangers that may arise from official ignorance or apathy the government would be well advised if they appointed one or two consulting physicians to the forces, who should hold the same relation to the royal army medical corps as the consulting surgeons who have been sent out. These sanitary commissioners, in addition to their special knowledge, would be in a disciplinary sense independent of the military authorities, and could therefore offer advice not merely 'when it is wanted,' as Lord Wolseley graciously allows, but when it is not wanted, and they could insist at least on its receiving serious attention. The services in such a capacity of a man of independent position, combining medical knowledge with official experience in sanitary administration, would be invaluable."

It is probable, and in fact now seems certain, that the war in South Africa will drag on for many months, during which time the British soldiers must live in camps. In order to keep the camps in a healthy condition strict overlooking by men experienced in sanitary matters will be necessary. It would seem that by following the advice of the *Practitioner* a long step toward attaining the desired object would be made.

INTRA-ABDOMINAL BILOCULAR HYDROCELE.

Bilocular or hour-glass hydrocele is not a common affection, although Monod and Terrillon, in their excellent treatise on "Les Maladies du Testicule," treat of it at considerable length. The affection has also been studied by Dupuytren, who described it under the name of "hydrocèle en bissac," Chelius, Berger, Malgaigne, and Duplay, and more recently by Kocher, Trendelenburg, Humphry, and Bazy. The unique characteristic of the tumor is that it consists of two sacs, one abdominal, the other sciatal, which communicate more or less freely by means of a narrowed part lying in the inguinal canal. It sometimes attains colossal dimensions. In a case reported by Rochard, the abdominal portion of the tumor extended upward to the umbilicus, passing the median line, and losing itself behind and below in the iliac fossa. On puncturing it, nearly three litres of fluid were withdrawn. The tumor was still larger in one of Bazy's patients, passing considerably above the umbilicus, and beyond the median line.

In the *Wiener klinische Wochenschrift*, No. 46, 1899. Dr. Winiwarter reports a like case in a man, thirty-one years of age, who gave the history of having had a hydrocele the size of an egg in the right scrotum since his youth. For two years the swelling had increased in size, reaching the volume of about two fists, and it also extended up into the abdomen. About a year before, the hydrocele had been punctured, giving exit to seven litres of clear, straw-colored fluid. Five weeks later it was again punctured, yielding about the same quantity of fluid. After eleven weeks a third puncture was made. When the patient was received into the hospital, he was much emaciated, anæmic, pale, having an extremely rapid pulse, and a temperature a little above normal. The feet were somewhat swollen. The urine was free from albumin; the lungs and heart were sound. Within the abdomen was a large swelling, clearly cystic in character, which extended from the right scrotum to the ribs. The circumference of the abdomen at the umbilicus measured 93 cm. The scrotal tumor could not be pressed toward the abdomen, though a percussion wave could be transmitted from one sac to the other. After removal o the sac, its length was found to be 40 cm., and its greatest breadth 23 cm. A bilocular hydrocele is generally spherical in shape, though in Kocher's case it was elongated like a thick sausage. Whatever may be its shape or size, the intra-abdominal part is always a pouch closed at the top, and absolutely independent of the peritoneal cavity.

As to the exact relations between the hydrocele and peritoneum, there is still much to be learned. Bilocular hydrocele may be bilateral (Kocher, Fano), but it generally occurs on one side only. The diagnosis is as a rule easy. A differential point of great value is that reduction is never absolute as in congenital hydrocele. In children, the abdominal sac may be so deeply placed that exploration by external palpation alone is impossible, and examination under narcosis as recommended by Kocher, by means of abdominal palpation and rectal touch, will alone clear up the nature of the case.

Authors disagree concerning the pathogeny of this affection, particularly as to the mode of formation of the abdominal part. Some think it is developed by the simple expansion of a common hydrocele through an accumulation of fluid; others, that the upper pouch exists from the first. The occurrence of bilocular hydrocele depends on faulty development of the coverings of the testicle. The prognosis depends especially on the size of the tumor and its relations to the peritoneum. The treatment is the same as that of simple hydrocele, namely puncture, puncture followed by the injection of iodine or other irritant, simple incision, or excision and removal. The latter is to be recommended when simpler methods have proved unsuccessful. This was employed in Winiwarter's case with complete success.

News of the Week.

Suing for Professional Services. — Dr. Branth of this city recently sued a wealthy client for $600 as a well-earned fee, but received only $200, the defendant repudiating all promises as to proper remuneration. The old story. The ordinary juryman believes in cheap medical services.

New Hospitals.—An additional orthodox Jewish hospital having been projected in the southern section of Philadelphia, to be known as the Beth Israel Hospital, a dissenting faction has secured a charter for another hospital, which is to be conducted as a nonsectarian institution, and is to be known as the Mount Sinai Hospital.

The Medical Inspection of Schools.—From among more than three hundred physicians recommended by the deans of medical colleges, the authorities of the hospitals, sectional school boards, and citizens, the Philadelphia board of education has been able to assign physicians to about two hundred and ten schools to make daily medical inspection of pupils presenting symptoms of illness. The work of examination in the schools is expected to begin on January 8th. Each physician will be expected to visit the school to which he is assigned between 9:30 and 10 each morning, and he will examine such children as are brought to him by the principal. If any pupil has, or is threatened with, any disease that is infectious or contagious the child will be sent home, with instructions to the family to consult a physician, and it will not be permitted to return to school without a proper certificate from a medical inspector of the bureau of health that it is safe to do so. Should the pupil require medical treatment for any other complaint notice will be sent to the family with the child on its return home. For the present the work is to be done without remuneration, but it is hoped that fair compensation will be paid for the service when the time for making appropriations comes.

The Progress of the Christian Science Movement.—Mrs. Mary Baker Eddy, the head of the Christian Science cult, has, it is announced, given her son a check for $10,000 and a house worth $15,000 as a Christmas present.

The Schuylkill County (Pa.) Medical Society elected the following officers on January 2d: *President*, Dr. W. C. J. Smith; *Vice-President*, Dr. A. L. Gillars; *Treasurer*, Dr. D. Taggart; *Secretary*, Dr. G. W. Farquhar; *Censor*, Dr. A. P. Carr.

The Study of Cancer at Harvard University.—By the will of Mrs. Caroline Brewer Croft, who died about two years ago, a sum amounting to nearly $100,000 has been placed in the hands of the corporation of Harvard University to be used in the investigation of the nature and therapy of cancer. Mrs. Croft was a native of Boston, but had lived for many years in England. Her early charitable efforts impressed upon her the horror of malignant disease, and for many years before her death she gave large sums annually for the relief of the poor who suffered from cancer.

College of Physicians of Philadelphia.—At a stated meeting held January 3, 1900, Dr. F. Savary Pearce read a paper entitled "The Gastro-Intestinal Tract in Nervous Diseases," in which he dwelt upon the necessity of eliminative treatment directed to the digestive tract for the relief of varied nervous manifestations, and reciting numerous illustrative cases. Dr. Frances R. Packard read a paper entitled "A Brief History of the Medical Societies which Existed in this Country Prior to the Founding of the College of Physicians of Philadelphia, in 1787." It was shown that only three societies, the New Jersey State Medical Society, the Massachusetts State Medical Society, and the New Haven Medical Society, had an earlier and continued existence than the College of Physicians. Dr. Packard read also a paper entitled "Some Old Certificates of Proficiency in Medicine." Dr. John G. Clark delivered an address, with lantern demonstrations, upon "The Vascularization of the Ovary and its Bearing upon the Differentiation of Sex, Origin, Development, and Degeneration of the Graafian Follicle, Inauguration of Ovulation, Organization of the Corpus Luteum, and the Final Cessation of Ovulation (Menopause)." Dr. W. W. Keen was elected president and Dr. Horatio C. Wood vice-president for the ensuing year.

Jefferson Medical College.—At a meeting of the Philadelphia Chapter of the Alumni Association of Jefferson Medical College on January 2d, Dr. Lawrence F. Flick discussed the prevention of tuberculosis. He said that to this end the people must be educated as to the contagious nature of the disease;

State hospitals for the treatment of cases in the incipient stages must be erected, with registration of cases and the application of the general principles of isolation and disinfection. Dr. J. C. Wilson expressed hope for an anti-tuberculous serum, and emphasized the importance of improving the nutrition by means of abundant alimentation, an open-air life, long hours of sleep, and the discipline of a sanatorium.

The Altoona (Pa.) Academy of Medicine and Surgery elected the following officers on January 2d: *President*, Dr. S. L. McCarthy; *Secretary*, Dr. E. S. Miller; *Treasurer*, Dr. J. U. Blose; *Trustee*, W. M. Findley.

Munificent Bequests.—By the will of Captain Jacob Jay Vandergrift, who died recently at Pittsburg, Pa., the following bequests are made: The Homœopathic Hospital of Pittsburg, $5,000; the Allegheny General Hospital, $2,500; the West Penn Hospital, $2,500; the Pittsburg Free Dispensary, $2,500; the Home for Incurables, $1,000.

Plea for Pure Water.—Dr. Benjamin Lee, secretary of the Pennsylvania State board of health, Dr. A. C. Abbott, bacteriologist to the Philadelphia bureau of health, and Dr. George Woodward, a member of the common council of Philadelphia, appeared before the town council of Norristown recently for the purpose of encouraging the erection of a sewage-disposal plant for the borough. Their efforts were, however, met with the response that the city should first cleanse the waters of the stream at its own doors before asking the boroughs to take action.

Episcopal Hospital, Philadelphia.—At the annual meeting of the board of managers on January 4th attention was called to the large and increasing number of dispensary patients. The necessity for a new dispensary was shown, and a recommendation was made for the erection in the near future of the "Aspinwall Ward" for poor, white, female orphan children who have been ill and are convalescent. The fund for this purpose was bequeathed to the hospital a few years ago by Anna Ross Aspinwall, of Pittsburg, and has a cash value of $200,000. During the past year 2,737 patients were admitted to the hospital, and 34,100 new patients were treated in the dispensaries, with 72,595 return visits.

Philadelphia County Medical Society.—At a stated meeting held December 27th, Dr. M. A. Bunce read a paper entitled, "Vasomotor Ataxia," and he presented illustrative cases. The designation is applied generically to conditions attended with abnormal vascular contraction or dilatation, in association with local changes in color, from white to pink and red or blue, and allied phenomena, in consequence of undue susceptibility to various stimuli, extrinsic or intrinsic. Dr. G. Betton Massey read a paper entitled "Some Cases in Conservative Gynæcology," in which he made a plea for the employment of electricity in a wider range of cases than are now treated by this means. Dr. W. Joseph Hearn read a paper entitled "Appendicitis; the Proper Time for Operation and its Mortality," citing statistics showing a death rate of from four to six per cent. Dr. S. Solis-Cohen presented a communication entitled "The Use of Palladium Chloride Internally in the Treatment of Tuberculosis," detailing the results of an experience extending over a period of three years. The preparation employed consisted of a solution of 5 gm. to the ounce made with the aid of hydrochloric acid, and of which from 5 to 10 drops were administered thrice daily. Fever seemed to subside, the cough to diminish, and weight to increase. The drug is thought to be in no wise a specific, but simply an additional aid in the treatment of a disease whose most important therapeutic factors are hygiene and nutrition.

Dr. Thomas Lauder Brunton, physician to St. Bartholomew's Hospital, London, and formerly editor of *The Practitioner*, has been knighted by the queen.

Typhoid Fever is raging in Kiao-Chau, Germany's new Chinese possession, twenty-nine members of the garrison having died of that disease during November. The governor, Herr Jaeschke, has suffered among others.

Medical Matters in the Boer War.—The British government has appointed from civil life four additional consulting surgeons for the army in South Africa. These are Sir William Stokes and Mr. Kendal Franks, of Dublin, and Messrs. W. Watson Cheyne and G. L. Cheatle, of London. Mr. Kendal Franks was for some time before the war resident in Johannesburg.—At a meeting held recently in London a committee of women was formed to equip an hospital base for the yeomanry who have been called out to reinforce the troops in Natal. The membership of the committee comprises most of the women of the British nobility.—Typhoid fever and dysentery are reported to be spreading in Ladysmith and other beleaguered towns.—The British troops are harassed greatly by the heat, to which they are unaccustomed, and the wounded especially suffer from it. In a letter to the *British Medical Journal*, Mr. Makins, one of the civilian consulting surgeons with the troops at Orange River, writes: "During an eight days' stay some six hundred wounded men have passed through the hands of the royal army medical corps here. In one night alone three hundred patients arrived from the fight at Modder River. Yesterday the thermometer registered 115° F. in some of the tents. The fact that the journey from here to the base hospital at Wynberg takes twenty-eight hours emphasizes the difficulties due to the immense length of the line of communication." He adds his testimony to that of the surgeons in our recent war concerning the benignity of the Mauser and the Lee-Metford bullets. A wounded Boer referred to the latter as a "gentlemanly bullet," "and this remark," he said, "is equally applicable to the Mauser. The wounds made by them are small, clean, and little disposed to suppurate."

The Chair of Psychology at Columbia.—Mr. John D. Rockefeller has given $100,000 to endow the chair of psychology at Columbia University. In their resolution of thanks to the donor, the trustees of the university state that Dr. James McKean Cattell, who holds the chair at Columbia, was the first professor of this science to be appointed in any university, American or foreign. There are now five special instructors in this department at Columbia, and the new donation will make it possible for them to carry on their work to much greater advantage.

Measles is epidemic in Newburg, N. Y., among all classes of the community. On January 5th there were over three hundred cases of the disease in the city, and from fifteen to twenty new cases are reported daily. Adults as well as children have been attacked.

The New York Academy of Medicine has paid the last item of its indebtedness, amounting to $2,000, and is now wholly out of debt for the first time since the completion of its building. The latter cost nearly a quarter of a million dollars.

American Delegates to the International Congress.—The President has designated the following officials to represent the United States government at the International Medical Congress in Paris August 2d, and at the Congress of Hygiene and Demography, which assembles at the same place August 10th: For the army, Surgeon-General Sternberg and Surgeon Lagarde; for the navy, Surgeon-General Van Reypen; for the Marine-Hospital service, Surgeon-General Wyman and Passed Assistant Surgeon Rosenau.

Professor Schenk Removed.—Dr. S. L. Schenk, professor of embryology and histology, and director of the Embryological Institute at the University of Vienna, has been retired on a pension. This action is in answer to a petition from the medical faculty of the university alleging the publication in the lay press of scientific theories constituting a form of advertisement. Dr. Schenk, it will be remembered, is the man who, not long ago, published a saccharine theory of sex production and made a little noise in the newspaper world. He had been director of the Embryological Institute for twenty-six years.

A Poison Bottle.—Senator Wilcox, of Auburn, purposes introducing into the New York legislature a bill providing that any bottle containing poison shall be of such peculiar shape that it can be readily distinguished in the dark by the touch. A similar bill was introduced at each of the two preceding terms of the legislature, but was defeated on the ground of discrimination in favor of some particular manufacturer who might secure a patent upon his design. To avoid this a provision will be incorporated in the bill that the style of bottle shall be determined by a committee of the State Medical Society, acting in conjunction with the State board of health.

Shorter Hours for Drug Clerks.—Dr. Nelson H. Henry, of this city, will introduce in the State Assembly a bill providing that drug clerks in cities of the first class shall not have more than seventy hours of work a week. It permits six hours' overtime during any week for the purpose of making a shorter succeeding week, but the aggregate number of working-hours in any two weeks shall not exceed one hundred and forty. No proprietor of any drug store shall require or permit any clerk to sleep in any room or apartment in or connected with the store, which does not comply with the sanitary regulations of the local board of health. The bill has been indorsed by many of the pharmaceutical associations in New York City. The Druggists' League for Shorter Hours has prepared another bill for introduction this year. It differs from Dr. Henry's in that it provides for one hundred and thirty-two hours of labor in two weeks instead of one hundred and forty, and empowers the city board of health to frame regulations and secure the enforcement of the law.

A Busy New Year's Day.—The ambulance department of Bellevue Hospital broke the record on January 1st of this year. All told fifty-six calls were answered. The majority of the patients were treated in the alcoholic ward.

The New York Neurological Society.—At the annual meeting of this society, held January 2d, the following officers were elected: *President*, Frederick Peterson; *First Vice-President*, Joseph Collins; *Second Vice-President*, L. Stieglitz; *Recording Secretary*, Pearce Bailey; *Corresponding Secretary*, Lewis A. Conner; *Treasurer*, Graeme M. Hammond; *Councillors*, C. L. Dana, M. A. Starr, B. Sachs, E. D. Fisher, and J. Arthur Booth.

The Rhyme of the Bramble Bush in Real Life.—A street car struck Giuseppe Marate, a sailor, in Philadelphia, Christmas Day, knocked him down, and dislocated his shoulder. He was put into a wagon and hurried off toward the Pennsylvania Hospital. The wagon jumped over a rut in the pavement and the jar reset the shoulder. When he got to the hospital the surgeons found the shoulder all right, bandaged it, and sent him back to his vessel.

An Electric Ambulance.—St. Vincent's Hospital has now a horseless ambulance. It is operated by an electric motor supplied with power from a storage battery. In many respects it is similar to the present city ambulances in use, but it is equipped with sliding glass doors for use in stormy weather. The operator will sit on a seat at the front similar to the seats of the old ambulances, and will be able to get up a speed of ten miles an hour. The vehicle is a gift of Mr. Edward Kelly.

The Plague is extending in Brazil, and has now been declared epidemic in the city of São Paulo.—In Honolulu, up to the first of the year, there had been seventeen cases officially recognized as plague. There had been a number of deaths from what was probably plague, but had not been declared to be such. The board of health has adopted measures which can be called energetic at least. The infected district has been surrounded by a military cordon, and several buildings in which the plague cases occurred have been burned. The invasion of the Hawaiian Islands has caused alarm on the Pacific coast, and special precautions will be taken to prevent the introduction of the disease into any of the ports of this country and British Columbia. A quarantine has been declared against vessels from Honolulu, and all vessels coming from any infected or suspected place will be required hereafter to use funnel guards over their hawsers to prevent the rats from going ashore.—The plague has broken out among the Chinese laborers on the Manchuria railroad, and it has been decided, at the instance of the Russian minister of finance, to dispatch a sanitary corps of doctors and Sisters of Mercy from St. Petersburg to Manchuria to combat the disease.—On January 8th it was reported that there had been six cases of plague with four deaths at Manila. All the cases thus far have been among the natives. The disease was probably imported from Hong Kong. The medical officers at all times have been on the watch to prevent this, but owing to the short distance from Hong Kong to Manila, and the large amount of traffic carried on in a small way by native junks and dhows, the ultimate introduction of the disease into Manila was inevitable.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending January 6, 1900. December 30th.—Passed Assistant Surgeon A. W. Dunbar ordered to duty on the *Monongahela*, immediately. January 2d.—Passed Assistant Surgeon R. K. Smith detached from the naval hospital, Mare Island, Cal., on reporting of relief, and ordered to duty on the *Pensacola;* Assistant Surgeon J. H. Payne detached from the *Indiana* and ordered to duty at the naval hospital, Mare Island, Cal. January 3d.—Medical Director A. F. Price promoted to medical director from April 9, 1899; Surgeon G. M. Pickrell promoted to surgeon from September 19, 1899; Assistant Surgeon R. Spear ordered to duty in connection with the naval recruiting rendezvous, Philadelphia, Pa., January 9th. January 4th.—Pharmacist J. N. Hurd ordered to duty at the Key West naval station, January 11th.

A New Hospital in Brooklyn.—The new St. John's Long Island City Hospital was blessed by Bishop McDonnell last Sunday. The building is of brick, is five stories high, and comprises a main structure and a wing with an extension in the rear containing the kitchens and laundry. In the main building on the first floor are the bishop's room and the children's room, while in the wing are the rooms of the house staff, and a suite of rooms for visiting clergymen. Private rooms for patients are on the second floor, while the women's ward occupies the wing. The third floor is taken up by the medical ward and the fourth floor by the surgical ward and nurses' rooms, while the operating-room is on the fifth floor. The patients will be moved from the old building the latter part of the month.

An Invalid Will.—The surrogate has refused probate of a will executed recently by an old woman one hour before her death. The will was signed by a mark, and it is asserted that the woman was kept alive long enough to sign it only by injections of strychnine and brandy. By the terms of the will $1,000 was left to the nurse, and the remainder of the estate, about $19,000, to the attending physician.

The Chief of the Sanitary Corps in the Boer Army is a German, Dr. M. Reinhard, from Bavaria.

An Australian Hospital Corps for South Africa.—The government of New South Wales has decided to send a field hospital corps and a battery of artillery to South Africa in addition to the mounted contingent.

A Case of Iodoform Poisoning in an Infant Two Weeks Old.—We have received a report of a case with the above title, the author of which omitted to send his name. If he will declare himself we shall be pleased to publish the case.

Obituary Notes.—DR. WILLIAM ALEXANDER HAMMOND died very suddenly at his residence in Washington on January 5th. He was born at Annapolis, Md., August 28, 1828, and was graduated from the University Medical School in this city in 1848. He entered the medical service of the United States army in 1849, but resigned in 1860 to accept the professorship of anatomy and physiology in the University of Maryland. Upon the breaking out of the civil war, however, he re-entered the army, and in April, 1862, was commissioned surgeon-general. He was later tried by court martial for irregularities in the award of contracts, and was dismissed from the army in 1864. While surgeon-general he established the Army Medical Museum, and suggested the plan of the "Medical and Surgical History of the Rebellion." After dismissal from the army he began practice in this city. He was professor of mental diseases in the Bellevue Hospital Medical College and later in the University Medical School. He was one of the founders of the New York Post-Graduate Medical School. In August, 1879, he was restored to the rank of surgeon-general U. S. A., retired, but without pay. Dr. Hammond was a man of undoubted ability, but his methods were not always in conformity with the unwritten code of professional ethics.

DR. JOSEPH E. ARROWSMITH died at his home in Keyport, N. J., on January 3d, at the age of seventy-seven years. He was a graduate of the University Medical School in this city in the class of 1844, and had practised in Keyport for over half a century. He was a member of the New Jersey State Medical Society and of the Monmouth County Medical Society, and was a consulting physician to the Monmouth Memorial Hospital in Long Branch.

DR. ROBERT H. HINE died of nephritis at Philadelphia, on December 30th, at the age of twenty-seven years. He was graduated from the dental department of the University of Pennsylvania in 1892.

DR. JOSIAH REEVES died at Medford, N. J., on December 25th, at the age of fifty-eight years.

DR. WILLIAM CROMWELL MCFETRIDGE died at Philadelphia on January 3d, of pulmonary tuberculosis, at the age of thirty-five years. He was graduated from the medical department of the University of Pennsylvania in 1886.

Progress of Medical Science.

New York Medical Journal, January 6, 1900.

Injuries of the Kidney and Traumatic (Parenchymatous) Nephritis.—T. J. Yarrow briefly states the causes, symptoms, and results of contusion and laceration of the kidney, and gives the history of a personal case, that of a boy aged seven years, who was run over by a coal cart, the wheel passing over the right leg and region of the right kidney. Immediate catheterization gave two ounces of normal urine, but two hours later he voided twelve ounces of bloody urine. His temperature was at first subnormal, but he soon developed a febrile movement, never over 100.6° F. In the course of six weeks he had entirely recovered. A very complete series of urinary examinations was made and is recorded in full. In addition to the usual findings, crystals of hæmatoidin were observed on several occasions. Yarrow believes that cases of nephritis due to trauma are far more common than is generally supposed.

The Limitations and Value of Fluoroscopic Examinations.—C. L. Leonard states that this method is dependent upon the personal equation of the observer, and differs from the skiagraphic method of employing the Roentgen rays, in that the picture on the screen transfers the image through the eyes and, while forming a mental picture, produces no mechanical record. Hence we have no fixed data in comparing impressions made at one time with those made at another. He believes that the value of the *x*-ray lies not in its power to penetrate everything, but in distinguishing between the less dense tissues, and thus enabling us to study organs and viscera that are hidden from ordinary vision. The fluoroscope is incapable of detecting these shades of difference, and does not mechanically register what it shows.

Hemorrhoids: The General Practitioner and the Ubiquitous Charlatan.—J. W. J. Doyle calls attention to the fact that rectal diseases are frequently prescribed for by the physician without the making of any systematic examination of the patient. But little value is to be attached to the patient's own statement of his symptoms. These may all be referred to the rectum, but examination may show affections of the uterus and bladder, stricture of the urethra, prostatic troubles, and various abdominal growths. Rectal examinations are not extraordinarily difficult and do not require any complicated apparatus. The vast majority of diseases within the rectum can be detected by the educated finger, the speculum being but seldom required.

On a Grave Possible Error in Skiagraphy.—Carl Beck shows by several illustrations the necessity of making skiagraphs in cases of suspected fracture, not only in an antero-posterior but also in the lateral direction. The picture of either one alone may lead to serious errors in diagnosis.

Monstrum per Defectum.—A. Moore figures and describes a monstrosity recently seen by him. It was delivered as the result of a miscarriage, and was a case of acrania with pseudo-encephalocele.

Report of a Few Cases of Chronic Empyema of the Antrum of Highmore, by A. W. De Roaldes. See Medical Record, vol. lv., p. 842.

The Sudan III. Stain for the Tubercle Bacillus.—By D. M. Cowie.

The Medical News, January 6, 1900.

Latent Infection and Subinfection, and the Etiology of Hæmachromatosis and Pernicious Anæmia.—J. George Adami concludes from his own experiments and those of others that, normally, leucocytes pass through the mucosæ on to the free surface of, more especially, the alimentary tract. These leucocytes pass back between the epithelial cells bearing foodstuffs, solid particles, and bacteria. This action of the leucocytes is increased during digestion: after their return they pass either into the lymphatics or the portal venules. It can be demonstrated that even in the healthy liver and kidney in a large number of cases, at least in the rabbit, a certain number of living microbes are present at any one moment. It is probable that in ordinary health a certain number of bacteria pass either through the thoracic duct or through the liver into the systemic blood. Apart from this latent infection Adami believes in the intermediate condition—"subinfection," a condition of chronic inflammatory disturbance. He also thinks hæmachromatosis and pernicious anæmia to be of bacterial origin.

The Principles of the Treatment of Fractures by Systematic Movements and Massage Without Apparatus for Immobilization.—Lucas-Championnière enumerates the advantages of his method of treating fractures. Moderate movement favors the repair of fragments of bone. Where movement is permitted the callus will be greater in quantity, will be more solid, and will be more rapidly thrown out. Moderate movement preserves the vitality of the limb as well as the suppleness of the articulations, muscles, and tendons. It prevents muscular atrophy. To this passive movement should be added massage, which should never cause pain. Threatened deformity is the only contraindication to the application of this treatment to all fractures.

Some of the Causes of Failure to Relieve Asthenopia and Allied Symptoms.—F. W. Marlow divides these cases into two main classes: (1) curable; (2) incurable. The curable cases fall into three groups: (*a*) In which the failure is the fault of the patient—often from carelessness in wearing the prescribed glasses. (*b*) Fault of the oculist, from failure to correct astigmatism or latent hypermetropia with sufficient accuracy; or in over-correcting myopia; or from neglecting to consider the influence of latent strabismus. (*c*) Fault of the case, due to extreme latency of errors of refraction and equilibrium. Incurable cases are of two classes: (*a*) Congenital asthenopes. (*b*) Cases with symptoms due to organic disease of eye or brain or to some general disease.

A Series of Cases of Pistol-Shot Wounds of the Head.—Charles Phelps reviews nine cases of this nature, and says that at present there is no doubt that all cranial pistol-shot wounds should be carefully explored, and as far as possible both the bullet and fragments removed.

A Case of Polydactylism.—A. L. Benedict reports this case, giving illustrations of the deformed hand and foot. The patient is a Jew. Each extra digit has a distinct articulation with the fifth metatarsal or metacarpal bone, respectively, the tendons being apparently the same as for the fifth digits.

Aseptic Catheterism.—Carl Beck states that the precautions to be observed in catheterism are: sterilization of instruments, the hands of the surgeon, and the field of operation.

Journal of the American Medical Ass'n, Jan. 6, 1900.

Ophthalmia Neonatorum.—Dudley S. Reynolds says that ophthalmia neonatorum means infectious conjunctivitis, always the result of contagion, very rarely, if ever, occurring in the process of delivery, the infecting agent being introduced by unskilled handling of the eyes by the nurse, or in an attempt to practise the Credé method or some similar mode of prevention. The clinical forms of the disease may be divided into mucopurulent and gonorrhœal. The only efficient mode of prevention is that which avoids infection, and the methods of Credé and others cannot be too strongly condemned. In the treatment the thing to be constantly borne in mind is the necessity for frequent and thorough washing away of all inflammatory matters from the surface of the affected membrane. "He who cleanses well cures well," must be the physician's motto.

Appendicitis from a Medical Standpoint.—I. N. Love argues strongly against the administration of sedatives in cases of severe abdominal pain until an approximate diagnosis has been reached, which cannot be done without free lavage and evacuation. The diagnosis once reached, appendicitis is to be regarded as a surgical case calling for—and this is the author's main contention—the interference of the trained abdominal surgeon. He claims for ideal surgery a mortality of one or two per cent. Failing the special abdominal surgeon, he would advocate medical or expectant treatment rather than place these cases in the hands of average general surgeons or practitioners.

Observations on Asch Operation for Deviation of Cartilaginous Septum.—Max Thorner describes the instruments devised by Asch for correction of deflections of the cartilaginous septum, and explains their use in full detail. There have been a large number of cases subjected to this operation since it was first performed in 1882, and with results almost uniformly good. The writer wishes to emphasize the fact that in his personal cases the operation has proved signally successful for the relief of scoliosis of the nose, which is often more distressing to the patient than the stenosis.

The Tuberculin Test, and the Need of a More Complete Diagnosis of Tuberculosis.—Charles Denison urges the need of earlier and better diagnosis of tuberculosis, and claims that among the most accurate means to this end is the tuberculin test. He says the experience of veterinarians in every State of the Union and of divers physicians all over the country was amply sufficient to convince an over-cautious profession of the comparative harmlessness of this test. He thinks that boards of health, dispensaries, and hospitals ought specially to be supplied with this means of diagnosis.

A Case of Chronic Inversion of the Uterus; Spontaneous Reduction After Three Years.—A. F. Jonas reports a case in which, after renewed and prolonged but futile efforts at reduction, the patient was dismissed. Subsequently spontaneous reduction and complete regeneration of the uterine mucous membrane took place, the woman passing through a normal confinement.

Continental Views of Alcohol in Therapeutics.—T. D. Crothers says the therapeutic use of alcohol in Europe is not so universal as is generally supposed. He concludes that the use of alcohol as a therapeutic drug must be modified, and that in the near future the agent will be put aside as worthless and dangerous.

Appendicitis with Gangrene and Rupture of Appendix and Cæcum.—Harry Greenberg reports a case of this description in which operation resulted in recovery.

Modern Therapeutics.—Warren B. Hill discusses modern therapeutic methods, especially the use of antitoxic serums and glandular extracts.

From Saddlebags to Pocketbooks.—By B. T. Whitmore. See MEDICAL RECORD, vol. lv., p. 892.

Laminectomy.—By John C. Munro. See MEDICAL RECORD, vol. lv., p. 835.

Boston Medical and Surgical Journal, January 4, 1900.

Epistaxis.—Frederic C. Cobb says that the local causes of epistaxis are apt to be ulcerations of the blood-vessels from scabs and crusts on the septum due to irritation by deflected septum, new growths, and operations for sarcomata. General causes are plethora and anæmia, hemorrhagic diathesis, acute fevers, vicarious menstruation, kidney disease, syphilis, phthisis, and alcohol. The bleeding point on the septum may be cauterized with chromic acid or the galvano-cautery, after cocainization. Suprarenal extract may be tried. Plugging should be done with strips of gauze along the floor of the nose, the Eustachian prominence not to be occluded.

Nitrate of Silver in Hyperchlorhydria.—M. P. Smithwick says that, to do the best for patients suffering from this disorder, one must treat them as neurasthenics, and assist them to live without unnecessary expenditure of nervous energy. Proteid diet has been found suitable in severe cases. Medicinal treatment is discouraging as regards cure. The administration of silver nitrate, one-fourth grain in a half ounce of distilled water twenty minutes before breakfast, has been followed by good results, markedly diminishing gastric sensitiveness. The necessary use of the stomach tube is a disadvantage, and the possibility of argyria must be kept in mind.

Three Unusual Cases of Angioneurotic Œdema in Infancy.—John Lovett Morse, stating that the usual seats for this somewhat unusual affection are the lips and cheeks or the external genitals, reports three cases in which the location of the swelling was the arms and hands. In the first case there was no known exposure or injury. In the second case an over-cold bath is supposed to have caused the trouble in one attack, and various exposures to cold the subsequent attacks, while in the third case no cause was found, but the trouble appeared most markedly in cold weather.

What Position Shall Universities Take with Regard to Investigations?—Thomas Dwight thinks that it is not the duty of universities either to force or urge original investigation upon students, which, however, should be on hand for the very zealous. Prizes should not be too common, but there cannot be too many scholarships for deserving men. In addition a sum of money should be placed in the hands of the professor at the head of each scientific department, to be spent for the good of that department, including publication.

Appendicitis in a Hernial Sac.—Benjamin Tenney reports a case in a woman aged seventy-nine years who was successfully operated upon, the patient making a good recovery.

Quantitative Analysis of the Gastric Contents.—Henry F. Hewes gives an improved method for this analysis, for use in clinical work.

Philadelphia Medical Journal, January 6, 1900.

The X-Ray Diagnosis of Nephrolithiasis.—Charles Lester Leonard has devised a method by which he claims he can make the absolute negative as well as the positive diagnosis in all cases of suspected renal calculus. This he does by using rays that will differentiate between the shadows of tissues less dense than the least dense calculus.

White Gangrene.—George G. Hopkins discusses, under this title, *x*-ray injuries which result from the destruction of the nerve supply of the affected tissue. He says they can be avoided by using proper apparatus, making a not too long exposure, and having not too small a distance between the tube and the object skiagraphed.

Practical Points in the Use of the X-Ray.—Louis A. Weigel insists upon the necessity for accuracy in *x*-ray work. He says there is often a striking difference between the image as seen with the fluoroscope and that on an *x*-ray negative, and the former is of limited utility as an aid to diagnosis.

I. A Bullet in the Popliteal Sphere. II. A Case of Dilated Œsophagus.—W. W. Keen reports two cases showing the value of the *x*-rays in diagnosis. In the first case, however, the bullet seemed to be posterior to the head of the tibia, yet was, in fact, embedded in the bone.

The Practical Use of the Radiograph and Fluoroscope in Diseases of the Lungs.—T. Mellor Tyson and William S. Newcomet are inclined to believe that errors in mistaking normal processes for pathological ones, in *x*-ray diagnosis, are due to hasty observation or want of experience.

The X-Rays in the Study of the Heart Reflex.—Albert Abrams says the heart reflex (contraction of the myocardium induced by irritation of the skin in the precordial region) is best studied with the fluorescent screen approximating the anterior chest-wall.

The Technique of X-Ray Work.—Arthur W. Goodspeed thinks that some of the now antiquated features of *x*-ray work are excellent, and attributes the special merit of much of his work to the constant adherence to one or two of these features.

Foreign Body, Chisel, Embedded in the Naso-Pharynx and Posterior Pharyngeal Wall.—Cary B. Gamble, Jr., and L. M. Tiffany report this case, in which the chisel was located by the *x*-rays, and was successfully removed.

Two Cases of Simultaneous Fracture of the Patellas, Treated by Wiring the Fragments.—J. S. Wright advises delay in wiring a fractured patella, his plan being to wait two weeks and sometimes four before operation.

The X-Rays as a Diagnostic Agent in Pulmonary Diseases.—J. Edward Stubbert holds that the fluoroscope is an accurate agent for corroborating and extending diagnosis made by ordinary methods.

X-Ray Examinations in Diseases of the Chest.—Francis H. Williams reports on the work of this kind he has done at the Boston City Hospital and in private practice.

An X-Ray Demonstration of Some of the Effects of Shoes and Stockings upon the Human Foot.—H. Augustus Wilson shows a number of *x*-ray pictures of deformed feet.

The Skiameter.—A. W. Crane describes an instrument by which he seeks to measure and record the density, size, shape, and movements of the fluoroscopic shadows.

Treatment of Lupus by X-Rays.—Philip Mills Jones reports two cases of lupus successfully treated by *x*-ray exposures.

The X-Ray in Military Surgery.—N. Senn says the *x*-ray is an indispensable diagnostic resource to the military surgeon.

The Use of the X-Ray in Orthopædic Surgery.—Robert W. Lovett presents a number of *x*-ray pictures of arthritic disease.

The Lancet, December 30, 1899.

Measures taken at Tor and Suez against Ships Coming from the Red Sea and the Far East.—M. A. Ruffer describes the organization of the sanitary department of Egypt, and speaks particularly of the measures taken to prevent the transmission of cholera and the plague. The measures differ as the ship may carry pilgrims or ordinary travellers. In former years the danger was minimized by the long period of travel required by the camel caravans, but now that rail and steamboat are used by the pilgrims, the danger is greatly increased, as the journey is so quickly made. The means of transport for these devotees is totally inadequate, and there is frightful overcrowding with all its filth and want of sanitary arrangements. Details of quarantine routine are given, but the people reach the quarantine stations in such enormous numbers that it is difficult if not impossible to carry out all the official regulations. In addition to the most thorough cleanliness possible, each pilgrim passes under the direct observation of a physician who takes his pulse, examines all the superficial glands, and carefully inspects the tongue. The incubation period of plague does not exceed five days. In a really bad case the patient is so sick that it is not likely to be overlooked. With cholera, the case is somewhat different, as the vibrio choleræ frequently persists fifty days or more in the dejections of those who have had cholera. Pilgrim's diarrhœa, so-called, includes every form of intestinal derangement from typhoid to cholera. Hence it is extremely difficult to detect true cholera cases, as it is quite impossible to make bacteriological examinations in every case. Fear of delay at quarantine leads to the concealment of many cases. Hence Ruffer expresses the belief that all measures for ships going through the canal should be confined to landing of the sick and the disinfection of the sick person's quarters and linen. It is better to do a little and do it well, than to attempt a great deal and do most of it imperfectly.

The Treatment of Surgical Tuberculous Affections.—W. Watson Cheyne devotes the third Harveian lecture to the consideration of genito-urinary tuberculosis, discussing in turn castration, epididymectomy, and operations on the prostate, bladder, and kidney. Various operative details are given, the author preferring epididymectomy, the method of Bardenheuer, who was the first to describe the operation. This operation is often to be preferred to castration. One cannot be sure that the removal of one testis will arrest the disease. The loss of both testes exercises a very deleterious effect on the patient. Apart from their generative function, they exert by means of their internal secretion a very great influence on the well-being of the patient. Moreover, there is reason to believe that after removal of both testes patients succumb more rapidly to the attacks of the bacillus. These objections to castration are to a great extent met by the operation of epididymectomy.

Some Notes on Sero-Therapy.—H. W. Mills records the following clinical experiences: (1) Tetanus in a boy aged eighteen years following lacerated wound of the foot. There were symptoms of tetanus on the sixth day, with injection of anti-tetanic serum, followed by a fatal result in twenty-four hours; at that time (1897) intra-cerebral injections were not in vogue and the serum was injected under the skin of the abdomen. (2) Puerperal fever treated with anti-streptococcic serum, 140 c.c. being given within a period of five days. It seemed to control the septic features of the case, but the patient died from syncope coming on after incautious over-exertion. (3) Antitoxin in twenty-seven consecutive cases of diphtheria, all of which ended in recovery. Six patients showed post-diphtheritic paralyses, while five had rashes from the seventh to the thirteenth day. A most emphatic indorsement is given to the practical utility of immunizing injections.

Extensive Mediastinal Emphysema in a Fatal Case of Laryngeal Diphtheria.—W. Ewart and H. B. Roderick report the case of a girl aged five years, illustrating a complication to which diphtheria of the larynx and trachea is liable in spite of tracheotomy and of antitoxin, and the fatality of which is probably attributable to the cardiac and pulmonary embarrassment set up by the increasing distention of the areolar tissue of the anterior and posterior mediastina and of the root of the lung.

Anatomical and Age Distribution of the Tineæ of Southern Assam.—S. A. Powell, who has practised eleven years in Assam, says that he has never seen a single case of ringworm of the scalp, but that nearly every one has at some time or other tinea of the body. Tinea of the nails is very common in that country. The article is a study of 1,407 cases of different varieties of the disease.

Our Position and Outlook.—An inaugural address by J. A. Lindsay at the opening of Queen's College, Belfast.

British Medical Journal, December 30, 1899.

The Essential Toxic Symptoms of Diphtheria.—John Biernacki draws his deductions from notes of fatal cases in which the toxic symptoms are extreme, as they obviously afford the best material for observation, taking care to exclude those cases in which the directly toxic element is masked by secondarily induced phenomena. He says that for a time the only symptoms are those ascribable to sore throat and fever, the first specific signs being undue pallor, moderate compressibility of the pulse, and lassitude. In a few days the pallor becomes more marked, the pulse more compressible, and the pyrexia less. Later the pulse is irregular, the urine is diminished in quantity, and the extremities are cold. Toward the end the surface of the body is blanched and cold, the temperature subnormal, and the radial pulse disappears. Other symptoms are jactitation and dimness of vision. These symptoms are accompanied by a fall in blood pressure, and are probably caused by it.

A Case of Malignant Pustule: Necropsy, with Bacteriological Investigations.—George H. Temple reports the death from malignant pustule of a seventeen-year-old girl. At the autopsy microscopical examination failed to reveal bacilli in the pustule or any of the organs. Potato cultures, however, were made from a clot found in the pulmonary artery, and resulted in a sufficient growth to enable a diagnosis of anthrax to be made microscopically. Inquiry in the village where the patient had visited revealed that five animals had died under somewhat suspicious circumstances two days before the girl's visit. Three points are noted: the rarity of cases of malignant pustule in women, the possibility of such cases being overlooked, and the great difficulty of detecting anthrax among stock before an epidemic occurs.

Poisoning by the Application of Glycerin of Belladonna.—H. P. Joseph reports a case of a woman who after being delivered of a still-born child complained of pain in the breasts. An application of glycerin of belladonna was ordered, resulting in all the symptoms of belladonna poisoning. She recovered slowly after a hypodermic injection of liquor strychninæ.

A Case of Membranous Conjunctivitis Treated by Antidiphtherial Serum.—A. D. McQueen reports a case in which bacteriological examination of the membrane detached from the eye showed diphtheria bacillus. The case was then treated as one of true diphtheria, with the result of prompt recovery.

Piperazin in Gout.—William Fearnley reports a case showing the good results of piperazin in gout. He says that the expense and trouble of taking this drug are its only drawbacks, but for the gouty he considers it as necessary as their daily bread.

The Treatment of Diphtheria.—A. Jefferis Turner sums up this matter by saying that the treatment of diphtheria consists in the administration of antitoxin early and in sufficient dose.

Surgical Treatment of Tuberculous Diseases.—By W. Watson Cheyne. See MEDICAL RECORD, vol. lvii., p. 67.

Lectures on Pharmacy and the British Pharmacopœia.—By Nestor Tirard.

Medical Press and Circular, December 27, 1899.

On the Examination of Sick Children.—Langford Symes gives an abstract of the mode of procedure in history taking and examination of the naked child. The order he recommends is: facies, head, frame, reflexes, eyes, glands, abdomen, heart, lungs, spine, neck, mouth, nervous system. The following are the chief points to be attended to so far as the nerves are concerned: (1) Motor phenomena; (2) reflex phenomena; (3) sensory phenomena; (4) trophic phenomena; (5) electrical phenomena; (6) bladder phenomena; (7) rectum phenomena; (8) mental capacity; (9) speech (aphasia, nasal speech, stammering, idioglossia, or even dumbness); (10) power of sitting, standing, walking, reading, writing, or singing. He finds that some children with cerebellar tumor can sing very well. The advantage of the plan he gives is that the hands once placed upon the child need never be removed until the entire investigation is complete. Examination is more difficult than in the adult.

Gastric Ulcer: Perforation, Recovery; Ulcerative Endocarditis; Death.—W. H. Carthew Davey reports the following case: A woman, aged twenty-two years, was attacked with sudden abdominal pain and vomiting of black-colored fluid. Treatment was by morphine hypodermatically and rectal feeding. In three weeks peptonized milk was retained by the stomach and improvement continued. At the end of a month parotitis developed with facial paralysis, first on one side, then on the other. General sepsis, ulcerative endocarditis, and death followed after four months.

Case of Cæsarean Section.—G. Cole Baker operated on a woman who had borne living children, though the true conjugate was but 6 cm., having been pregnant ten times before. The child weighed nine pounds. The mother was up on the twenty-eighth day.

Cases of White Swelling of the Knee.—A. B. Judson describes ten cases. He does not insist on absolute fixation if the knee is capable of full extension.

Surgical Treatment of Tuberculous Diseases.—By. W. Watson Cheyne. See Medical Record, vol. lvii., p. 67.

Munchener med. Wochenschrift, December 19, 1899.

Experiments in Hand Disinfection.—Paul and Sarwey come to the following conclusions on this subject: Contrary to Ahlfeld's assertion that the normal "every-day" hand yields fewer bacteria after its disinfection by means of hot water and alcohol, and that after a longer soaking in warm water, combined with energetic mechanical manipulation, its bacteria are decreased, these investigators are certain that the hands are not freed from bacteria by hot water and alcohol disinfection. They add that the question as to whether hot water and alcohol disinfection is superior to other methods can better be answered after experiments shall have been made with artificially infected hands, and after other methods shall have been thoroughly tested.

A Case of Acromegaly Complicated by Symptoms of Raynaud's Disease.—A. Boettiger gives the history of a case in which the diagnosis of acromegaly is absolutely certain. Of especial interest, however, is the color of part of the skin of the fingers and hands, which was bluish-black, while here and there were scattered brick-red patches of irregular outline. The hands felt cold and moist. Tactile sensation was normal for the hands, sensation of pain being dulled. The skin temperature was subnormal. Heat and cold were clearly distinguished. The faradic sensation of pain was altogether absent in the skin of the fingers. Reflexes were normal. For both affections there seems to be a toxic etiology, the poison probably not coming from without, but being elaborated in the body itself. Autopsy frequently shows the same alterations in the vessels in both diseases.

The Value of Urine as a Culture Medium for the Diagnosis of Typhoid Fever.—Ernst Unger and Ernst Portner give the following points as important in relation to cultures made for diagnostic purposes. The lack of long-thread colonies is a proof of the absence of typhoid. Numerous long-thread colonies prove the presence of typhoid. Shorter-thread colonies are of use for diagnosis only in combination with the clinical symptoms of typhoid. Urine as a culture medium is a great advance in bacteriology, for since up to this time the proof of typhoid bacilli in the stools was difficult and required from four to five days, they can be demonstrated in the urine in from two to three days, and with much greater certainty.

Dionin.—Meltzer says that dionin has a milder analgesic affect than morphine, and on the other hand a more powerful and lasting effect than codeine, having neither the bad features of the above preparations nor the bitter taste of peronin.

The Effect of Dionin and its Use in Diseases of the Respiratory Organs.—Th. Janisch asserts that dionin induces sleep quite promptly in nearly all cases, and is of the greatest use in chronic bronchitis, emphysema, asthma, and phthisis.

Results of Vaccination in the Kingdom of Bavaria in the Year 1898.—By L. Stumpf.

Berliner klinische Wochenschrift, December 18, 1899.

Sequelæ of Singers' Nodes.—A. Rosenberg has noticed in the cases of vocalists suffering from this affection a certain change in those individuals who do not give themselves the proper respite from continuous vocal exertion. The circumscribed nodule seems to disappear, and in its place there is noticed a broadening of the cord itself, so that it presents a convex rounded edge. Proper rest restores the characteristic nodular appearance. When the patient phonates, the cords approximate normally in their anterior half, but not in the posterior owing to the convexity mentioned, so that at the posterior end of the glottis there is a triangular cleft made at the expense of the affected side. If both sides are affected this is symmetrical and of course larger. R. claims that by noting this appearance of the cords he can tell whether or not his directions as to vocal rest, etc., have been observed by these patients.

Changes in Circular Insanity.—A. Pick treats of certain changes in type of circular insanity which he thinks have been gradually taking place. These changes are particularly interesting as demonstrating that mental diseases are not all stereotyped in character, but that they undergo gradual changes in type just as do the organic affections.

Congenital Complete Bilateral Anosmia.—Placzek reports such a case occurring in a woman aged sixty years, and claims that it is the second on record. He also states on the authority of Roscoe that the famous Lorenzo di Medici was similarly affected.

La Riforma Medica, December 13-18, 1899.

Pulmonary Hypertrophy, Ectasy, Swelling, and Emphysema.—Edoardo Maragliano calls attention to the fact that many pulmonary conditions have ordinarily been erroneously grouped together under the name of emphysema. Among these are a physiological hypertrophy, vicarious emphysema, and pulmonary swelling. In true emphysema there is alteration of the lung tissue and increase of endo-alveolar pressure. Moreover, true pulmonary emphysema is always generalized and diffuse in both lungs, whereas hypertrophy and dilatation are localized in certain determined areas. An exact diagnosis in these cases is necessary to intelligent and successful treatment.

Microscopical Findings in a Case of Idiopathic Partial Neuritis of One Hypoglossal Nerve.—Alessandro Marina found in the right hypoglossal nerve of a patient who had for four years suffered from unilateral glossoplegia and hemiatrophy of the tongue, and who died of pneumonia, microscopical signs of a primary neuritis of the middle third of the nerve. Only a third of the nerve bundles were affected, the rest being absolutely healthy. This demonstrates that partial paralysis of an area innervated by a single nerve trunk does not alone indicate a central affection.

Researches upon the Pathogenic Action of the Casein Ferments.—R. Jemma concludes from his experiments that the usual ferments of casein belong to the bacillus subtilis group, which exhibits no pathogenic action in animals used for laboratory experiments; that among the ferments belonging to the mesentericus vulgatus group we find some endowed with pathogenic action upon the intestinal mucosa. Injected into the peritoneum, the circulation, and subcutaneously they are inactive. That the bacillus butyricus of Hüppe and the varieties related to it, isolated from milk, are always non-pathogenic.

Methylene Blue in Epilepsy.—Giuseppe Paoli used this remedy in nine cases with favorable results. It is best given by the mouth in pills ot 0.30 each, twice a day.

French Journals.

The Danger of Sexual Connection in Inflammatory Affections of the Uterus and Its Adnexa.—René Belin reports an observation of double pyosalpinx in which two double pockets were plainly made out by manual palpation before the patient entered the hospital. A laparotomy done at once revealed the presence of but one of these tumors, the other having ruptured before operation. It was subsequently ascertained that after the first consultation and on the eve of entering the hospital the woman had had coitus with no less than three of her friends, in the last of which she experienced a sensation like a tear, followed by severe pain. The author believes that violent coitus is often accountable for ruptured tubes and general peritonitis of obscure causation.—*Journal de Médecine de Paris, December 17, 1899.*

Subcutaneous Injection of Gelatinized Serum in Hemorrhagic Variola.—Boy-Teissier, in an epidemic just now raging at Marseilles, has been led, by the observations of Costinesco in purpura hemorrhagica, to try injections of gelatin in the hemorrhagic form of smallpox. In one series of seven cases, two of which were very severe, he injected a a single sitting 200 gm. of gelatinized artificial serum in the strength of two per cent. Six of the patients died, and one recovered. No abscesses resulted, nor was there even any redness of the skin. In a second series of thirteen cases, three of which were fulminating and ten simple hemorrhagic, he injected 200 gm. at two sittings, of the same strength. The three severe cases ended fatally, and among the milder ones there were two deaths and six recoveries, while at the time of the report two patients were convalescent without complications. The injections were begun with the onset of premonitory signs, namely, epistaxis, hemorrhagic tint of the lids and conjunctiva, and a violaceous tint of the integument. Three abscesses were caused by the injections in this series.—*La Presse Médicale, December 16, 1899.*

The Indication for Cæsarean Operation Compared with Symphyseotomy, Craniotomy, and Premature Artificial Delivery.—Fancourt Barnes believes that the limits of Cæsarean section may be extended, since the mortality, which before 1880 was 81.2 per cent., has gone down to from 8 to 6.8 per cent. These results are due entirely to improvement of the technique of abdominal operations and uterine suture. The mortality to the mother in premature artificial delivery is one or two per cent., while that of the infant, on the contrary, is thirty-three per cent. He concludes that symphyseotomy has not proven its reason for existence, and he cannot help believing that the eminent men who have sung its praises will, in the future, come to abandon it. Premature artificial delivery will, within certain limits, always have a useful place in obstetrical operations. After an attentive study of the more recent publications upon Cæsarean operation, he has come to believe that it is an operation both scientific and justifiable, and that it will be carried out in the future in many more cases than hitherto.—*Journal de Médecine de Paris, December 17, 1899.*

Triple Stricture of the Intestine of Neoplastic Origin: Entero-Anastomosis.—P. Goullioud reports an observation in which a laparotomy revealed three distinct strictures in the intestine of a woman, thirty-three years of age, due to cancerous growth as indicated by the examination of mesenteric ganglia removed at the operation. The reason that operative procedures for occlusion or intestinal obstruction still give such undesirable results is because they are often undertaken at too late a period. In the case reported the resection of 50 cm. of the small intestine would have been necessary, without taking into account the enormous infiltration of the mesenteric ganglia. The operator, therefore, did an entero-anastomosis, the immediate result of which was good, but the treatment of the case had been undertaken at too late a period to be of permanent benefit.—*Lyon Médical, December 16, 1899.*

Premorbilliform Erythemas.—Eugène Deschamps relates a series of seven observations in which erythema of short duration, sometimes of the measles type and sometimes of the scarlatina type, had been observed by him and others shortly before the outbreak of measles upon the skin. He also reviews the erythematous eruptions which have been described as following shortly after measles. While these eruptions are habitually without serious consequence so far as the outcome of the disease is concerned, they seem, however, to furnish a precise indication for the necessity of disinfecting the child's nose and throat and of supervising the state of his digestive organs.—*La France Médicale, December 22, 1899.*

Eye-Reflexes Considered in Relation to Recruiting for the Army.—F. Lagrange believes that many men could be enlisted for the army who are now rejected because of defective sight. As to the question of astigmatism, he thinks it a simple matter, with the present use of the skiascope and ophthalmometer, with which every military hospital should be supplied, to test the eyes and accept those for whom correcting glasses can be given. Astigmatism should not be given as the reason for exclusion of many cases which can be readily brought up to or above the medium. The higher degrees of abnormal vision due to astigmatism should cause exclusion because of the frequency of intra-ocular lesions.—*Le Bulletin Médical, December 16, 1899.*

A Case of Ludwig's Angina.—G. Marchese de Luna relates an instance of sublingual phlegmon in a man aged thirty-nine years, terminating fatally. He calls attention to the importance of early diagnosis, and believes that energetic surgical treatment is the only one of utility. In the present instance he was not permitted to operate at the time he made the diagnosis. General infection supervened, with pneumonia in the last stages proving the presence of a general infection.—*Gazette des Hôpitaux, December 19, 1899.*

Transmission of Tuberculosis by Means of Postage Stamps.—Busquet relates an instance of a soldier admitted to the hospital for tuberculosis of the lungs, who was a collector of postage stamps, which he was in the habit of fastening in albums almost daily, either moistening the stamp itself or strips of adhesive paper by applying them to the tongue, frequently exchanging these same stamps with other collectors. Cultures made from these stamps showed the presence of tubercle bacilli.—*Le Bulletin Médical, December 16, 1899.*

Rupture of the Tympanum following a Blow upon the Ear.—Paul Viollet reports the case of a married woman who received a blow upon the ear resulting in rupture of the tympanum, and recalls an instance of traumatic ecchymosis of the tympanum following a kiss upon the ear, reported recently by Thollon.—*Gazette des Hôpitaux, December 19, 1899.*

American Journal of the Medical Sciences, January, 1900.

On Splenic Anæmia.—William Osler reports fifteen cases of splenic anæmia, a term which indicates the two essential features of the disease. This series emphasizes the long duration of the affection. In all, the enlargement of the spleen, which was considerable, appears to have preceded the anæmia. In seven cases, hemorrhage from the stomach was the feature for which relief was sought. Watson explains hæmatemesis in enlarged spleen: "The stress of the congestion is continually felt in the submucous capillary system, and the hemorrhage, which is apt in such cases to occur from the loaded membrane, receives a simple solution upon principles almost purely mechanical." Ascites was present in three cases. In no case were the external lymphatic glands especially enlarged. Any grade of anæmia may exist. Melanoderma was seen in six cases. There was a relatively high blood count, relatively low hæmoglobin, and low leucocyte count. A differential diagnosis must be made from pernicious anæmia, splenic leukæmia, Hodgkin's disease with enlarged spleen, cirrhosis of the liver with enlarged spleen, alcoholic, syphilitic, and hypertrophic cirrhosis. The treatment is that of severe anæmia.

Report of Five Cases of Endocarditis Occurring in the Course of Tonsillitis.—Frederick A. Packard, in his report of these cases, believes them to have been pure examples of acute tonsillitis and pharyngitis, having no connection with rheumatism, the endocarditis arising as a direct consequence either of infection of the endocardium by micro-organisms, which gained entrance by way of the tonsils, or of structural change in the mitral leaflets, brought about by coagulation necrosis or other result of the chemico-vital action of toxins produced by micro-organisms present in the throat and absorbed from the inflamed tissues.

Facial Spasm and Its Relation to Errors of Refraction.—Stevens, in a report on facial spasm, says that the symptom picture differs but little in all forms, the spasm being usually confined to the distribution of the facial nerve. The etiology is often obscure, but may be from an affection of the nose or rhinopharynx or from cortical or subcortical disease. Ocular defect is more usually responsible. The refraction and muscle balance should be corrected and systematic after-treatment should be pursued.

The Relation of Migraine to Epilepsy.—William G. Spiller states that migraine, especially the ophthalmic form, is related to epilepsy. Generally, no convulsions are detected in migraine, though they may develop after many years. These cases may be regarded as abortive cases (formes frustes) of migraine that later become associated with epilepsy, or as abortive forms of epilepsy (sensory epilepsy) in which the convulsions later become apparent.

Report of a Family Outbreak of Trichinosis.—George Blumer and Leo Haendel Newman report nine cases of trichinosis in two families. Blood examinations showed an eosinophile leucocytosis, a relative decrease in the neutrophiles, and in many cases a decrease in the small uninuclear leucocytes.

Tracheal Diastolic Shock in the Diagnosis of Aortic Aneurism.—J. N. Hall holds that the crucial test of the value of this sign is in differentiating aneurism from solid thoracic tumor in cases not involving the chest-wall.

A Critical Summary of Recent Literature on Gonorrhœa in Women.—John G. Clark, in his review of this subject, lays stress on the chronic or persistent course of gonorrhœa.

Cystinuria and Its Relation to Diaminuria.—Charles E. Simon states that diamins have been encountered in the urine in cases of cystinuria, and in these cases only.

International Medical Magazine, December, 1899.

On the Relative Frequency of Hernia in the Sexes and the Various Types in the Female; a Statistic Comparison.—Thomas A. Manly states that hernia statistics are most unsatisfactory. Kingston says that for all ages the proportion of hernia is two males to one female. Cloquet concluded after large experience that ruptures are nearly three times more numerous in men than in women. After the age of forty-five years hernia has about the same frequency in both sexes. Heath says in the adult female the proportion of inguinal to femoral is about equal. Typical adult umbilical hernia is *par excellence* an infirmity of married women.

Obstructive Diseases of the Male Urethra.—J. D. Thomas enumerates the obstructive diseases (and obstructions) of the urethra as: Foreign bodies; acute prostatitis; false passage; rupture; stricture; spasm of the cut-off muscles; injury to, or in the neighborhood of, the anus; chronic hypertrophy of the prostate; small meatus; phimosis; pediculated tumors; congenital atresia. With very few exceptions, the various obstructive diseases all require different treatment—the method to be governed by the cause of the disease.

The Diagnosis of Iritis.—Walter L. Pyle says there should be no difficulty in differentiating iritis from conjunctivitis. The chief distinguishing points are: Discoloration of the iris when compared with its fellow; contracted, sluggish, or fixed pupil, turbidity of the aqueous, and ciliary injection. From acute glaucoma, the diagnosis is more difficult. Here, besides testing for increase of tension, we have the size of the pupil as a guide in iritis, more contracted than usual and perhaps fixed; in glaucoma, dilated and sluggish. Generally, in these acute inflammations satisfactory ophthalmoscopic examination is impossible.

Neurosal Conditions Involving Excessive Secretion of the Gastric Juice (Hyperchlorhydria, Hyperchylia, Gastroxynsis, Reichmann's Disease, etc.).—Boardman Reed states that the differential diagnosis of the forms of hypersecretion must turn almost entirely upon the chemical and microscopical examinations of the stomach contents. The diagnosis from gastric ulcer is not always easy. The diet should be carefully regulated, and a complete rest from mental occupation is most important.

The Importance of the Early Recognition of Carcinoma Uteri, and the Methods by which It is Attained.—E. E. Montgomery states that carcinoma uteri in its very early stages is quite amenable to treatment. When suspected, the surgeon should first try dilatation for digital exploration—the next step being microscopical examination of the tissues obtained either by excision of a specimen or by curettage.

Gall-Stone Crepitus and Friction, with Illustrative Cases.—J. M. Anders says that while the presence of gall-stone crepitus and friction in typical cases of cholelithiasis is corroborative, it is not essential to an absolute diagnosis. In irregular cases, either symptom often serves as a deciding factor.

Laboratory Methods of Diagnosing Tuberculosis: The Staining of Sputum.—W. Wayne Babcock describes carefully the technique of staining the tubercle bacillus by means of carbol fuchsin and Loeffler's alkaline methylene blue.

Journal of Experimental Medicine, November, 1899.

Experimental Investigation of the Treatment of Wounds of the Heart by Means of Suture of the Heart Muscle.—Charles A. Elsberg, from numerous experiments on animals, concludes that suture of a wound of the heart, as a final resort, is an operation worthy of consideration and often justifiable. In animals, and also in man, it is devoid of the danger of sudden arrest of the heart, unless Kronecker's coordination centre be injured. The suture should be an interrupted one of silk, if possible penetrating only the epicardium and superficial layers of the myocardium, and tied during diastole. No rules can be laid down, but each case must be considered separately as to indications for operation.

Acute Endocarditis Caused by Micrococcus Zymogenes.—William G. MacCallum and Thomas W. Hastings state that from a case of acute endocarditis of the aortic and mitral valves with infarctions in the spleen and kidneys, a micrococcus was twice isolated in pure culture from the blood during life and demonstrated after death in the valvular vegetations, infarctions, and other parts. It is small, and occurs mainly in pairs. It is pathogenic for mice and rabbits, causing abscesses or general infections. The authors, after much research into the nature of micro-organisms, feel justified in recognizing this organism as a new species, and from its fermentative properties name it "micrococcus zymogenes."

Chronic Interstitial Nephritis and Arteries in the Young.—N. G. Brill and E. Libman present a case whose chief points of interest are: (1) The occurrence of a very advanced primary chronic interstitial nephritis at the age of fourteen years. (2) Its presence in other members of the same family. (3) The extensive and marked arterial changes present. (4) The hemorrhagic diathesis, and the occurrence of a large hemorrhage in the mesentery. (5) The occurrence of calcified deposits in the liver. (6) The evident existence of latency of some cases of chronic nephritis in children.

Bacillus Pyocyaneus and Its Pigments.—Edwin O. Jordan separates this bacillus into four varieties: α, Pyocyanigenic and fluorescigenic (most common); β, pyocyanigenic only (rare); γ, fluorescigenic only (not uncommon, closely related to "B. fluorescens liquefaciens"); δ, non-chromogenic. The different varieties are not so plastic as is sometimes assumed, and cannot be readily converted into one another by subjection to varying conditions of life. The signification and correlation of the almost countless physiological variations among the members of this group in respect to growth in gelatin, behavior to temperature, indol production, etc., remain to be determined.

A Study of the Neuron Theory.—Martin H. Fischer claims that there is not independence of neurons, as anastomoses have been found, and that the dendrites may have a nutritive as well as a nervous function.

Fibro-Sarcoma of the Brain.—Alice Hamilton reports a tumor resembling glioma, but in which the fibrils were arranged in circumscribed masses, and took the differential stains for connective tissue. It was decided that it was an unusual form of fibro-sarcoma.

The Differentiation and Classification of Water Bacteria.—George W. Fuller and George A. Johnson call attention to several modifications which experience has led them to believe are of assistance in the study of water bacteria.

A Preliminary Note on the Fractional Precipitation of the Globulin and Albumin of Normal Horse's Serum and Diphtheritic Antitoxic Serum, and the Antitoxic Strength of the Precipitates.—By James P. Atkinson.

Leukæmic Lesions of the Skin.—Horst-Oertel describes leukæmic cutaneous nodules whose structure supports the theory that secondary leukæmic nodules are essentially composed of cells derived from the blood.

Lymphoma.—E. R. Le Count describes a small tumor which he considers to have been a benign, noninflammatory new growth of lymph nodes.

A Case of Addison's Disease with Simple Atrophy of the Adrenals.—Carlin Philips. See MEDICAL RECORD, vol. lv., p. 407.

Montreal Medical Journal, December, 1899.

Some Remarks on the Symptoms and Operative Treatment of Bronchocele, Especially in Relation to Graves' Disease.—Francis J. Shepherd, after enumerating the well-known symptoms of Graves' disease, reports several cases showing the effects of operative treatment. He considers it most important in choosing the form of operation to be guided by the nature of the case. Enucleation and the after-treatment are carefully described.

The Wisdom of Surgical Interference in Hæmatemesis and Melæna from Gastric and Duodenal Ulcer.—G. E. Armstrong, in defining cases of hæmatemesis suitable for operation, gives two classes: those, first, of frequently repeated small hemorrhages, which persist in spite of medical and dietetic treatment, and which threaten to destroy the life of the patient; and, secondly, those having large hemorrhage which, in spite of medical and dietetic treatment, recurs. He reports two successful cases.

Two Cases of Ephemeral Mania, Uncomplicated with Epilepsy, Intemperance, or Parturition.—T. J. W. Burgess records two cases of mania transitoria, both patients being women. The cause of the first was supposed to be the excitement of a railway journey and the consequent fatigue—this being her first experience; the second was caused probably by the shock of a sudden fright.

Goitre: Its Etiology and Incidence in the District of Montreal.—J. A. Springle, after summing up the causes which are generally considered as etiological factors of goitre, mentions some conclusions incident to Kocher's recent investigations. He believes that certain waters contain the materies morbi, emphasizing the fact that water from the so-called freshwater sandstone is particularly goitrous.

Notes from Practice in the Argentine Republic.—F. G. Corbin reports three cases: (1) Fecal fistula following pelvic abscess cured by operation; (2) nephrectomy without a ligature; (3) interstitial pregnancy mistaken for a myoma uteri; operation, recovery.

Endo-Enteric Suture.—E. Reavley describes the endo-enteric suture originated by F. G. Connell, illustrating the steps of this method by plates. He claims the following advantages: Rapidity, simplicity, only one line of union and that the shortest, less injury to the intestine, all intestinal walls included, and the greatest attainable strength.

A Case of Lues Venerea with an Unusually Protracted Incubation Period.—A. Mackenzie Forbes, in reporting this case, says that all penile abrasions, appearing both with and after urethral discharges, should be most carefully watched.

A Rare Surgical Case.—T. M. Calnek reports the case of an aneurism situated just at the trifurcation of the gluteal artery, the three main branches arising from the sac of the tumor.

Tuberculosis of the Flat Bones of the Skull.—A. Primrose reports such a case, observing that it is extremely rare and that it is apt to be confounded with syphilis.

Archives of Pediatrics, December, 1899.

A Case of Heart Lesions.—A. C. Cotton reports a case of this nature in a child eleven years old. The necropsy showed stenosis of the pulmonary conus; malformation of the pulmonary valve (two cusps); aneurism of the right ventricular wall; acute mural endocarditis; defective (perforate) ventricular septum; fibrinous pleuritis; old healed and recent metastatic abscesses of both lungs; cloudy swelling of the liver and kidneys; chronic splenitis and acute perisplenitis; general anæmia; anasarca, hydrothorax, hydropericardium, and ascites; panophthalmitis of the left eye. Bacteriological examination revealed the streptococcus pyogenes in the lungs and the vegetations, and adherent clots in and about the aneurism of the heart wall. The colon bacillus and two micrococci, which could not be identified, were also obtained from the lungs.

The Importance of Prolonged Rest in Bed after Acute Cardiac Inflammations in Children.—L. Emmett Holt asserts that there are three reasons why cardiac inflammations are likely to be especially serious in young children: (1) The frequency with which both the endo- and pericardium are involved; (2) the great tendency to acute dilatation; (3) the liability of these attacks to be complicated by pneumonia. The cardiac muscle, like the voluntary muscles, in young children, has not the resistance which it attains later. For these patients, rest as nearly absolute as possible is necessary, even for two or three months after acute symptoms.

Diphtheria and Serum Therapy, with Especial Reference to Experience in Cuba.—Joaquin L. Dueñas asserts that, in his own personal experience, he has not lost any patient from pharyngeal or laryngeal diphtheria since his employment of antitoxin.

A Case of Hydrocele of the Cord following an Operation for Strangulated Inguinal Hernia.—Burr Burton Mosher reports this case of hydrocele which was immense, and which, with the exception of the reducible protrusion, was wholly within the abdomen.

Peliosis Rheumatica in a Lymphatic Child.—J. Park West reports a case of that rather unusual disease described by Schönlein in 1829 as peliosis rheumatica. No satisfactory cause could be found.

Scorbutic Membranous Colitis.—J. Henry Fruitnight describes this case as the only instance of scurvy accompanied by the expulsion of a pseudo-membrane with which he is acquainted.

Infantile Scurvy—Mild Type.—Francis Huber reports several cases of infantile scurvy, all of the patients belonging to the better classes and all being rachitic.

Strangulation of the Fœtus in Utero by the Umbilical Cord.—Joseph W. Irwin reports this unusual case, due, probably, to the mother falling from a street car in the seventh month.

The Use of Gruels as Diluents of Cow's Milk.—By Henry Dwight Chapin. See MEDICAL RECORD, vol. lvi., p. 181.

A Case of Multiple Osteomyelitis in an Infant.—T. M. Rotch presents this case as one of pathological rather than of clinical interest.

Pediatrics, January 1, 1900.

Complications of Diphtheria.—J. A. Abt does not regard septic diphtheria as, strictly speaking, a complication of the disease, but believes with Huebner that it would be more appropriate to call these cases diphtheria gravissima or maligna, since pyogenic cocci may be absent and nearly pure cultures of diphtheria bacilli are obtained. Baginsky says that in nearly every case in which antitoxin is administered early sepsis rarely, if ever, develops. A case is cited to show that such violent toxins may be produced that it is impossible to neutralize them with the ordinary dosage of antitoxin. Heart complications may occur in the mild as in the severe forms. Paralysis may be early or late. The most feared cardiac complications occur after the local disease has disappeared. There are characteristic symptoms which should warn us: exceedingly rapid or slow pulse during convalescence, but, more important, disturbance of normal rhythm. The characteristic irregularity shows an intermission of one or two beats, or it may become double. Antitoxin can have no influence on a heart already damaged by diphtheria poison, but it is believed that the antitoxin partially or completely neutralizes the poison if given sufficiently early. It is observed that since the use of antitoxin became general severe nephritis is becoming less frequent.

Double Paralytic Varus from Peripheral Neuritis.—Henry Ling Taylor says the commonest cause of acquired clubfoot is poliomyelitis. Among the rarer causes of acquired varus or equino-varus is peripheral neuritis. The case of a girl of thirteen years is given. The neuritis is distinguishable by its sudden onset with pain, absence of fibrillar tremor and degenerative reaction, non-progressive character, and tenderness of the nerve trunks.

A Case of Interstitial Emphysema.—Max Girsdarsky records with illustrations a boy's history. After asthma, and bronchitis with emphysema of the lungs, there were sudden choking, thickening about the neck, and tumor formation, giving crepitation, and a fremitus-like sensation to the fingers. Improvement began on the sixth day. In two weeks the interstitial emphysema had disappeared.

Annals of Gynecology and Pediatry, December, 1899.

The Neuroses of the Menopause Caused by Intestinal Fermentation.—Charles J. Aldrich says that, without regard to sex, the physiology of life is marked by distinct epochs: Dentition; pubescence; and the climacteric of age. The first two are developmental, the last the epoch of degeneration and decay. To woman nature has added another, the menopause. This is a physiological process, and not a process of decay. At this time the spleen becomes smaller; the lymphatic glands waste; Peyer's patches smooth down, and lose their peculiar structure; the intestinal villi shrink and become less vascular; the muscular coats of the intestines atrophy, and lessened peristalsis ensues. The power of propelling the mixed products of indigestion and fermentation is lessened, and innumerable micro-organisms flourish and excite fermentation and elaboration of toxic alkaloids. Consequently constipation, anorexia, eructations, flushes, vertigo, headaches, and insomnia follow. Cathartics, nux vomica, and hot-water enemas will clear the tract. Massage, electricity, diet, and intestinal tonics will aid in keeping it clear.

Surgery in its Relations to the Female Pelvic Organs.—John B. Wheeler observes that in operative cases the best prospect of a complete and speedy restoration to health is afforded by a radical operation. In the case of a young woman, with most of her child-bearing life before her, it may be justifiable to offer the less reliable aid of a partial operation, in order to give her every chance to preserve the function of reproduction. In the case of a woman approaching the menopause (and *a fortiori* if she has passed it), there is no valid reason for refusing her a radical operation.

Report of a Case of Puerperal Sepsis and what It Teaches.—Charles H. Glidden says that, taking into consideration the frequent inconveniences to which the obstetrician is subject, time is well spent in considering the management of puerperal sepsis from the curative as well as the preventive standpoint.

A Case of Cystitis of Long Standing, Complicated by Chronic Malaria, Together with Sluggish Liver and Habitual Constipation.—J. W. Walker, in treating this case of cystitis, used quinine and thialion besides, and a prostatic catheter of block tin.

A Clinical Study of the Lymphatic Glands in One Hundred Cases of Scarlet Fever.—Jay F. Schamberg has carefully tabulated the results of his work on this subject, which was carried on at the Municipal Hospital for Infectious Diseases, of Philadelphia.

Puerile Indigestion.—F. C. Morgan states that ignorance and carelessness of nurse or mother are primary causes of puerile indigestion. Four facts govern the matter: Quality of food, quantity of food, frequency of administration, method of preparation.

Sudden Increase of Intra-Abdominal Pressure a Possible Danger in the Operation for the Cure of Old, Very Large, Retained Hernia.—By Henry O. Marcy. See MEDICAL RECORD, vol. lvi., p. 641.

Eclampsia.—F. L. Brigham, in reporting several cases of eclampsia, asserts that, in his opinion, veratrum viride will successfully supplant the use of the lancet in this affection.

Some Practical Experience in Asepsis and Antisepsis in Obstetrics.—By Douglas Ayres. See MEDICAL RECORD, vol. lvi., p. 636.

Intestinal Obstruction from Biliary Calculi.—By J. Wesley Bovée. See MEDICAL RECORD, vol. lvi., p. 569.

Typhoid Ostitis.—Charles F. Painter reports two cases of ostitis due to typhoid, one situated in the hip joint, and the other in the spine.

Indigestion in Infants and Children.—By James H. Taylor. See MEDICAL RECORD, vol. lvi., p. 602.

The Therapeutic Gazette, December, 1899.

The Prevention and Treatment of Puerperal Eclampsia.—Edward P. Davis says the convulsions may be readily controlled by chloroform, large doses of morphine, veratrum viride, or nitrite of amyl. Recent observers estimate that in women subjected to no care during pregnancy one in eighty-five has eclampsia. The mortality varies from fifteen to twenty-five per cent. Serum albumin is important only when in large amount and appearing with kidney débris. As a preventive measure the patient's excretion should be stimulated. An appropriate diet composed largely of milk, bread and butter, green vegetables, and fruit, with an abundance of pure and soft water, is the first prerequisite; a warm tub bath at night and a cool sponge in the morning should be taken. Thin wool or silk and wool should cover the entire surface. Fresh air and gentle exercise are necessary. Alcohol should not be allowed. The craving for tea or coffee may usually be appeased by the use of very hot water, effervescent drinks, and occasionally, for a short time, small doses of nux vomica or strychnine.

The Treatment of Eclampsia.—James Clifton Edgar takes up first the preventive, then the curative treatment, under which latter he discusses a method to control the convulsions. Among other things he advises that the uterus be emptied under deep anæsthesia by some method that is rapid and that will cause as little injury to the woman as possible. He then goes on to consider elimination of the poison or poisons which we presume cause the convulsions. A protest is entered against the careless use of the term "accouchement forcé," and to the easy confidence with which it has been recommended as the best if not the only means of controlling eclamptic seizures, without attaching sufficient importance to the condition of the cervical barrier.

The Treatment of Eclampsia.—Richard C. Norris thinks prevention the most efficient treatment. Neuralgia of obstinate character, irritable temper, excessive vomiting, marked salivation, coated tongue, hebetude, and signs of inactive liver are indications for treatment. The formation of toxins is to be prevented by diet, while the liver must be aided to destroy them and the excretory organs to eliminate them. The colon should be flushed daily with at least two gallons of salt solution. Chloroform is preferable to morphine in controlling convulsions.

The Treatment of Puerperal Eclampsia.—A. F. A. King assumes the convulsions to be of uræmic nature, and prescribes hydragogue cathartics and hot baths or wet packs, dry or wet cuppings, one application of mustard plaster, then hot poultices of flaxseed and digitalis leaves. Absolute quiet is necessary. He places a gag between the teeth, and pulls forward the tongue after the convulsion to prevent its falling back and endangering respiration, which are practical points of importance.

The Treatment of Puerperal Eclampsia.—Edward Reynolds is a strong believer in the efficacy of diuresis, catharsis, and diaphoresis, rest in bed, milk diet, and mild sedatives, such as the bromides. Immediate delivery under ether is advocated for all cases in which one convulsion has occurred. He occasionally uses a single injection of one-sixth grain of pilocarpine. He prefers chloral to morphine.

A Case of Fibroma Molluscum and Dermatolysis.—H. Clarence and F. G. H. Edwards report the case of a man who had two heavy pendulous folds of skin, one on the face and the other on the chest and shoulder, and also numerous small tumors scattered over the trunk and arms. One of the tumors, which was removed, weighed 1,530 gm. (about three and one-third pounds). The authors regard dermatolysis and fibroma molluscum as the same affection at different stages, and propose the term "fibroma molluscum multiforme."—*Journal of Tropical Medicine, December, 1899.*

Therapeutic Hints.

Arsenic Antidote.—

℞ Tinct. ferri chlor.,
Sodii (vel potass.) bicarb āā ℥ i.
Aquæ (warm) ℥ viij.
M. S. Ad libitum.

Styptic Collodion.—

℞ Acidi benzoici ʒ iij.
Tannini ʒ v.
Phenol ℥ i.
Collodion ℥ xiij.

Iodoform Gauze.—

℞ Iodoform ʒ xiiss.
Elemi resin ʒ i. gr. xv.
Ster. vaseline oil ʒ iiss.
Rectified benzene ℥ xvi.
Ether ℥ xxij.

Add the resin to the mixed liquids; filter and dissolve the iodoform by agitation.

Iodol Gauze.—

℞ Iodol,
Resin,
Glycerin āā 10
Alcohol 100

Epistaxis.—

℞ Antipyrin 0.5
Tannin 1.0
Powd. sugar 10.0
M. S. Dusting powder.

—Rendu.

Rigid Perineum.—

℞ Chloroform ℥ i.
Sulphuric ether,
Spir. of cologne āā ℥ ss.
M. S. Apply locally.

—Southworth.

Acute Laryngitis.—

℞ Sodii sozoiodolat.,
Sulphuris sublim āā 15
M. S. Apply with powder blower every four hours.

—Fritsch.

Whooping-Cough.—

℞ Antipyrin gr. ss.–i.
Ammon. chlor gr. iiss.–v.
Syr. limonis ʒ ss.
Aquæ q s. ad ʒ i.

Or:

℞ Antipyrin gr. ss.–i.
Ammon. bromid gr. i.–ij.
Ammon. muriat gr. i.
Syr. simp q.s. ad ʒ i.
S. At a dose every three hours.

—J. Madison-Taylor.

Or:

℞ Phenacetin 2.5
Tinct. belladonnæ 5.0
Extr. castan. vesc 30.0
Spir. rectific ad 50.0
M. S. For children over one year of age ten drops every two to six hours, over ten years a teaspoonful.

—Lancaster.

Bronchitis.—

℞ Terpin 10.0
Glycerin,
Alcohol āā 150.0
Syr. of honey 125.0
Tr. of vanilla 10.0
M. S. A tablespoonful three or four times daily.

—Crinon.

Night-Sweats of Phthisis.—

℞ Agaricin gr. viiss.
Dover's powder ʒ ij.
Powd. marshmallow,
Mucil of acacia āā ʒ i.
M. et divide in pil. No. c. S. One or two pills at night.

—Siefert.

Broncho-Pneumonia in Children.—

℞ Sodii benzoatis gr. viij.
Ammon. acetatis gr. xxiv.
Spir. vini gallici ʒ ij.
Mist. acaciæ,
Syrupi āā ℥ iss.
M. S. From one-half to one teaspoonful every two hours.

—Marfan.

℞ Ammonii acetatis gr. viij.
Sodii benzoatis gr xxx.
Oxymel scillæ ʒ iiss.
Syr. pruni virgin ℥ i.
Aquæ destill ℥ iiiss.
M. S. Teaspoonful or more every two hours, according to age.

—Perier.

Summer Complaint in Children.—

℞ Paregoric ℥ ij.
Extr. of witch-hazel ℥ i.
Carbolic acid ʒ i.
Fld. extr. of kino,
Jamaica ginger āā ʒ ij.
Precipitated chalk ʒ i.
Simple syrup up to ℥ viij.
M. S. For adult a teaspoonful, for children in proportion to age.

—T. B. Greenley.

Hemorrhoids.—

℞ Cocaine hydrochlor gr. vi.
Morph. sulph gr. x.
Resorcin gr. xv.
Hydrarg. chlor. mitis ʒ ss.
Petrolati ℥ i.
M. ft. ungt. S. Apply to parts.

℞ Cocaine hydrochlor gr. ij.
Pulv. opii gr. iv.
Resorcini gr. vi.
Acidi tannici gr. xij.
Iodol ʒ i.
Ol. theobrom q.s.
M. ft. suppos. No. xii. S. One every four hours.

—O. Hasencamp.

Myalgia.—

℞ Extr. cimicifugæ fld.,
Extr. erythroxyli fld.,
Tr. guaiac. ammon āā ℥ ss.
M. S. A teaspoonful three times a day.

In Chlorosis.—

℞ Ferri sulphatis 5.0
Sacch. lactis 15.0
Pulv. frangulæ 25.0
M. ft. pulv. No. c. S. One powder after each meal.

—Liégeois.

Syphilis.

℞ Acidi arsenosi,
Hydr. chlor. corros.,
Auri et sodii chloridi āā 0.1
Extr. sarsaparillæ,
Extr. gentianæ,
Extr. opii āā 0.2
M. ft. mass. in pil. xxx. div. S. One pill morning and night.

—J. D. Ribiero.

Acute Enteritis.—

℞ Resorcini 5.0
Bismuthi salicylatis āā 15.0
Tannigen,
Sacch. alb.,
Sodii carbonat āā 20.0
M. ft. pulv. S. A small teaspoonful every two hours

—Ewald.

For Incoercible Vomiting.—

℞ Picrotoxin,
Morphin. hydrochlor āā gr. i.
Atropin. sulph gr. $\frac{1}{30}$
Ergotin gr. xx.
Alcohol q. s. (to dissolve)
Aquæ ʒ ij.
M. S. Eight to ten drops in small amount of water, repeated at intervals.

—Robin.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 4, 1900.

William H. Thomson, M.D., President.

Treasurer's Report.—This showed the Academy to be now free from debt.

Pathology of Migraine.—Dr. Coleman W. Cutler presented a paper on this topic. He said that migraine was a periodical or paroxysmal neurosis making its appearance in childhood or early adult life, and characterized by headache, often preceded by an aura, and associated with vomiting. The visual aura was the most common, and usually consisted of peculiar color perceptions with perhaps spasm of the muscles of accommodation. Olfactory or taste perceptions, as a part of the aura, were decidedly rare. In the great majority of cases migraine was transmitted in the family as such, but coincident with it other minor neuroses might occur. It was probable that epilepsy might be accompanied by phenomena simulating migraine, or alternating with it. Symptomatic migraine might be an early sign of tabes. The tension of the eye should be tested in all cases of ocular pain, especially if associated with scintillations of light. The tendency of migraine was to begin in youth and end in middle age. Heredity was a predisposing cause in from ninety to ninety-five per cent. of all cases. The exciting causes were exceedingly numerous. A certain number of cases seemed to resist all efforts at treatment. The relation of latent gout to migraine was still an open question. In at least fifty per cent. of the cases reaching the oculist the attacks became less frequent and often ceased entirely after a proper course of treatment.

Significance of Migraine in Graves' Disease.—Dr. William H. Thomson read this paper. He said that there was probably no other disease so decidedly hereditary as migraine, and it had therefore been classed as a neurosis. His own view was, that it was more probably the result of an intermittent toxæmia. No slight significance should be attached to the fact that whole classes of individuals were free from migraine, and other whole classes were victims of this affection. The persons forming the class subject to migraine were those leading indoor and more or less sedentary lives. In this respect migraine was very different from epilepsy, for in the latter disease the individuals affected were found in both indoor and outdoor workers. Active bodily labor wholly prevented stasis of the circulation, whereas sedentary life favored stasis. In the former, good digestion was the rule; in the latter it was the exception. He would call attention to the fact that Graves' disease might often exist, and severely too, without any exophthalmos. In his experience the malady had ended fatally in a larger percentage of cases in which there was no exophthalmos. He had detailed notes of sixty-five cases of Graves' disease seen in private practice. Of this number, thirty-two were without and thirty-three with exophthalmic goitre. The total symptomatology of Graves' disease, with this one exception, was so characteristic that there was no difficulty in making the diagnosis. In all of the sixty-five patients there had been persistent tachycardia, and this had been as marked in those without as those with exophthalmic goitre. Tachycardia he looked upon as an essential symptom of this affection, and it was particularly important because without it one would be liable to mistake the condition for neurasthenia, hysteria, or dyspepsia. Tachycardia was usually one of the earliest symptoms to appear and one of the last to go away. Another very characteristic symptom was the sense of general nervousness very commonly described by the patient as an unreasonable fright. Another frequent symptom was muscular tremor, worse in the morning, and often passing off altogether by evening. Of the sixty-five patients only sixty stated that all of their symptoms were worse in the morning. Tremor of the eyes was present in every one of the cases in which there was no exophthalmos. These patients often complained of pains in various parts, chiefly in the legs, associated with tenderness. A peculiar hyperæsthesia of the external ear had been noted in a considerable proportion of both classes of cases. Severe vertigo had been present in about one-fifth of the cases. A most striking parallel between the two classes was to be found in derangements of the digestive apparatus. In some of the cases there had been a persistent nausea occurring independently of the taking of food. Diarrhœa had been a leading symptom in sixteen of the thirty-two cases in which there had been no exophthalmic goitre, and had been characterized as painless. It was said to be worse in the morning. It was quite uniformly asserted that the other symptoms were aggravated with the occurrence of diarrhœa, but the general course of the disease had been about the same in the cases showing diarrhœa as those charaterized by constipation. Persistent vomiting was a serious symptom in many cases of both classes. One very severe case was that of the wife of a physician who had assiduously watched her for two years, but who had never suspected the existence of Graves' disease because of the absence of exophthalmic goitre. This should impress upon us the evil of naming diseases after one symptom. He believed the primary cause of Graves' disease was an auto-infection from the alimentary canal, and that it was associated with a peculiar inability properly to digest nitrogenous food. It was conceivable that the presence of such poisons in the blood in excess might overstimulate the thyroid gland, and might occasionally lead to atrophy of the gland and to myxœdema. The speaker said that only since 1896 had his attention been specially directed to the frequency of migraine in connection with Graves' disease. He had seen but one case in which migraine and epilepsy had been found in the same individual. This person had had epilepsy from the age of seven until coming under observation at the age of eighteen years. The epilepsy had been made to disappear entirely, but some years later she had developed an exophthalmic goitre, and still later migraine had appeared. The occurrence of migraine as a family complaint in Graves' disease had been noted in sixty-five of the cases.

Dr. C. L. Dana said that at the present time most neurologists looked upon migraine as an hereditary constitutional neurosis, paroxysmal in character, and occurring in the same periodical way as epilepsy and certain other neuroses. It was considered to be a discharging neurosis affecting more highly evolved psychical nerve centres than were affected in epilepsy. Such centres one would naturally expect to find more highly developed in brain-workers than in ordinary laborers. While the disease was incurable, much relief could be afforded by lessening the irritation and the exhaustion of the centres. By relieving eye-strain, removing sources of intestinal irritation, and securing more outdoor life, much could be accomplished. Next in importance to treatment directed to the mode of life was that having for its object the improvement of the digestion. He was not in a position at present to discuss the interesting clinical studies presented in the last paper regarding the relation of migraine to Graves' disease. One of the most interesting features of the pathology of migraine was that it certainly had neurotic equivalents. He had seen cases of migraine with the headache at intervals for years, and then this pain would be replaced by attacks of periodical ptosis. He had not noted that migraine and epilepsy occurred very frequently in the same family, or were very closely allied in their pathology.

Dr. B. Sachs said that the occurrence of migraine and epilepsy in the same individual was undoubtedly rare; he could not recall more than two such cases, and in these the migraine had followed the cessation of the epilepsy. That migraine was the result of toxæmia seemed to him purely speculative. Toxæmias might act as exciting causes, but nothing more. Reference was made to the case of a young man suffering from epilepsy who had developed acute pulmonary tuberculosis, and on the occurrence of this intercurrent disease he had exhibited no further epileptic seizures. This relation of epilepsy to acute infectious disease was interesting, and to him novel. It seemed to him rather injudicious to diagnosticate as Graves' disease every case exhibiting tachycardia.

Dr. Thomson, in closing the discussion, said that he would not make the diagnosis of Graves' disease on persistent tachycardia alone, but he would be willing to make the diagnosis, even in the absence of exophthalmic goitre, if along with the tachycardia there were muscular tremors, paræsthesiæ of one kind or another, persistent constipation or diarrhœa—in a word, clear evidence of a serious constitutional disorder. The object of his paper was to call attention to the frequency of this malady without any associated exophthalmic goitre.

SECTION ON GENERAL MEDICINE.

Stated Meeting, December 19, 1899.

Louis Faugères Bishop, M.D., Chairman.

The Relative Intensity of the Second Sounds at the Base of the Heart: A Study of One Thousand Cases.—This paper, by Sarah R. Creighton, M.D., was read by Lewis A. Connor, M.D. (See page 45.)

Dr. Emily Lewi said that the explanation of the phenomena was perfectly satisfactory to her, and that there were a number of anatomical factors in the position of the child's heart and the adolescent's heart, as compared to the adult heart, that would account for the clearness of the sound. The heart of the infant, of the child, and of the adolescent lay more vertically in the thorax than it did later in life; incisions made into the frozen subject showed this. If a transverse incision was made through a child's heart at the level of the aortic valve it would pass through the thick right ventricle. Another anatomical peculiarity of the child's heart was that the left pleura hardly went to the left edge of the sternum, whereas the right pleura went to the left margin of the sternum. These were additional factors in making increased intensity of the second pulmonary sound as heard in the child. The speaker had noticed for some years that anæmia or chlorosis, in girls from fifteen to twenty years of age, caused an accentuation of the second pulmonary sound; whereas in girls who had no marked chlorosis—hæmoglobin seventy or eighty per cent.—this sound was merely a click, probably due to the condition of the blood. The speaker believed that one should have some standard for comparison, for it would not appear that the same heart sound could be heard in a girl of twenty years as would be heard in a man of sixty; nor should we expect to have the same quality of sound at the base as at the apex.

Dr. James K. Crook said that, in an experience covering many years in both teaching and in examining many patients, he could bear testimony to the fact that the aortic first sound was more intense than the pulmonary second sound in the adult. The pulmonary second sound was more responsive to disturbances of the circulation. In the presence of excitement the pulmonary second sound was more quickly responsive than the aortic second sound. What conditions led to variations in the pulmonary second sound? Mitral stenosis caused a marked increase of the aortic second sound. The blood was dammed back on the lungs through the pulmonary capillaries, back to the pulmonary artery, and in consequence there were increased pressure and increased tension of the pulmonary artery, and greater recoil against the valves. This was marked in emphysema and in pneumonia, *i.e.*, the acute lobar form. In this disease the study of the second sound was a very important point; so long as the power held out the pulmonary second sound was accentuated; but when it began to fail it was always an ill omen. The application of a tourniquet to the limb influenced pressure in the aorta, and there followed a little accentuation of the second sound. This was increased in conditions of general arterial tension, as was found in Bright's disease, in chilling of the surface after exposure to cold, and in epilepsy. Balfour claimed that whenever there was accentuation of the second sound there was hypertrophy of the left ventricle.

Dr. Lewis A. Connor said the fact that not all the cases were normal cases, some patients having anæmia, others pulmonary tuberculosis, etc., might interfere with the accuracy of the records; but many of those examined were not at all ill. The doctors, the nurses, the parents who accompanied children, were examined, and as great care was taken the probabilities were that the records were not far from right. Most text-books made a mistake in not distinguishing between the sounds heard in the adult and the sounds heard in children. From the age of thirty years on there was marked accentuation of the second sound; this accentuation was more marked and constant with each decade. Dr. Creighton did not think her explanations adequate; they were only suggestions. Regarding the taking of the aortic second sound as the standard, that could be done only when we were sure that the individual was perfectly normal.

A Case of Bilobar Pneumonia; Purulent Pericarditis; Pericardotomy; Recovery.—Dr. Morris Manges presented the patient, whose history briefly was as follows: The boy, aged fifteen years, was admitted to the wards of the Mt. Sinai Hospital on July 6th last. His illness began two days previous with fever, chill, etc., and he presented a pneumonic process at the right base and left apex. He was then suffering from a bilobar pneumonia. His condition remained the same until July 9th, when there was flatness at the right base; he was aspirated, in the expectation of finding fluid; but none was found. Two days later he became worse, and a trilobar pneumonia was found, the left lobe being involved. In spite of all his general condition remained relatively good. Respiration was 92, with pulse and other things corresponding. Resolution began on July 13th, and his condition improved rapidly. On the following day there was found a to-and-fro friction murmur at the base. The pulse was irregular and paradoxical. Resolution continued until his general condition improved. The pericardial area soon became smaller, and the temptation to tap the pericardium was resisted. The boy's condition continued to improve until August 6th, when a friction murmur was readily obtained over the base of the heart. The heart became more rapid, and the case looked like a septic one. On August 13th things suddenly changed; there was an increase in the dyspnœa and vomiting occurred; the pulse became irregular, and gradually the dulness increased so that the area became advanced one-half an inch outside the left nipple line. It was decided that the pericardium then should be emptied, and eighteen and one-half ounces of purulent fluid was taken away; the microscope showed this to contain pure cultures of the pneumococcus of Fränkel. The relief was transitory. Next the pericardial sac was opened, and forty fluidounces removed. The patient continued to improve, although there was a consolidation of the left lobe posteriorly. On September 4th the boy was out of bed and was then discharged. The patient was then shown to have had a typical adherent pericarditis; the cardiac area was normal, and there was no murmur. His general condition was good, and the boy was now following his occupation of a district telegraph messenger.

In Dr. Meyer's analysis of five hundred cases of lobar pneumonia, fifty-eight cases were bilateral, of which only twenty-seven per cent. resulted fatally. Pericarditis was a complication in eleven cases; in forty-one cases there was an endocarditis; of these there was a mortality of forty-five per cent. Regarding the patient shown, he said the pericarditis *per se* did not influence his recovery in any way. It was not until one month had passed that the pericarditis developed. The septic condition being of a moderate type was explained probably by its not being due to the streptococcus or the staphylococcus, but to the pneumococcic infection. Although pericardial effusion occurred in pneumonia it did not call for immediate interference. The pneumococcus was the cause of many cases of pericarditis. Regarding pyo-pericarditis, it might occur in pneumonia, osteomyelitis, traumatism, etc. As a rule the attention was called to the occurrence of pericarditis by a to-and-fro murmur; one should bear in mind that this might last but a few hours, and so might often be overlooked; pericarditis with effusion was often present without giving rise to symptoms, even when the effusion was very large. Pyo-pericarditis was not rare. There had been six cases in the Mt. Sinai Hospital, three of which resulted in recovery, and three were fatal; three patients died after aspiration. Aspiration did good in all but one case. In one case one ounce was drawn off; the patient was cured. In the second case two ounces of blood and serum were removed, but the patient died. In another case two ounces was withdrawn; the patient recovered. The fourth case was the one cited; eighteen and one-half ounces was drawn off, and the patient recovered. On the other hand, in some cases aspirated it would have been better to have left them alone. A small needle should be inserted to get the serum for diagnosis. If simply serum was found and the symptoms were not urgent, the case should be let alone; if pus was found, the patient should be handed over to the surgeon. In the patient presented, eighteen and one-half ounces of pus was removed the first day, and forty ounces the next, making fifty-eight and one-half ounces removed, which was an exceedingly large quantity to be taken from a boy of his size. There must be some good indication for aspirating. Skoda said that there were two good rules for entering the pericardial sac: (1) when the sac was distended with a large exudate which showed no tendency to absorb, and the patient was running down; (2) a vital indication was intense dyspnœa.

Dr. Howard Lilienthal's remarks were read by Dr. Manges. On account of the intense dyspnœa, and the boy's bad condition, it was decided to use eucaine as a local anæsthetic. During the operation the boy's attention was drawn away from the work by talking to him. He was not told that an incision was to be made; he thought that he was to be aspirated again. He felt no pain at all. A trap-door was made as suggested by Roberts. It was a triangular one, beginning one-half inch from the sternal border. The hemorrhage was insignificant. A stitch was used to make the wound patent. The pericardium was thick and so rigid that the skin was drawn in instead of the pericardium being drawn out. Irrigation was made with a soft-rubber tube. Six weeks after the operation the patient was discharged. Pyo-pericarditis was a surgical disease, and harm could result only from delay in treating it surgically. Tapping had invariably failed in all cases treated. Eucaine seemed to the author to be the best anæsthetic in these cases. There was danger of infecting the pleural cavity if special care was not taken.

Dr. Lewis A. Connor related a curious and remarkable case which occurred during his service at the Hudson Street Hospital. The man was thirty-five years of age, and came into the hospital in a condition hardly showing a case of pericarditis. The patient went on from bad to worse, and finally his condition became so grave and his state so critical that he was aspirated, and thirty ounces of fluid was removed. The patient was then turned over to Dr. Stimson. He was placed on the operating-table, and a four-per-cent. cocaine solution was used as an anæsthetic. A rib was exsected, and an enormous quantity of pus was discharged, probably sixty or seventy ounces. A slight nick in the left pleura was made, and the operators were surprised to find that the left pleura extended so far to the right. The patient lived for some days afterward, but died of sepsis, which could not be explained by the condition in the pericardium, which was thoroughly and completely drained. There were some obscure and indistinct signs over the chest. The autopsy showed that the pericardium had been doing well, but there was a sacculated empyema of the left pleural cavity which it was difficult to recognize clinically. If the pleura had not been infected the speaker believed the man might have recovered.

Premature Burials.—Dr. H. L. Garrigues read a brief paper on this subject. He said that physicians differed much in their views as to whether burials of living persons were frequent or not, some declaring that they never occurred, and one, who had made a special study of the question, saying that one person out of every two hundred was buried alive. He did not believe that premature burials were very rare—first, because, though graves were so rarely opened, yet it was found in a number of cases that the inmate of the grave had revived in the coffin; second, because there were so many narrow escapes from being buried alive; third, because of the unreliability of the so-called signs of death, with the sole exception of unquestionable putrefaction of vital organs; fourth, because of the absence of proper laws to protect the apparently dead against live burial; fifth, because of the carelessness with which death certificates were signed by physicians. The speaker favored waiting mortuaries, where bodies should be kept under proper supervision till decomposition had begun. He concluded his paper by stating that only authorized practitioners of medicine should decide whether a person was dead or not; that blanks for certificates of death should contain questions in regard to the chief signs of death, and the physician signing the certificate should answer each question with "yes" or "no," besides declaring that he personally had examined the body; that it should be made a crime to do anything to the supposed dead that would cause pain or injury to a living person, before the certificate was signed. As long as nothing of the kind was done, nobody had any guarantee that he would not be buried alive, thrown into a glowing furnace, or be killed by the performers of autopsies, the undertakers with their ice-boxes, or the embalmers with their solutions of arsenic.

Demonstration and Description of Apparatus to Prevent Premature Burial.—M. Emile Camis, of Paris, demonstrated the life-saving apparatus, "le karnice," which was composed of a tube four inches in diameter, resting on the casket, and connected at the other end to a rectangular metallic box containing signals. The metallic box alone was visible above the grave; the other parts were buried in the ground. A metal rod passed through the axis of this tube, its lower end going into the casket and being placed in communication with the signals in the metallic box at its upper end. The part of the rod entering the casket terminated in a ball which was placed one and three-fourths to two inches from the sternum of the interred person. Should a movement of the body in the casket occur the ball was displaced; by the aid of simple mechanism a general simultaneous action took place; the box was opened, and the signals, bell, flag, shining ball were put in motion or were displayed; the sound of the bell was sufficiently sonorous to attract the attention of the cemetery watchman. Also the buried person received air and light, even at night, and his voice was carried through the tube and heard over a large radius.

Election of Officers.—The following officers were elected for the ensuing year: *Chairman*, John H. Huddleston, M.D.; *Secretary*, E. Franklin Smith, M.D.

SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Stated Meeting, December 28, 1899.

Brooks H. Wells, M.D., Chairman.

Imperforate Uterus with a Large Hæmatoma of the Ovary.—Dr. H. J. Garrigues presented a specimen taken from a young girl, twenty years of age, who had never menstruated. She had suffered from epileptic seizures coming not only at the time of the menstrual molimina, but in the intervals. Vaginal examination had revealed a normal vulva and a vagina two inches deep. Above this was a large, round mass, one portion of which was much harder than the rest. On October 25, 1899, he had performed laparotomy. This had revealed a uterus about the normal size and shape, though a little thicker antero-posteriorly than normal. The right ovary was slightly enlarged, and showed a fresh corpus luteum filled with blood. The right tube was normal. The left tube was bound to a cyst nearly filling the pelvis, and adherent to the intestine. He had removed the uterus, and had then extirpated the cyst, which proved to be a hæmatoma containing ten ounces of chocolate-colored bloody fluid. Seventeen days after the operation three pints of old blood, mixed with pus, had been evacuated through the vagina. A sound had passed through an opening in the upper vagina in the direction of the right iliac fossa. The opening had been dilated, and the cavity drained. The patient did not now suffer from the menstrual molimina, but she had had several epileptic seizures during her stay in the hospital. The tubes were found to be lined with normal mucous membrane. There was no evidence of a canal in the uterus. The fact that the uterus was of nearly normal size and shape made the case almost unique. The hæmatoma was an evidence of vicarious menstruation internally which, according to the history, had been going on for about four years.

Dr. P. A. Harris asked what had intervened between the cervix and the depression representing the vagina.

Dr. Garrigues said that he had seen one other solid uterus, but it had not presented the usual shape of a normal uterus. In reply to the question of Dr. Harris he said there had been about half an inch of soft tissue intervening. In two other cases he had succeeded in making a connection between a stenosed vagina and the uterus, and such a procedure would have been indicated here had he not been informed that a competent gynæcologist had already attempted something of the kind. In view of the epileptic seizures and the diminished intelligence of the girl it had seemed to him that laparotomy was justifiable.

A Combined Endoscope and Cystoscope.—Dr. A. H. Goelet said that he had been interested in endoscopy of the uterus for the past two years, but had been unable to accomplish what he had desired because he had been working with reflected light. At present he was using direct light with much better results. An instrument constructed on this principle was exhibited, and its action demonstrated. For more minute inspection, when that was desirable, a magnifying glass was attached. The source of illumination was a tiny electric light. He had found the instrument principally of value in the determination of the necessity for curetting. By such inspection one could decide whether there was an active endometritis present or only a hyperæmia. One could also determine by such examination whether the endometritis was confined to the cervix or implicated the body, and could inspect the orifices of the Fallopian tubes. The complete apparatus cost $30; the lamp could be renewed at a cost of $2, and was guaranteed to last at least thirty consecutive hours. The four dry cells could be replaced at a cost of $1. He had found the magnifying glass a great aid in passing the ureteral catheter.

Dr. Garrigues remarked that it might be possible to introduce the smaller size of this instrument without anæsthesia, but the degree of dilatation required for the other two sizes would certainly demand the employment of an anæsthetic. He was of the opinion that such inspection of the interior of the uterus would prove a valuable aid to the clinician.

A Case of Ectopic Gestation with Unusual Symptoms.—Dr. Ralph Waldo reported the following case: A married woman, twenty-nine years of age, had been admitted to the Lebanon Hospital with the history of having weaned her last child four weeks previously. She had had an excessive bloody flow, which she had taken to be her menses. As it had been profuse she had been curetted, but with no control of the hemorrhage. On admission, she had stated that she had had only very slight abdominal pains. She was very much exsanguinated, and was flowing so freely that a tampon was required. Examination had revealed a mass the size of a hen's egg situated behind the uterus. On November 3d she had been etherized and the uterus curetted, with negative result. The diagnosis of tubal pregnancy had been made in spite of the fact that the tumor was not sensitive, and that there had been severe and persistent uterine hemorrhage. The tumor had been freely movable, and had involved the upper half of the right tube. After an interval of twenty-four hours the bleeding had returned, and on November 27th it had been so profuse as to necessitate tamponade of the uterus to save the patient's life. The following day laparotomy had been done. This had revealed an ectopic gestation in the outer half of the right tube, and a clot protruding from its fimbriated extremity. The tumor had not ruptured. There was a large quantity of blood in the abdominal cavity. The fœtus had not been found, although other products of conception had been present in the tube. The left ovary was three inches in diameter, and was composed of several well-defined cysts. This ovary and its tube had been removed, and the patient had made an uninterrupted recovery. The case was reported because of the absence of tenderness and the profuseness of the hemorrhage.

Dr. H. J. Boldt also presented a specimen of ectopic gestation. It had been taken from a woman who had been seized nine days ago with severe pain in the lower part of the abdomen. From her extreme pallor, the excessive tenderness of the abdomen, and the sensitiveness and fulness in the vaginal cul-de-sac, he had suspected ectopic gestation. The woman also had a complete procidentia of the uterus. She had been kept in the hospital for a few days for observation, but as she had not improved he had opened the cul-de-sac two days ago, and at once a quantity of blood had gushed out. He had then removed the uterus, and had discovered that the impregnated tube had ruptured near its abdominal extremity. The last menstruation was said to have been on time, but he had just learned that the last period had been of only two days' duration, whereas the preceding one had lasted nine days. With this exception the history had been absolutely negative as regards pregnancy.

Intussusception Mistaken for Ectopic Gestation.—Dr. Boldt also presented a specimen from a case which had been supposed to be one of extra-uterine pregnancy. It had been removed from a woman who had been taken ill with severe vomiting She was supposed at that time to be pregnant about six weeks. Albuminuria was present. For the next two or three days there had been a slight rise of temperature, and an increasing and diffused abdominal tenderness. She had stated that she had not menstruated for six weeks, and had had some abdominal pain, during which time there had been a slight bloody discharge —a "spotting." When seen by the speaker the pulse had been small and rapid, and the temperature a little over 100° F. The greatest tenderness had been in the left iliac fossa. On vaginal examination the uterus had been found soft and rather large, and to the left was a large doughy mass filling the cul-de-sac. A few hours later he had opened the abdomen, and had been rather surprised not to find any blood. A peritonitis was present. A portion of the intestine was found in the pelvis, and this was gangrenous for a considerable length. On opening the bowel he had found an intussusception, due to the presence of a polypus which measured seven and one-half by eleven and one-fourth inches. The case was of interest because he had at first made a provisional diagnosis of intussusception, but had changed it after having made a vaginal examination. On looking over the literature of the subject he had found one case reported by Otto Kustner in which menstruation had suddenly ceased in a woman having a retroflexed and adherent uterus. After nine weeks the woman had consulted Kustner, and he had found a sensitive tumor to the left of the uterus. About this time there had been a slight bloody flow for a few days. On auscultation of the abdomen a sound had been heard which had been taken for the placental souffle. Having skipped her third period she had been examined under anæsthesia, and then it had been discovered that the above-mentioned tumor had increased to the size of a gestation at the third month. A diagnosis of ectopic gestation had then been made, and laparotomy had been performed. The operation had revealed, not ectopic gestation, but a sarcoma of the ovary with numerous hemorrhagic infarctions. This woman had previously never missed her menstrual periods.

Dr. P. A. Harris remarked that in two or three cases of ectopic gestation coming under his care there had been an excessive bloody flow, although in addition there had been pain and tenderness.

Dr. Waldo called attention to the fact that in his case the hemorrhage had been so excessive that tamponade of the uterus had been demanded on two occasions as a life-saving measure.

Soft Myoma in a Young Girl; Wrong Diagnosis.—Dr. H. J. Boldt reported the following unusual case occurring in a virgin aged eighteen years. Menstruation had been established only about two years. On examination he had found a freely movable tumor extending nearly up to the umbilicus. Examination under an anæsthetic had failed to show the presence of ovaries. The tumor had presented marked fluctuation. A diagnosis of ovarian cystoma had been made, but on introducing a trocar nothing had been removed. The abdomen had then been opened, and this had revealed an exceedingly soft myoma. The fact that it had occurred in a patient so young was of peculiar interest.

Fibroma of the Ovary.—Dr. A. Brothers said that he had seen at his clinic, last summer, a woman aged forty-seven years, the mother of seven children. She had been well until six years ago, when she had noticed a swelling in the abdomen. This had steadily increased in size. A hard tumor, apparently a fibroid, could be easily mapped out. Seven weeks later she had been admitted to the Post-Graduate Hospital with a pulse of 136, a temperature of 101.8° F., and excessive tenderness of the abdomen. A few days later laparotomy had been done, revealing a tumor separate from the uterus. A considerable quantity of pus had escaped during the effort to remove the tumor. The latter had proved to be a fibroma of the ovary. On account of the suppurative condition present, through drainage had been established by way of the vagina. After the operation the temperature had risen to 104° F. and the pulse to 144. Two days later the dressings had been found soiled with fæces. A few days after this the urine had shown evidences of nephritis, and the patient had become delirious. Suspecting iodoform poisoning, as well as nephritis, the parts were flushed and all iodoform was removed. She had improved steadily after this, but a secondary operation had been required to secure closure of the wound. The pathologist, Dr. Henry T. Brooks, said that he could find no trace of ovarian structure, yet he inclined to the diagnosis of fibroma of the ovary.

Dr. Garrigues said that a number of years ago two large tumors had been brought to him for microscopical examination. They were ovaries, yet there had been no trace of ovarian tissue remaining, the masses having been entirely converted into fibrous tissue.

Dr. Boldt said that a few years ago Dr. F. Ferguson had examined for him a fibroma of the ovary. He had seen one other case in which the appearance had been that of a fibroma, but no microscopical examination had been made. With regard to the case just reported by Dr. Brothers, he would say that the suppuration was due either to a complicating appendicitis or to traumatism. The latter cause was not uncommon when, as in the case under discussion, several students had been allowed to make a pelvic examination.

Imperforate Hymen.—Dr. A. Ernest Gallant presented a specimen of imperforate hymen. A young woman who had been married seven weeks had presented herself because sexual intercourse was impossible. On examination he had found a crescentic hymen with a band at the upper portion, which had constituted the obstruction.

Dr. Brooks H. Wells referred to two cases which he had seen in which there had been a tiny opening through a thick and fleshy hymen.

Dr. P. A. Harris said that about twelve years ago he had operated upon a woman who had been married six years. Sexual intercourse had been impossible because of a very small opening. He had removed portions at a time, and had practised dilatation. She had been very grateful for the relief afforded, and about one year later had been delivered of a child. Subsequently she had expressed her sorrow at having submitted to the operation, because the children were coming so rapidly.

A Second Contribution to the Study of Ulcerative Lesions of the Vulva, Commonly Called Lupus or Esthiomene.—DR. GRACE PECKHAM-MURRAY read a paper with this title. She stated that the case forming the basis of this paper had been first reported upon to the Academy of Medicine in May, 1887. The patient was a woman, forty-eight years of age, who at that time had passed the menopause two years. She had had six children and one miscarriage. In 1879 she had married the second time, her second husband being a Norwegian sailor who had had syphilis. Microscopical examination of the growth about the vulva had been made by Dr. H. C. Coe, at that time the pathologist of the Woman's Hospital, and he had reported evidence only of inflammation of connective tissue. The question had arisen as to whether the ulcerative condition present was non-specific or was the result of tuberculous or syphilitic infection. Dr. Murray said that since her first paper on this subject there had been only five others published. She had succeeded in collecting from the literature only sixty cases of this affection, showing its rarity. Pozzi had given, in his text-book, one of the best descriptions of this disease. In 1889 Dr. J. Nevins Hyde had described these cases under the title "Syphiloma of the Vulva." In 1890 Dr. Robert W. Taylor had presented an article on the same subject, elaborately illustrated. He divided these cases into six classes. One class represented simple ulceration; the other five were various forms of syphilitic ulceration. Dr. Taylor had repudiated the idea of these cases being lupus. All observers agreed concerning the slowness of growth. The speaker said that she believed that the disease might be the result of prolonged irritation. She was not prepared to say that these cases were never lupus, but she believed that this form of ulceration might be tuberculous, syphilitic, or non-specific. In the case reported by her the original intention had been to remove the tissue by operation, but the patient would not consent. There had been only one microscopical examination made, but in view of the fact that a number of cases had been reported in all of which the microscopical appearances had been the same, she had not thought it necessary to have the examination repeated.

DR. J. H. EMERSON said that he had seen an almost identical case, and had had it examined by a pathologist, with like result. In that case the history had been one of alternate healing and breaking down. After a long course of antisyphilitic treatment without benefit, she had been sent to St. Luke's Hospital, and Dr. B. Farquhar Curtis had done an extensive resection, but the patient had not remained in the hospital long enough to secure proper healing.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, December 26, 1899.

GEORGE B. FOWLER, M.D., PRESIDENT.

Successful Removal of a Large Encephalocele from a Child.—DR. A. PALMER DUDLEY reported a case of hydrencephalocele which had been admitted to the Harlem Hospital on October 17, 1899, and had been operated upon by him when the child was only six days old. The child was the seventh born to its parents, and all of the previous children and all of the confinements had been normal. According to the history, the mother had suffered severely from nausea during her pregnancy, and had been in labor for two days, and had then been delivered by a midwife. On admission, the child's temperature had been 99° F., the pulse 120, and the respirations 26. The child had a microcephalic head and was poorly nourished. There was general skeletal evidence of rickets. About one inch below the posterior fontanelle was a distinct pedicle which supported a large hernial tumor. This tumor was translucent except at its neck, and the fundus of the sac was about on a level with the middle dorsal region of the spine. The anterior and posterior fontanelles were large, the sutures of the skull were separated, and all of the bones of the cranium were poorly ossified. At a point just above the external occipital protuberance was an opening through which protruded the encephalocele. The tumor gave no impulse on coughing, but was fluctuating and irreducible. The longest diameter of the tumor was nine inches, the transverse five inches, and the diameter of the opening in the occipital bone one and a half inches. There were no special constitutional symptoms, and absolutely no cerebral or localizing symptoms. On October 21st he had done a complete amputation of the hernial sac and its contents without anæsthesia of any kind. A ligature of catgut was applied around the pedicle and slowly tightened. During this process there were general contractions of the muscles of the left half of the body. Two flaps of good size were dissected up. Over two pints of a straw-colored fluid were evacuated on making an incision. The ligature at this time had slipped, and had been removed entirely. There had been but little hemorrhage in spite of this accident. The cerebral hernia had then been divided at its neck, thus completing the amputation. No vessel had required ligature. The child had seemed to suffer no pain during the operation, and had certainly made no outcry. Very little shock had followed the operation, and during the next nine days the temperature had remained at about 100° F., and the pulse between 100 and 124. Slight suppuration had occurred about the stitches, and the latter had been removed on the ninth day. On the evening of that day the temperature had fallen to 96° F., and there had been slight convulsions on the right side of the body and face. There had also been some spastic rigidity. During the next twenty-nine days the temperature had been remittent. On the fortieth day the temperature had fallen to the normal point, and had remained there since that time. The stump had healed well, but there had been no ossification about the hernial opening. The child had taken nourishment well. Ophthalmoscopical examination showed the vessels of the retina to be apparently normal. The pupils did not react to light. The speaker said that, of seventy-nine recorded cases, in fifty-three the opening had been in the occipital bone. In six instances the subject had reached adult life; the others had died in early childhood. The case reported was not a simple meningocele or a simple encepholocele, but a hydrencephalocele. He had removed 57 gm., or nearly two ounces, of brain substance at the operation. Microscopical examination showed the portion removed to be brain tissue, but the pathologist was unable to locate the part. Both child and specimen were exhibited.

DR. WILLIAM M. LESZYNSKY said that it was a question in his mind whether such an operation was justifiable save for cosmetic purposes. The very fact that 57 gm. of brain substance had been removed showed how dismal must be the outlook for this child; even if the baby should live for some time it was not likely that it would be able to see—indeed, the lack of pupillary reaction pointed strongly in that direction.

Acquired Non-Malignant Stricture of the Rectum.—DR. W. DUFF BULLARD read a paper with this title (see page 47).

Dr. Otto Kiliani said that at first one might be surprised at the statement that the majority of rectal strictures were of syphilitic origin, but those who saw many cases of rectal disease knew this to be a fact. When a stricture assumed the form of a complete ring it was not uncommon to find two or three other such rings situated a short distance apart. When the ulceration was severe and obstinate to treatment he would favor an early resort to inguinal colostomy. Proctotomy would not be sufficient in all cases; sometimes extirpation would alone meet the indications.

Dr. James P. Tuttle expressed his great surprise at the statement that syphilis was only a predisposing factor of rectal stricture. Of course, a man with syphilis might have a benign stricture of the rectum, or even a stricture in which tubercle bacilli were present, but this did not prove the stricture to be tuberculous. Tuberculosis of the rectum rarely manifested itself by such an amount of infiltration as one would expect would be necessary to cause rectal stricture. If both traumatic and non-traumatic strictures were considered, he would say that it was perfectly true that a majority of rectal strictures were non-malignant; but if only pathological strictures of the rectum were under consideration, then he would assert that fully sixty-six per cent. were due to syphilis. In a case of traumatic or simple inflammatory stricture the microscope showed an increase of fibrin and fibrous tissue with little cell increase, and no characteristic change in the blood-vessels. Before one could say positively that a stricture was syphilitic or non-syphilitic, the tissue must be subjected to careful microscopical examination. Ulceration and cellular infiltration, or fibrous cicatrization, were the essential elements in the production of rectal stricture. Pathology had certainly demonstrated the characteristic differences between syphilitic and simple inflammatory stricture. Regarding the treatment he would say that he had been deeply disappointed with the operation of posterior proctotomy because these strictures persistently returned. For a well-formed stricture of the rectum he knew of only one method of cure, and that was extirpation. Dilatation came next in importance. He had never seen a case of posterior proctotomy in which the stricture had not returned in time. After much study and experiment on the cadaver he had become firmly convinced that it was impossible to introduce the Kelly tube into the descending colon.

Dr. Frederick Kammerer said that his personal experience had been that he had never seen a well-developed rectal stricture that was not syphilitic. Of course, by a "stricture" he meant a narrowing of the rectum sufficient to give rise to symptoms. He had occasionally obtained a good result from posterior proctotomy, being able to keep it in abeyance by dilatation. Resection of a large stricture of the rectum was an operation of much difficulty and danger, and therefore he would favor posterior proctotomy as a first resort. Resection of the stricture itself was also sometimes followed by stricture.

Dr. Tuttle explained that he would not recommend resection of the rectum except in cases that did not prove amenable to milder measures.

Dr. Palmer Heath Lyon recalled a well-developed stricture of the rectum seen recently in a patient upon whom a homœopathic practitioner had endeavored to operate for the relief of hemorrhoids by injecting them with carbolic acid. In this case there had been no evidence of the stricture being other than of traumatic origin.

Dr. Bullard, in closing, said that he was not yet convinced that syphilis was the cause of rectal stricture; to his mind, adequate microscopical proof had not yet been presented. No case had yet been reported in which there had been degeneration of the embryonic nucleus, which was essential in a syphilitic gummous formation. If some rectal strictures were due to gumma, then it should be possible for pathologists occasionally to find these gummata.

Opinion of Legal Counsel on the Case of Drs. Purdy and Maier.—Robert C. Taylor, Esq., counsel for the society, having been asked for his opinion on the recent arrest of Dr. Harry R. Purdy and Dr. Otto Maier, and as to the best means of preventing such outrages in the future, replied that it was his opinion that the police captain had acted entirely without regard to the law, and that these physicians had a right to bring a civil suit against Police Captain Delaney. Regarding the circumstances of the arrest, the statement was made that physicians were not specially liable to unjust arrest, as witness, for example, the frequent arrests of drivers and motormen in connection with accidents occurring in the streets, such arrests being made entirely without warrant. In the judgment of counsel the trouble was not with the law, but with those who administer the law in this city, and consequently the remedy was not to be found in amending the present law. Instead he would recommend that a formal communication be addressed to the police department, setting forth the circumstances of the case under discussion. This might result in a general order to the police captains regarding the future conduct of cases of this kind.

As a committee had been appointed by the New York County Medical Association to consider this same case, a joint meeting of the two committees had been held. Dr. John Blake White, of the latter committee, sent a communication stating that the committee had agreed to recommend the following resolution:

"*Resolved*, That it is the sense of the committee that a vigorous protest be sent to the various medical societies of Greater New York, to the commissioners of police, and to the board of coroners, condemning the unlawful arrest of Drs. Purdy and Maier, two physicians of reputation and standing in the community, and requesting the board of police to instruct the police captains to exercise greater care in the future where reputable physicians are concerned, before making arrests."

Action Taken.—On the recommendation of the comitia minora the society voted to send a communication to the board of police, requesting that more care be exercised in arresting physicians on suspicion only.

STATE CARE OF CONSUMPTIVE POOR.

Hearing before a Committee of the State Board of Charities, at a Meeting Held in New York, December 13, 1899.

Dr. George G. Wheelock: I believe in the establishment of a State sanatorium intended exclusively for incipient cases. This should be located, I believe, preferably in the Adirondacks, where perhaps the State could allow a portion of the forest reserve for the purpose. I say in the Adirondacks by preference, because there is in the State nowhere else a similar expanse of nearly continuous forest growth, with but little cultivated soil, located in pretty high altitudes; and experience also has shown, gathered from the highest medical authorities, that up to the present time patients coming from a residence for cure in the Adirondacks have shown better conditions of improvement and restoration than those in a similar stage of the disease coming from other climatic resorts. The question of distance is not a vital one, inasmuch as all patients should be expected to remain at least six months; and a single trip of a few hours more or less only would have to be considered. Moreover, not all places in the State are as far removed as is New York City from the Adirondack Mountains. If our purpose is to cure and not merely relieve, the best climate should be found for the purpose. As to the outlay called for, I believe not less than $200,000 should be asked for, as was contemplated in the bill of last year. It would be a mistake to begin with an inadequate appropriation.

In this connection the subject of the Farm Colony should be considered, as the criticism of that plan will help to emphasize the reasons for selecting the Adirondacks in preference to the Catskills, or even Liberty, in Sullivan County. The Farm Colony can hardly be compared with the Craig Colony, for in the latter employment is the means of promoting a cure, while with tuberculous patients nearly absolute rest in fresh air is the prime requisite. Reduction of temperature and arrest of tuberculous processes have been found after many trials to be impeded rather than aided by manual labor; hence the occupation of a spot where there is arable land is not a necessity, and the less arable land there is about—as in the Adirondacks—the better is the atmosphere for curative purposes.

If as a means of keeping the family together the Farm Colony is proposed, it would certainly seem wiser not to advocate it for several reasons, viz.: (1) The family members are nearly if not quite as much in contact with the patient as in their city home; hence infection, which we seek to avoid. (2) The State would hardly be likely to pay for the support of a family as well as the patient, and we have seen that work such as would support a family is bad for the process of cure. (3) If the family are kept together it increases the chances of the birth of feeble children, who, in turn, will perhaps become victims.

As to location, I may say that the late Dr. Loomis, who originated the sanatorium at Liberty—himself a victim to the disease—always went for his own cure to the Adirondacks.

I think the suggestion a wise one to urge the building of hospitals for advanced cases near the cities, where tuberculous patients may die comfortably, remembering also that as the disease advances the dangers of infection of those in the immediate vicinity increase rapidly; and hence, for the comfort of the dying as well as the preservation and protection of the family, the patient's removal from home is desirable, and we know that few private hospitals will receive him—hence the need of public institutions. Having arrived at the above conclusions myself, and being anxious lest they were not fully established, I saw my friend Dr. Trudeau a few days since, whose experience and faithful care of tuberculous patients are surpassed by no one in this country, and whose patient and intelligent study of the disease over a period of years has brought wisdom. We went fully into the above topics, and I am happy to say that he confirmed in every particular the views which I have expressed.

EDWARD T. DEVINE, general secretary of the Charity Organization Society: Three distinct but not incompatible methods of fighting tuberculosis are advocated: First, more strict dietetic and therapeutic treatment of individual patients in their own homes, accompanied by educational work to prevent such contagion as can be prevented by reasonable care on the part of the patient. Second, the isolation of advanced cases, which are, of course, the most dangerous as centres of infection, the object of such isolation being merely to insure better care for destitute patients at the end of their lives and the elimination of contagion. Third, the isolation and curative treatment of incipient cases.

There is entire agreement about the first two methods. It has been demonstrated that many cases of tuberculosis are cured in their own homes, even in cities, and there has been great advance in the possibility of diagnosing consumption in its early stages. Aside from increased vigilance in the medical profession in the treatment of individual cases, what remains to be done is the circulation of suggestions and information through printed leaflets, public addresses, instruction in schools, and advice given by church and charity visitors.

The plan of isolation hospitals for advanced cases meets with equally unanimous indorsement. In New York City Seton Hospital and the wards recently set apart in the almshouse hospital are achievements already secured in this direction, and the prospective removal of insane patients from Blackwell's Island will give increased opportunities of which the department of charities will doubtless be quick to take advantage. If these facilities are not sufficient, and if it becomes necessary, the Henry law authorizes the city to arrange for an isolation hospital outside the city limits. Increased facilities for caring for such patients are still imperatively needed, but the indications are that the rapid progress of the past year or two will be continued until there is something like an adequate provision for the need. It is only when the plan of caring for incipient cases by a State institution is proposed that there arises difference of opinion, and this on close examination is found to be a difference of emphasis rather than of principle.

A State sanatorium for incipient cases is urgently needed in addition to all that can be done by local isolation hospitals and by improved treatment of patients in their own homes. It is needed, first, because it will cure a large number of patients who cannot be cured at home, and whom it is a disgrace to the community to leave until they are fit subjects for the isolation hospital. In the sanatorium proper diet, favorable climatic conditions, the absence of severe physical labor can all be secured, and incidentally the patient can be taught lessons which will be useful to him, to his family, and to his neighbors. The saving of lives in this way has a direct money value to the State, as is recognized by our attempts to prevent murder, to protect from fire and other public calamities, and by ample precedents in other directions. If nothing else could be said for the State sanatorium than that it would save annually a dozen lives by curing consumption in its early stages, this would be ample justification for the proposed expenditure. This is especially true since its object is not to prolong the lives of those who have at best a few months to linger, but in many instances those who are young and strong and who on being cured of their incipient disease may live long and useful lives.

Second: Of all the objects which the State may legitimately pursue, none is more clearly justified than the safeguarding of the public health from contagion and from such diseases as are due to social causes rather than to the neglect or misfortune of the individual. This is recognized in the efforts made in every progressive community to secure a pure and healthful water supply. The resident of the country may perhaps dig a well and secure water for his own family without either the consent or the aid of his neighbors. Residents of cities and towns, however, are entirely dependent upon the conclusions which may be reached and the action which may be taken by the community as a whole. If the water supply is tainted or defective he has no recourse within himself.

Even those who are the most extreme opponents of paternalism and the most earnest advocates of sturdy individualism concede that there are numerous duties thus devolved on the State or its political subdivisions, and that among these the protection of the public health from dangers which lie in social conditions is perhaps the foremost of all. It becomes, therefore, a question whether there is especial danger from consumption marking it out as a disease which should be attacked vigorously and by every means at the command of society. The facts that have been brought out in regard to this by the vital statistics, by the discussions in medical periodicals and in medical societies, and by the experience of those who work in public and private charities, are perfectly clear and are admitted on all sides to be appalling. It is not necessary to enumerate them. Tuberculosis claims so large a number of victims relatively to other diseases that it stands without rival as the great scourge of mankind. It is in its incipient stage curable; it is in all stages communicable. The duty of the State, therefore, to expend large sums if necessary, and certainly to expend the moderate sum contemplated for the establishment of one State sanatorium stands out more and more clearly the more the subject is examined. Its victims are by no means the poor alone. That it has claimed one member of the State board of charities since the present investigation was begun, and that in every discussion of the subject, even in the smallest group, it is necessary to use discretion on account of the sensitive feelings of those whose immediate kindred already bear its mark, are a sufficient indication of its universal and as yet unchecked way. Yet it is to a large extent preventable, and awaits only aggressive, intelligent, and courageous action. Half-hearted measures will not suffice. There are no such poverty-stricken condition of the State and no such rival claims upon its resources as will excuse our dallying with the problem. One need not be a socialist to favor State action in matters of this kind, while the fear of being charged with paternalism in the face of an obvious public duty is as absurd as would be the charge of militarism if the nation were to expend money for coast defences in the face of an actually impending invasion. The State sanatorium would not merely save some lives and restore to life and activity a certain number of human beings each year. It would also be an experimental station in which our knowledge of how to treat the disease would be constantly advanced, and which would be a constant source of inspiration and information to the great body of the medical profession, on which we must, of course, chiefly rely. It is only by limiting in this way the various complications which are always present when patients are living at home, and especially when they are engaged in their ordinary occupations, that the disease can be closely observed and the effects of different kinds of treatment can be positively ascertained.

Private sanatoria are excellent in their way, but they are for the rich or for the limited few for whom private assistance is forthcoming. Not all of the remainder who should be treated can be induced to give up their work and to be absent from their homes for the period necessary to secure results in a sanatorium, but throughout the State there are many who would be able to make special arrangements of this kind and who could be persuaded to do it when they realized that their lives are at stake. Even the hard-working mechanic who has a family to support will often be able, by the help of relatives and friends it may be, to leave his family for six months, and he can be persuaded to make the necessary sacrifices to do this if he realizes that the present temporary absence may mean, and possibly will mean, that he can continue to support his family for many years and to bring up his children, whereas if he does not have this opportunity they will be left within a year or two entirely dependent and without their natural support. Of course, not all can do this. Otherwise the problem would be unmanageable. By caring for the limited number who could be received under conditions favorable for good results we shall benefit not merely them but the communities in which they live, and this would be done not merely by restoring them to lives of usefulness, but by preventing the development of an advanced case of tuberculosis with all its dangers.

The question remains where the State shall draw the line. The only answer to this is that there is no absolute dividing line between what the State should and should not undertake in the protection of the public health, but that the question must always be one of expediency, in which the conclusions will be reached by balancing in a rough way the cost of prevention and the cost of failure to act. So far as tuberculosis is concerned the cost of acting is reduced by the fact that in the Adirondack preserves, and possibly also in other sections, the State has a valuable working capital already in its possession. There is some dispute as to whether an unfavorable climate or the proximity of cultivated land, or the presence of large numbers of cattle, is chiefly responsible for the presence of tuberculosis in districts where population is congested. Whichever view is correct, we are remarkably favored in that the Adirondack region has a suitable climate if there is such a thing, has a large uncultivated tract which many believe to be an especially valuable consideration, and it is a community in which it is easy to take any necessary precautions regarding contagion, from the small number of cattle necessary to supply the needs of its limited population. Other States with far less taxable property have not found the expenditure for a sanitarium burdensome. With our advantages in the particulars mentioned the burden would be still lighter upon us. On the other hand there is no State in which the frightful cost of failure to act is as great as here. With crowded populations at both ends of the State and with the great majority of our population living in cities, with our supply of fresh milk necessarily coming from at least three States, and with the meat supply of most of our population coming from many States, there are some phases of the problem with which it is especially difficult for us to deal. It becomes the more important that we shall adopt such measures as lie within our power.

Citizens of the State as taxpayers naturally look to the State board of charities to sound a warning note against extravagance or abuses of any kind in the State charitable institutions. To act in such ways as a watchdog of the public treasury is an exceedingly useful service which will always be appreciated. On the other hand, it is quite as important that the State board of charities shall carefully consider the public needs of the State, and shall sound a note of warning when the State is neglecting or omitting to do what the public interests require. This may require greater courage, but it is a kind of leadership which will in the long run be appreciated by the citizens of the State quite as much as protection against extravagance. Justifiable expenditure for a necessary purpose is not extravagance, and a responsible board to which the public looks for leadership should no more be frightened by a false and misleading cry of extravagance than by the equally false and misleading charge of a tendency toward paternalism. Those who are interested in the welfare of the poor, and who believe that the State is neither extravagant nor unduly paternal when it takes reasonable precautions to ward off from them their most insidious and dangerous foe, look now to the State board of charities for aid and encouragement in the establishment of a State sanatorium for incipient cases of tuberculosis.

Dr. Alfred Meyer: The answer to the question, Shall or shall not the State lend its aid to the consumptive poor by the erection of properly located and properly equipped sanatoria? will depend, in my judgment, upon the answers given to three cognate questions: (1) Is it or is it not better for the consumptive poor to remove them from their unsanitary surroundings and to place them under medical supervision with attention to all the details of hygienic living? In other words, do they or do they not have a greater chance of recovery in the country under continuous medical supervision, than in the crowded centres with an occasional visit from their lodge physician, a visit to the dispensary or to the hospital? This is a distinctly medical question. (2) Is there or is there not some constitutional objection to State aid in New York? This is a distinctly legal question. (3) Is it or is it not expedient for the State to exercise this right, if permitted so to do by the constitution? This is a distinctly sociological question.

Unless we say that American consumption differs from the consumption of other nations, the first question must, I believe, be answered in the affirmative, because of the accumulated experience of medical men the world over. For, whatever difference of opinion there may be upon the question of the relative value of altitudes, the relative value of dryness and moisture, and of other meteorological conditions, there is general agreement upon the need in these cases of abundant fresh air and light, and good food, and intelligent supervision, and the greater probability of recovery if these conditions are fulfilled. It is the sifting down of the treatment to these primordial hygienic principles that has shown us why our efforts in the great population centres are so futile; but, though the road we should follow has been clearly pointed out to us, it is only the well-to-do citizen who can follow it. It will not do to answer, as some have done, that patients sometimes get well under bad surroundings, while they continue at work and have only occasional medical advice. You might as well say there is no need of guard rails in front of a trolley-car because occasionally a citizen escapes being hit and run over by the exercise of unusual agility; or, to make a more distinctly medical comparison, that there is no need of disinfecting the dejecta of typhoid-fever patients because at times this wise precaution is neglected with impunity. Though exceptions have their value in teaching us lessons and in enlarging our views, they should not be mistaken for the rule or blind us to the fact that they are exceptions. Nor is it just to characterize those interested in this movement as dreamers—though to be called such is not always a reproach, for often the dreams of one age are the facts of the next. But it is not dreaming to accept the teachings of science; it is not dreaming to accept the evidence of the post-mortem table that pulmonary tuberculosis is a curable disease; it is not dreaming to listen to the testimony of medical men of every country as to the essentials of treatment; it is not dreaming when modern civilized communities devise methods for alleviating the suffering and disease of the unfortunate in their midst; nor is it dreaming to say that pulmonary tuberculosis is by all odds the greatest scourge with which we have to deal. We are not holding out for ourselves any false hopes; we know that man is born to die, and that he will continue to die whether we have a State sanatorium or not; but we feel that we are awake when we are trying to make practical application of the things that have been learned in the last fifty years—that we are awake, yes, wide awake, when, in the language of one who has advocated this movement, we wish to care for the patient in the right place, at the right time, until he is cured, rather than in the wrong place, at the wrong time, until he is dead.

With reference to the legal aspect of the question I believe no objection has been raised against the State sanatorium. Neither in the Senate nor in the Assembly did any of the numerous members of the legal profession in those bodies assail the bill on account of its supposed unconstitutionality.

With reference to the third question, the expediency of this measure, I believe, after what has been said, that this must also be answered in the affirmative. Or should the great and wealthy State of New York hesitate because it involves the expenditure of a paltry $200,000? What are $200,000 compared to the untold advantages of suffering alleviated and of lives saved to the State? It almost seems sacrilegious to figure in money value the dead who might have been saved to the State during the past year. And yet, in view of the fact that reasons of economy prevented the success of this measure last winter, I may be pardoned for making this calculation. So far as I know, the only clew as to how high the State of New York values the life of a citizen is the statute now repealed permitting the heirs of a citizen dead by violence to sue for $5,000. Now if only one out of every fourteen of the fourteen thousand consumptives who died last year had been saved, the sum total measured by this standard would have represented a saving to the State of $5,000,000.

With reference to the expediency of such a movement as this, we must also be guided by the stand taken toward it by medical societies and by private philanthropic and charitable organizations. So far as I know, there has not been any opposition on the part of any organized body of men or women, lay or professional. On the other hand, the movement has been indorsed by the New York State Medical Society and by the Section on General Medicine of the New York Academy of Medicine. This was done at a meeting of the section held at the Academy on October 17th last. The interest in this matter was shown by an attendance larger than that on any other evening in the past three years; a number of medical men from neighboring States expressed themselves favorably upon this movement, and the resolutions adopted were practically an indorsement of the Massachusetts State Hospital for Tuberculosis, the first of its kind to be opened in this country, and an indorsement of the movement for a similar institution in this State. In all candor I must add that the full Academy has not as yet passed judgment in the matter—the resolution will not come up for action until next week.[1]

With reference to the expediency of this movement, one other objection must be answered. There seems to be a fear that the opening of a State sanatorium for tuberculosis will encourage the opening of State institutions for a multiplicity of diseases. The question is asked, Why not a State hospital for cancer? And if not, why not? I should answer that every bridge will be crossed when it is reached—that the intelligent public opinion of this State will settle each question as it arises, on its merits and intelligently; and that not until it is made clear that cancer is as prevalent among the poor as tuberculosis, that provisions for its care are as inadequate as they are for tuberculosis, and that cancer is as much a menace to the healthy citizen as cases of tuberculosis—not until then will there be that intelligent sentiment behind the demand for its State care that there is to-day for the State care of tuberculosis.

DR. S. A. KNOPF: As to the danger arising from tuberculous patients there seems to be a general idea that the more advanced and hopeless cases are a greater danger to the community than the early ones. This assumption is a mistake. The advanced hopeless or even helpless case is confined to his room, and the danger of infection is limited to his immediate environments. On the other hand, the tuberculous patient who is still able to be up and about, and who often pursues his daily occupation, has an opportunity to expectorate anywhere, and thus propagate the disease to a greater extent than his brother consumptive confined to his bed. From this it is evident that the need of institutions for incipient cases is as important as for advanced ones. While we may congratulate ourselves on the willingness of the State to create one institution for either incipient cases or advanced, let us hope that through a combination of State and private charity we will soon have a sufficient number of institutions of both kinds; for only through such methods can we hope to cope successfully with the tuberculosis problem. That the expense of maintaining a patient in a sanatorium is not any greater than in a general hospital, may be seen by the following figures: The daily cost of a patient in the general hospitals of New York under the direction of the commissioners of charities is $1.16. In the Adirondack cottage sanatorium it is $1.

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[1] Since this was written the Academy of Medicine, at a general meeting held December 21, 1899, adopted resolutions favoring the establishment of both State and municipal sanatoria.

DR. VAN FLEET: The Adirondack bill of last year was very strongly urged by our committee, and especially by our representative in Albany, Dr. Root, who did nearly all the work. All physicians recognize the necessity of some sanatorium of this kind. The objections to the bill of last year were, first, the item of expense, and, second, that it dealt only with incipient cases. Speaking as an individual, this matter presents itself to me in a different form than it seems to present itself to others. The State should not go into the establishment of a sanatorium through any philanthropic motive. The only justifiable reason for the State would be that of self-protection. If the State is going to all this expense for a few, it is unjustifiable. But if it is going into this matter for the treatment and isolation of all cases, in order to prevent the spread of this dreadful disease as a matter of self-protection, then the State has no right to stop at the question of expenditure. The cost of doing is only to be compared to the cost of not doing. The choice of the Adirondacks for the site of the sanatorium is a very good one. The Henry bill allows cities to establish sanatoria outside their municipal limits. This should not be, as you cannot go outside the limit of one municipal corporation without coming into the limit of some other municipal corporation. [This statement was corrected by the chairman.] The object of the Henry bill was that a certain menace to property values in Spuyten Duyvel might be removed. The State has a vast tract of land in the Adirondacks, where a sanatorium could not injure anybody. This seems to me a very strong point. Another objection is a purely sentimental one. If the State goes into this thing for self-protection, it has the right to demand that all these cases be reported for the protection of the rest of its citizens. They ought to be obliged to go to the sanatorium, and be taken away from the crowded sections of our towns and cities. I am heartily in favor of a measure of this kind, and the institution should be situated so that it cannot interfere with the rights of others.

There was no work for our committee to do after the adjournment of the legislature. The matter will come up again at the next meeting.

Tinnitus Aurium is regarded by Robin and Mendel (*Memorabilien*, July, 1899) as due to direct or reflex irritation of the auditory nerve. For its relief they recommend the fluid extract of cimifuga racemosa; gtt. xxx. pro die being a moderate dose. According to the observation of these authors, this drug has a sedative effect upon the aural circulation as well as upon the auditory nerve.

Correspondence.

LETTER FROM NAPLES.

(From our Special Correspondent.)

THE UNIVERSITY OF NAPLES MEDICAL SCHOOL—HOSPITAL INTERNES—NEED OF TRAINED NURSES.

NAPLES, December 18, 1890.

A MEDICAL degree is conferred by the University at Naples after six years of study. The first year physics, chemistry, and descriptive anatomy are the only obligatory subjects. The course for the second year comprises zoölogy, botany, and comparative, physiological, and descriptive anatomy. In the third year human, descriptive, and preparatory (much like our regional) anatomy, human physiology, and general pathology are studied. The remaining three years are given over to clinics, with therapeutics, hygiene, and special pathology in addition.

The clinical material here is, of course, immense, and the students have many more opportunities for practical work in surgery than is possible with us. One of the reasons for this is that there are no trained nurses, and the student does the work of the nurses and assists at the operations constantly.

There are two thousand men now taking the medical course. Women are admitted on equal terms, but few have availed themselves of the opportunities, eight only having taken degrees here, and these are nearly all Russians. At the end of six years the men are considered qualified for hospital positions, which are given to those considered by their friends to be most fit. Their positions correspond to nothing in America, for the doctors have their offices outside and attend to any private practice. A certain number of men are chosen for each division, not necessarily from the graduating class. Some may have been physicians for one or two years, and each one remains in the hospital a given night during the week. Most of the men are about during the day for a few hours, when operations are to be done by their chief, and they have most of the minor operations to perform. Many major ones also fall to their lot.

Surgery is apparently much more advanced than medicine, their methods in this branch being those of the best German and English schools.

Morisini and Spinelli are perhaps the leading surgeons in gynæcology among the older men. Very little work is done here on malaria, all of the best-known men being in Rome. In fact, there is absolutely nothing in Naples for American students. Nursing is only a name, the work being done mostly by a very low class of servants, who have no training whatever, and by the Sisters of Charity. This is true of all hospitals except a few small wards at the "Gesù e Maria," where Miss Baxter, a young woman who took her course at Johns Hopkins, has established a small training-school (during the three years of its existence eleven nurses have been graduated), and these little wards show plainly enough the traces of her splendid efforts.

DISCOURAGING EXPERIENCE OF A PUBLIC-SPIRITED CITIZEN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The MEDICAL RECORD is eminently qualified and ever prompt in challenging the rights and upholding the dignity of the profession, as was so recently illustrated by its able editorial of November 4, 1899, "An Unpardonable Indignity," defending Drs. Purdy and Maier. Your strong protest against such a flagrant outrage certainly meets with the approbation of every honorable member of our noble profession. As evidence of this, witness the manner and spirit with which the leaders of the profession came to the rescue, as revealed in your correspondence column of your issue of December 16, 1899.

It is only by concert of action we may hope to enact and enforce laws to protect us from dangers within and without the profession. To illustrate, I am here prompted to report my very recent experience in a case in which I attempted, in a legal way, to enforce the law that bears on empiricism in Kentucky, to wit:

Last May, by the advice of the county attorney, I had a warrant issued for the arrest of a man for violating the law and he was released on his own recognizance until the time of trial, which was made a commonwealth case. The first trial resulted in a hung jury, although ten of the jury voted for fining the accused. On the second trial he was acquitted, as a result of the testimony of three of the local physicians, one of whom, strange to say, is on the county board of health, who testified in favor of this notorious quack.

This would have ended the matter had not one of the above physicians inspired him to bring suit against me for malicious prosecution. The man admitted on the witness stand that he had been in communication with one of these three physicians, and further admitted that if I had any malice toward him he was not aware of it.

My attorneys motioned for peremptory instruction by the judge for the jury to dismiss the case on the plaintiff's own testimony, and absolute failure to show malice. However, the case was allowed to go to the jury, who flagrantly disregarded the plain law and evidence, and rendered a verdict for $500 in favor of plaintiff. Of course I will appeal. MEDICUS.

Medical Items.

Pectoriloquy. — Pectoriloquy — so named by Laennec, its discoverer—is a complete transmission of the voice to the ear. The words spoken are heard distinctly articulated. It closely resembles the resonance heard over the larynx, and is usually limited to a small space in the chest, where it also may or may not have a hollow, ringing character. It was formerly believed always to indicate the presence of a pulmonary cavity, but auscultators are now agreed that this is not necessarily the case in every instance, but that it is sometimes simply an exaggerated bronchophony; the only distinction between these two being that bronchophony is the transmission of the voice, pectoriloquy that of the speech. Well-defined pectoriloquy is not a common phenomenon.—LOOMIS: "Lessons in Physical Diagnosis."

Quinine Making in Bengal.—Major Prains' interesting report for 1898-99 has recently been published. The total number of living plants in stock amounts to considerably over two millions. The out-turn of the factory was 10,335 pounds of sulphate of quinine and 3,921 pounds of cinchona febrifuge. This large amount is absorbed in the issues to the medical store depots at Calcutta and Mian Mur and to the Alipur jail, for manufacture into "pice packets" for sale through the post-offices. Another large amount was sold to hospitals and dispensaries and to the public. There appears to be no quinine exported to other countries.—*Indian Medical Gazette.*

Why Quackery Succeeds.—In concluding an address upon ancient and modern quackery, Dr. Eden says in *The Lancet*, November 18th: "In the earlier days it was inevitable that such primitive methods as were then known should often fail, but it is a reproach to us that with all our boasted scientific progress the practice of the healing art, except in the domain of surgery, is making such scanty advancement. We are all so keen on scientific problems that we are apt to lose sight of the fact that in the eyes of our patients our value mainly depends upon the amount of relief which we are able to bring them. What they expect from us is not an elaborate diagnosis or a learned discourse on their disorder, but simply something that will do them good. One of the most accomplished physicians whom I have ever known took little or no interest in his patients between the stage of clinical diagnosis and that of post-mortem examination. That is the kind of medical attendant from whom people flee to find refuge in a quack. I take it that our duty is to spare no pains and leave no method untried which promises to be useful in combating disease, for we shall be ultimately judged, not by our academic distinctions or our contributions to science, but by the measure of success we have attained in discharging the task which society has committed to us—namely, the relief or mitigation of suffering and the preservation of health."

Appendicitis Said to be Caused by the Habit of Crossing the Legs.—A foreign surgeon has put forward the suggestion that appendicitis is caused by the habit of crossing the legs, which restricts the action of the digestive apparatus. The appendix is only loosely attached to the cæcum, and there is always some half-digested food in the cæcal bag. By crossing the legs there is liability that the undigested food may pass into the vermiform appendix and set up inflammation; in a few hours pathological processes set in, and an attack of appendicitis is developed.—*Scientific American.*

Fortune Making by Hypnotism.—Occult influence as a road to wealth may appeal to many people as being a fantastic notion born of a wild freak of the imagination (writes a well-known English lawyer), but I can tell you that in recent years various sciences bordering more or less on the occult have played an all-important part in many a stirring but unrecorded legal drama, and that mysterious agencies are much more resorted to in order to gain the ends of unscrupulous persons than the public is aware of. One instance I have in my mind among others was that of a retired business man whose will I proved not long ago, and among the bequests was one to his medical attendant for £5,000 ($25,000), a larger sum than had been left to any of the testator's own family. It would be too long a story to go into all the remarkable facts of this case, but for months previously the doctor and the patient were continually together. The doctor had something of an uncanny reputation as being a believer and dabbler in occult science, and under his tuition the man of business soon became a convert and consented to various hypnotic experiments being tried upon him, with a view to the benefit of his health. His sudden death came as a great shock to his relatives, but they experienced another shock when they found that the doctor had been made executor and chief legatee of his will.

Escape of Cerebro-Spinal Fluid from the Ear after Injury.—That the cerebro-spinal fluid can escape from the cranium in cases of injury has been known for some time. As early as the year 1727, Stalpartius van der Wiel published a case in which large quantities of a thin, clear, watery fluid had escaped from the ear for several days after a severe injury to the head. O'Halloran and Dease published cases, but these appear to have been lost sight of until Langier called attention to the coexistence of a watery discharge and rupture of the membrana tympani in some cases of fracture of the base. The character of the fluid was not recognized at first, but it was established by Nélaton, Robert Rabourelin, Chatin, and Deschamps. Guthrie held that the fluid probably came from the cavity of the arachnoid, and pointed out that it was symptomatic of great danger. This accident is now of course a matter of common observation. —St. Clair Thomson.

Smoke of Burning Leaves Injurious.—The board of health of Plainfield is considering the question of adopting a rule which will prohibit the burning of leaves within the city limits, as it is claimed that the practice is conducive to much ill-health during the fall season. Several physicians have said that the smoke and smudge which come from burning leaves are the causes of many of the ailments of the throat, lungs, and eyes.—*Scientific American.*

Meat and Cancer.—The question how far the increase of cancer among the more highly civilized nations, which has appeared so marked during recent years, is caused by the greater quantity of meat which is eaten in prosperous countries, is a matter of very considerable interest. That man is by nature not a vegetarian, in other words that he is naturally not a mixed feeder, may be taken as pretty certain; but it is also certain that as the result of hard necessity meat has generally in times past been to him a luxury, and has but rarely found a preponderating element in his diet. But with prosperity and with the greater ease with which animal food can now be obtained we find whole nations falling upon meat as a necessary ingredient of their daily diet; and in the very nations among whom this change is most noticeable we are told that cancer shows the greatest increase. In support of the connection between meat and cancer Dr. Roger Williams points to the rarity of cancer in prisons and workhouses where but little animal food is allowed, and hard work is exacted. He has lately found additional evidence as to the small amount of cancer among the convict population, which he says strongly supports this view. . . . We need scarcely say, however, that convicts are a somewhat "selected" class of people, and that diet is not the only matter in which convicts differ from those outside prison walls. —*Hospital.*

Typhoid Fever in South Africa.—Professor Sambon, writing in the *Journal of Tropical Medicine*, says: "Typhoid fever is the most prevalent and fatal disease in South Africa. In the Galeaka Gaika war it was stated by the principal medical officer to have been undoubtedly the most serious disease during the war. In the Zulu war of 1878 typhoid appeared at the headquarters at Helpmakaar and at Rorke's Drift in the middle of February, accompanied by diarrhœa and dysentery. Helpmakaar became so unhealthy that it had to be evacuated. The troops were moved to Utrecht and Dundee, but the fever immediately broke out at both these places. . . . It is an almost unanimous opinion that all outbreaks of typhoid may be traced to the polluting of the water supply by the excrements of a typhoid patient. I do not contend in the least that water may not be a vehicle, and possibly the principal vehicle, of typhoid infection, but I think it is very obnoxious to generalize a theory, however plausible it may be. Indeed, there are many outbreaks that cannot receive so comfortable an explanation. Some of them are strikingly limited, and their limitation is rarely in accordance with the distribution of the water supply supposed to be polluted. Dr. James Allen, of Pietermaritzburg, from his observations in South Africa came to the conclusion that typhoid fever depended chiefly upon infected cattle. He describes a specific enteritis occurring in calves, subject to relapses and very contagious, and holds that the excrements of animals affected with this distemper, on gaining access in any way into the human body, will give rise to typhoid fever. He holds that typhoid fever thus arose in a great measure among the British troops in the Zulu war."

French Regulations Against the Use of Lead Oxide.—In France, says the *Sanitary Record*, we understand a regulation exists making it illegal to use lead oxide in glazing pottery. It was interdicted by a ministerial circular so far back as 1878, but the regulation has been practically allowed to remain a dead letter. For this state of things the manufacturers are not wholly to blame. The ultimate responsibility rests on the shoulders of the public, who prefer ware glazed by means of lead because it is cheaper.

Excision of Bowel for Malignant Disease.—Treves, in his work on intestinal obstruction, says: "I would estimate the present mortality of excision of the bowel for malignant disease at about twenty per cent., and the mortality of short-circuiting operations at about twelve per cent. It is to be remembered that the majority of these operations concern the colon. As in like measures for other forms of obstruction, the great element in success depends upon the performance of the operation at the earliest possible period. The danger in an excision of the bowel or in a short-circuiting operation is to be measured mainly by the degree of distention of the bowel at the time of the operation. When abdominal section is performed as early as possible the mortality of the operations in question will still further decline. The mortality of colotomy performed for chronic intestinal obstruction may be placed at between five and ten per cent."

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended December 5, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Dist. of Columbia, Washington	December 22d	5	
Illinois, Cairo	December 23d to 30th	12	
Iodian Territory, Choctaw Nation	December 10th	30*	
Louisiana, New Orleans	December 16th to 30th	21	
Shreveport	December 16th to 30th	9	
Massachusetts, Chelsea	December 16th to 30th	..	1
Lowell	December 23d to 30th	..	1
Nebraska, Omaha	December 23d to 30th	1	
New York, Amsterdam	December 16th to 31st	1	
New York	December 16th to 23d	1	
Ohio, Cincinnati	December 23d to 30th	1	
Cleveland	December 16th to 30th	3	
Pennsylvania, Allegheny	December 16th to 23d	3	
Pittsburg	December 16th to 30th	2	
South Carolina, Greenville	December 7th to 30th	4	
Tennessee, Nashville	December 23d to 30th	2	
Utah, Salt Lake City	December 16th to 23d	1	
Virginia, Portsmouth	December 23d to 30th	10	2

* In mining camps.

		Cases.	Deaths.
SMALLPOX—FOREIGN.			
Belgium, Antwerp	December 2d to 9th	5	3
Brazil, Rio de Janeiro	November 3d to 17th	..	111
Gibraltar	December .d to 17th	3	1
Greece, Athens	December :d to 9th	5	1
India, Bombay	November 21st to 28th	..	14
Russia, Moscow	November 25th to December 2d	1	
Odessa	December 2d to oth	3	1
Warsaw	November 23d to December 2d	..	8
Spain, Madrid	December 2d to 9th	..	7
Turkey, Smyrna	December 3d to 10th	..	1
YELLOW FEVER.			
Brazil, Rio de Janeiro	November 3d to 17th	..	6
Colombia, Panama	December 19th to 26th	1	
Cuba, Matanzas	December 29th	..	1*

* Soldier.

		Cases.	Deaths.
PLAGUE—UNITED STATES.			
Hawaii, Honolulu	December 11th to 18th	2	2
PLAGUE—FOREIGN.			
India, Bombay	November 21st to 28th	..	137
Calcutta	November 4th to 18th	..	77
Kurrachee	November 18th to 25th	3	1
CHOLERA.			
India, Bombay	November 21st to 28th	..	4
Calcutta	November 4th to 18th	..	25

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Original Articles.

COMPARATIVE STATISTICS IN THE TREATMENT OF APPENDICITIS.

By EDWIN MARION COX, M.D.,
NEW YORK.

There is very frequent comparison by statistics of the medical with the surgical treatment of appendicitis, and to the superficial observer the medical men sometimes seem to make out a fairly good showing for what many of them like to call the conservative method. We are also occasionally offered "new" methods of treatment, the chief part of all of which is avoidance of operation. Many series of cases have been reported with a mortality of from eight to twelve per cent. in which a non-surgical form of treatment has been employed, and the reporters have seemed to ask, apparently with a touch of pride, whether the surgeons can show any better results. There are several objections to the accuracy and fairness of such series, seemingly not often enough or strongly enough emphasized. For example, one series, that of Sahli, consists of 7,213 cases from Swiss sources, among which 473 were operated upon with a mortality of twenty-one per cent. and 6,740 treated without operation with a mortality of 8.8 per cent. It is admitted that recurrence was observed in 20.8 per cent. of these cases, but the observer does not give the period during which the cases were watched, and of the cases represented by the 8.8 per cent. mortality we do not know how many could have been saved by timely surgery. Other advocates of the medical treatment, mostly foreign, offer approximately the same results, in some instances with even less mortality for the treatment they prefer. The first element in such series that attracts the attention of the American surgeon can hardly fail to be the high mortality after operation, explicable only by a close analysis of the figures, unless we wish to say that Europe has not reached the same proficiency in treating this disease as America. The medical man usually sees the patient with appendicitis before the surgeon, and in many instances the latter never sees the patient at all, so that there is no opportunity afforded him to say whether in his judgment operative treatment at once or later would be suitable. Many such patients pass through the attack and live to have another, within or without the ken of the first physician. Others are treated for several days by medical means until the physician calls the surgeon, perhaps too late to save life, and at best with a very good chance of increasing the mortality figures to which the physician objects so strongly in the records of the cases treated by operation. The advocate of medical treatment seems to assume always that the surgeon would operate upon every case of appendicitis almost at once, and therefore feels justified in classing every patient who survives an attack as cured by medical means, either forgetting or ignoring the fact that the surgeon is continually seeing more or less mild cases in which he advises waiting either for a return of symptoms or until a suitable time after the subsidence of the attack, for operative treatment. The medical statistician assumes the right to keep any of these cases under his observation as long as he sees fit, and then to call the surgeon, saying: "All that medical treatment can do has been done; now let surgery save him." He assumes also the right to place in his list of cures mild cases of the so-called catarrhal form of the disease, omitting to consider that such are not cures when there is a large percentage of recurrences, and that in many cases operations are done for subsequent attacks, often with diminished prospects of good result on account of inadequate treatment in the first instance. A further, though less important, source of inaccuracy in drawing conclusions from the statistics of appendicitis is error in diagnosis. Several mild inflammatory processes in the right iliac fossa simulate appendicitis, and recoveries might easily be placed in a list of cures, to the material reduction of the mortality percentage. The reason that a surgeon is less apt to be led into errors of this sort is that surgeons are usually called to see suspected cases of appendicitis because they are known to have had experience, and are therefore, in this particular condition, less likely to be deceived than the less experienced medical observer. The only fair means of comparing the surgical results with the results of cases treated without operation would be the impracticable arrangement of comparing two large series of similar consecutive cases, one treated in each way. I think that one series would very quickly develop cases which would require surgical aid, unless the medical men were prepared to take the responsibility of unnecessary deaths. It is obvious that death should not be attributed to the operative method of treatment in cases in which that treatment is undertaken under stress of emergency, and not at the time that the surgeon would have chosen. The opponents of the operative treatment of appendicitis have in some instances assumed the entirely unjustifiable attitude of doubting surgical statistics offered by men of good repute, with what reason is not clear. There is not the slightest doubt that in competent hands the mortality after the removal of the diseased appendix in suitable cases during the quiescent period is practically nothing, and that in acute cases of various kinds (abscess, perforation, etc.) the figure is much lower than any medical form of treatment can possibly show, and will become still lower in proportion to the recognition which timely surgery receives as the only proper way of handling the disease.

The obvious physiological disadvantage under which the normal appendix must work in order to keep itself free from intestinal contents must be clear to any one who has ever seen an appendix, but the great increase in these disadvantages which occurs after an attack of inflammation is apparently not so well understood. The mucous lining of the appendix is subject to and liable to be involved in any inflammatory process occurring in the cæcum, but in the latter organ the healing of a small ulcerated area with the subsequent cicatricial contraction is of no consequence. When there is destruction of mucosa and submucosa in the appendix, the healing results in the formation of cicatricial tissue which must soon produce a certain amount of distortion and narrowing of the lumen of the organ. This state of affairs can only make the ability of the appendix to keep itself clear greater, with a consequent probability of a second attack of the same general character. All who have seen many appendices removed will remember how often the type suggested by this description occurs. There may be several points of narrowing which is of various degrees of development, with almost always a collection of muco-purulent fluid in a more or less distended organ behind the last stricture. The danger of perforation in many of these cases is extreme, for in many of them there has never been any formation of adhesions outside of the appendix. There are, of course, many cases of appendicitis in which the inflammatory process within the appendix is more intense from the first, and there is early local or general gangrene of the organ, with perforation and its various results depending on the conditions in the peritoneum of the iliac fossa at the time. Cases of this kind ought to have prompt surgical attention, so that the amount of necessary surgical work shall be as small as possible, and the danger of general sepsis as remote as we can make it. The idea of waiting for "adhesions to form" or "the abscess to develop" is just as rational as waiting for adhesions in a case of strangulated hernia.

I should like to describe briefly a few cases, all but two of which I have operated upon during the past eighteen months. The others I saw in consultation. I have chosen them because they illustrate some points made in calling attention to the untrustworthiness of the medical statistics of the treatment of appendicitis.

Case I.—Man, aged twenty-one years. He had had several attacks, only one of which compelled him to go to bed. Intervals of about six weeks occurred between the attacks. He came to St. Francis' Hospital for removal of the appendix, if advisable, so that he could go safely on missionary trips. Examination showed that there was tenderness on deep pressure in the iliac fossa, but the appendix could not be felt with certainty. McBurney's intermuscular operation was done, and in ten days the patient was up. There were no adhesions about the appendix, which was freely movable. One inch from its extremity there was an almost impervious stricture, and between this and the extremity the organ was distended with about a drachm of greenish pus. About three-fourths of an inch from the first stricture there was another, not so tight, and between the two there was more pus. A man could hardly carry a more dangerous article than a thin-walled sac of pus suspended in his abdominal cavity, yet medical treatment would have "cured" any attack that this patient had had, and he might thus have enriched several statistical lists before the sac ruptured.

Case II.—Boy, aged fourteen years. He had one sharp attack a number of weeks before admission to St. Francis' Hospital. The boy was in excellent general condition, and was sent to the hospital because his physician believed that an operation was the best treatment for his condition. There was no tenderness, and the appendix could not be felt, as the boy was fat and muscular. The same operation was done as in Case I., and the patient was well in two weeks. The appendix was lying along the postero-internal aspect of the cæcum. It was about three and one-half inches long, and one and a half inches from its extremity there was a sharp angle, so that the organ was doubled with its tip pointing almost directly back to the base. The angle thus formed was tightly adherent to the cæcum, and the rest of the organ was perfectly free. The appendix beyond the angle was tensely filled with muco-pus, and it burst during removal. A small area of granulation tissue remained on the wall of the cæcum where the appendix had adhered, so that a small strip of gauze was left in the wound for four days. This appendix was on the point of rupture when the operation was done, and the boy is certainly better off now than if a four-inch incision had been necessary later with the unavoidable division of muscular tissue.

Case III.—Girl, aged ten years. This case was much like Case I. There had been several attacks, and the child was brought to St. Francis' Hospital for treatment. There was distinct tenderness, but no mass in the fossa. The last attack had occurred about three weeks before operation. The operation was the same as before, and the patient was well in ten days. The appendix was free, and distended toward its tip with fecal pus, and it contained several calculi. There was no actual closure of the canal, but the middle inch was much narrowed and was cicatricial. The last calculus could not pass this area; the others were on the proximal side. This appendix was certain to have behaved badly, and the attacks would undoubtedly have increased in severity.

Case IV.—Woman, aged thirty years. Her history was obtained with difficulty. When brought to St. Francis' Hospital she was evidently recovering from an attack of appendicitis, and as soon as we could get an interpreter a history of other attacks was elicited. Examination showed marked tenderness in the iliac fossa, and the appendix could be felt. This patient's temperature ran pretty regularly to 99.5° or 100° F. at night for several days during which she was under observation, and then the intermuscular operation was done. The woman left the hospital well in two weeks. The appendix was three inches long, free, and contained several calculi and some pus, but there was apparently no stricture. The tip was moderately distended, and the largest calculus was in this locality. Operation was certainly the only way of putting this patient in a safe condition.

Case V.—Well-developed and muscular young woman, aged about twenty-eight years. She gave a history of a number of attacks, most of them mild. She came to St. Francis' Hospital for diagnosis and treatment, although she was not ill at the time. The appendix was distinctly tender, but there were no other local signs. The same operation as before was done, and she was well in two weeks. The condition in the appendix was almost exactly the same as in Case IV., and there was just as little prospect of spontaneous cure.

In addition to these cases, I should like to add a short description of two cases, seen in consultation and operated upon by another surgeon:

Case VI.—Man, aged fifty-three years. He had had five well-marked attacks, but had steadily refused operation. His last attack kept him in bed with an evening temperature from 100° to 102.5° F., and marked tenderness and rigidity with flexion of the right thigh. He refused operation for a number of days, during which all kinds of non-operative means were used to help him, and several times he threatened to get up and go out. His tenderness remained, and the mass which had begun to form became more and more distinct. His fever continued and he began to look septic. At the end of two weeks from the beginning of the attack he consented to operation. This disclosed an abscess surrounded by quite dense adhesions, filled with pus containing necrotic shreds. The appendix was not searched for. Recovery was uneventful. The case of this patient is a good example to use in calling attention to the advantages of the interval operation. As it is now he has a long scar; his appendix could not be safely sought for, and the consequences of this state of affairs are obvious.

Case VII.—Man, aged thirty years. He had one sharp attack in 1898, and had been well until the second attack occurred one year later. It was sudden, marked by intense pain and the usual symptoms of perforation. Operation was performed about twenty-four hours after onset. The appendix was free and perforated. The pelvis was full of turbid fluid, with flakes of fibrin. He was treated with hot surgical salt solution and a drain in the pelvis. Recovery was rapid and uneventful. The appendix was in much the same condition as in Case I., plus the perforation. If this patient had been operated upon in the quiescent period, he would have escaped the comparatively long muscle-dividing incision and the consequent danger of hernia. If this patient had been treated by some medical observers, his first attack would have permitted them to put him in a list of cures.

The figures given by Sahli have been quoted because they are extensive, and because, with some other similar series, they are frequently grouped together. A recent notice of them with others may be found in Boas,[1] in the remarks upon the treatment of perityphlitis. The mortality as mentioned above was given as 8.8 per cent. in the cases treated without operation, but we do not know how many of this 8.8 per cent. were carried through to death without operation, or how many were operated on in a desperate condition after the inefficacy of medical treatment had been shown; though perhaps under the latter circumstances such cases would be made to add to the mortality after operative treatment. It is admitted that in over twenty per cent. of the cases that ended in recovery under medical treatment there were recurrences, but no period of observation is given. This twenty per cent. is probably less than one-quarter of the real figure representing recurrences, and insufficient and inaccurate observation of the subsequent histories of the cases must account for the low figure given. Furthermore, it is important to know how many among even this twenty per cent. come to require surgical treatment, sometimes when it is not available. Periods of a year between attacks of appendicitis are very frequent; two years are a common enough interval, five-year intervals occur, and I have known twelve years to elapse. Medical statistics as usually offered are, therefore, untrustworthy. A twenty-one-per-cent. surgical mortality is entirely too high, and such a series must contain many cases in which timely surgical relief was not afforded. With our present knowledge of the disease, it seems safe to say that one attack of appendicitis makes another almost certain, that medical treatment is useful only as an adjunct and with every preparation ready for a prompt operation, and that operation in the quiescent period is a safe measure, especially because we can leave the abdominal wall strong after it is done. This is a very important consideration for any patient, and for the ordinary workingman it is everything.

In addition to these cases, there were twenty others operated upon by me in various stages of acute appendicitis during the same period of eighteen months in St. Francis' Hospital. All were cases with more or less extensive suppuration and varying degrees of sepsis at the time of operation. Death followed in three cases, and a few words in regard to these may be instructive.

Case I.—Man, aged about thirty-five years, weighing three hundred and ten pounds. He had been ill several days. There was a large mass in the fossa. Temperature was 106° F. at the time of operation, and the patient had diabetes. The mucous membrane of the appendix was gangrenous, and there was turbid fluid in the fossa. Death occurred in twelve hours, with coma and rising temperature.

Case II.—Man, aged twenty-five years. He had been ill four days. His temperature had been between 103° and 104° F. for the period of illness. The abdomen was distended, with great tenderness and marked resistance in the iliac fossa. The appendix was very large and riddled with gangrenous perforations. There were very few limiting adhesions. The patient died rather suddenly at the end of about thirty-six hours. He had some jaundice.

Case III.—Man, aged twenty-one years. He had been ill four days, and came to the hospital. He showed all the clinical appearances of general peritonitis. A large incision was made, with free salt-solution irrigation. The appendix was gangrenous and perforated. Death took place in twenty hours.

At least two of these cases had a very good chance if an operation had been done earlier, for among the seventeen recoveries there were several which seemed clinically almost if not quite as bad. In one of them there was a large secondary abscess of the liver which was operated upon successfully.

INVERSION OF THE UNCUT APPENDIX.

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In the issue of the Medical Record of November 25th, Dr. George M. Edebohls presents an exceedingly valuable historical review of the literature of appendicitis. In this article he refers to his method of treating the appendix by inversion, the chief argument in favor of his method being that it obviates the necessity of opening the bowel, with the resultant risk of infection. He states that his procedure, so far as he knows, has found but one imitator, whose first and only case ended fatally. Over against this result, however, he states that in his own hands he has had considerably more than one hundred cases of inversion without a single death.

Some time last year I noticed in some journal a reference merely to a method of treating the appendix by inversion, as advised by Edebohls and Dawbarn. No description was given of the technique of either of these surgeons. The idea impressed me favorably, and I at once adopted it, but devised my own technique. Since the appearance of the article by Dr. Edebohls I have corresponded with him on the subject, and find that my technique is radically different from his.

I have practised inversion in considerably more than one hundred cases; just how many I am not able to state, but I find over eighty in my records for about six months past. I have practised inversion not only in cases in which the operation has been made for appendicitis alone, but also in the great majority of cases in which I have opened the abdomen for any reason whatever. It is now a routine procedure with me to examine the appendix in all such cases, and in practically all I immediately invert it. The exceptional cases are those in which the appendix is found atrophied, or in which the preceding operation has been of such a character as to render it unwise to prolong operative procedures by even the two or three minutes necessary to secure the inversion.

While I have not kept a definite record of all the cases, I am satisfied that I have found a healthy appendix in less than ten per cent. of all abdomens which I have opened. The evidences of disease usually consist in thickening of the appendix, more or less obliteration of its lumen, or adhesions. Occasionally a fecal concretion is found, and not very infrequently evidences of recent acute inflammation, the symptoms of which had been entirely obscured by the greater disease present.

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[1] "Diagnostik und Therapie der Darmkrankheiten," Theil ii., 1899.

How much of disease, discomfort, and danger have been obviated by this routine removal no one can state. My patients have been uniformly pleased when told afterward that the appendix had been removed. On three occasions I have been obliged to operate for acute appendicitis occurring in cases in which the appendages had been previously removed on account of disease. One of these cases had been operated upon by a distinguished Chicago surgeon, and I had myself operated on the other two. I have now in mind in addition several patients in whom I did not remove the appendix, during previous years, and who are now annoyed at times by a very suggestive tenderness and grumbling in the region of McBurney's point.

The technique of inversion is beautifully simple, and I did the operation very many times, to the delight of visiting surgeons. I did it eight or ten times during the week of the meeting of the American Medical Association, the manœuvre being witnessed on each occasion by quite a number of prominent surgeons. So much satisfaction has been expressed by those who have witnessed these demonstrations, that I am quite certain a number of them have adopted the procedure in their practice.

The appendix is freed from adhesions if present and brought up into view in the usual way. The tip of the appendix is held by my assistant with one hand, while with the thumb and forefinger of the other the colon is supported just below the origin of the appendix. With a ligature carrier a catgut ligature is then introduced at the base of the appendix, so as to include the meso-appendix, care being taken to embrace the small artery that runs along close to the appendix. The meso-appendix is then ligated, the ends of the ligature being left long. With scissors the meso-appendix is severed just beyond the ligature, and the tissues constituting it are then seized either with fingers or forceps and stripped off from the appendix from the base to the tip. This is usually accomplished with a single effort, but occasionally they will have to be removed in pieces. Not infrequently, and quite usually when operating on an acutely inflamed appendix, great thickening of the peritoneal and muscular coats will be found present. These coats will be so infiltrated that inversion is impossible. In such a case a longitudinal incision can be easily made with either knife or scissors, cutting through these two coats down to the mucous membrane. This having been done, the thickened coats are very easily peeled off, leaving merely the mucous membrane intact, which is so thin and soft as to offer slight obstacle to inversion. Not infrequently, however, the distal extremity of this mucous-membrane tube is obliterated as a result of previous inflammatory attacks. In such an event the obliterated end must be snipped off with scissors before proceeding to the next step. Care should be taken, however, not to open into the lumen of the tube.

The appendix having thus been prepared for inversion, the tip is seized between the thumb and forefinger of one hand and inverted by pressing upon it with the blunt end of a patent-eyed needle. The manœuvre is accomplished by a manipulation somewhat similar to that employed in putting a fish-worm on a hook. The tip having been inverted for about the length of the needle, an inch or more, the needle is removed and an ordinary long probe substituted. With this the inversion is completed in an instant. If, as the probe is being introduced into the colon, carrying with it the appendix, it meets with a fold offering obstruction, it should be withdrawn and the rest of the inversion completed with the fingers. This is accomplished without any trouble whatever. Inversion now being complete, one end of the ligature which had been previously used is threaded into the needle and a single stitch taken across the opening in the bowel, which marks the point of disappearance of the inverted appendix. If it seems desirable two stitches can be taken. The catgut is drawn through until the stump of the meso-appendix is brought up against the opening, and then by tying the two ends the operation is completed.

The operation can be usually made in very much less time than it takes to describe it.

The vascular supply is so completely cut off by the ligation of the meso-appendix that I have no doubt the inverted organ promptly sloughs off, or possibly undergoes a species of digestion. I have had but one opportunity of investigating the post-operative appearance of the appendix. In that case death resulted at the end of about a week after the operation; the operation for the removal of the appendix being only incidental, and death occurring not as the result of the operation. The autopsy showed the appendix very much softened and evidently rapidly breaking down. Healing seemed to be complete at the seat of the operation.

In a very few cases in which operation is made for appendicitis, conditions will be found which will render inversion impossible or so difficult as to be unwise. These will be cases usually of gangrene of the tissues, or in which there is a tight constriction near the base of the appendix. Fecal concretions if present can usually be readily forced into the colon, and open the way for more easy inversion.

The only possible objection to the operation is that no specimen is secured to display to the patient and his friends. This objection, however, is of no importance, of course, when considered in connection with the manifest advantages of inversion over opening the bowel.

The operation of inversion is made in a very few moments. There is no hemorrhage connected with it, and there is no danger of infection. When made in connection with other operations requiring opening the abdomen, it can hardly be said to have any mortality whatever. Considering the fact that it removes once for all every possibility of appendicitis in the subject of the operation, and considering the great mortality of the disease which is thus obviated and its enormous morbidity, it seems to me that it would be wise for operators in general to adopt some form of this manœuvre as a routine procedure in connection with their laparotomies.

A CONSIDERATION OF THE FAILURE OF ANTITOXIN IN OPERATIVE CASES OF DIPHTHERITIC CROUP.

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Since the publication of the writer's previous articles in opposition to the serum treatment of disease, the committee on antistreptococcic serum appointed by the American Gynæcological Society reported to the meeting held in Philadelphia, May, 1899: "The outlook for the antitoxin-serum treatment is quite discouraging." Statistics showed the results to be no better, if as good as those obtained without it in the treatment of puerperal fever.

There was a disposition to claim for tetanus antitoxin a very exalted therapeutical value, but recent events have probably convinced most men of its absolute failure. During the past year the obstetrical and gynæcological clinic of the Czech University of Prague had to be closed because tetanus became epidemic, and many of the patients died despite the use of tetanus antitoxin. In the epidemic of tetanus which prevailed last July in New York City antitoxin was generally used, and the disastrous consequence is well known and cannot be denied. The superlative merit of the Baccelli carbolic-acid treatment of this disease was entirely overlooked in the blind craze for serum therapy.

When in 1896 Winters showed the bad effects of diphtheria-antitoxin treatment in the Willard Parker Hospital of New York City, Brannan said he was surprised that Winters should distrust the bacteriological diagnosis as shown by the presence of the Klebs-Loeffler bacillus. That there is no etiological relation between diphtheria and this micro-organism is made clear by the following observations:

Of one hundred cases of chronic nasal catarrh, Vassant by bacteriological investigation found the Klebs-Loeffler bacillus in twenty-six patients, in none of whom was any symptom of diphtheria present.

Grenet and Lesné, in fourteen cases of purulent coryza in children, found a bacillus resembling the Klebs-Loeffler bacillus which in seven instances proved fatal to guinea-pigs and in four produced pseudo-membranes. Yet in none of these children was there membrane present or glandular enlargement.

MacFadyen and Hewlett, after examination of a culture from a swab which was sent to them, reported that the diphtheria bacillus was present. They were then told that the swab had been used on the throat of a pigeon suffering from canker, a disease common on the scalps and in the throats of these birds. The bacillus was also found in the throat of every healthy pigeon examined.

J. Price-Brown reports cases of non-diphtheritic pseudo-membranous rhinitis, which he concludes is as common as primary nasal diphtheria.

Engelmann has seen cases which demanded intubation, although it had not been possible to demonstrate the Klebs-Loeffler bacillus.

Peabody, when called to attend a nurse and being in doubt about the diagnosis, first gave antitoxin and then took a culture, which was negative. At the same time he took cultures from the throats of three children who had been in the company of the nurse the same day. The cultures from two of the children developed the Klebs-Loeffler bacillus, though none of the children ever showed any throat symptoms.

Hennig, in a study of thirty-five cases of clinical diphtheria, of which number only about one-half were infested with the Klebs-Loeffler bacillus according to the report of two eminent bacteriologists, states that the number of cases of post-diphtheritic paralysis was greater in those which did not show the presence of the Klebs-Loeffler bacillus.

In one of the London infectious-disease hospitals there occurred an epidemic of rhinitis in which it was found that the Klebs-Loeffler bacillus was present in every one of the fifty-one cases. In no instance was there membrane in the nose, or glandular enlargement, or fever, or any other indication of disease. In morphological character and by every test known to laboratory workers this micro-organism corresponded to the Klebs-Loeffler bacillus. Todd and Washbourn, who report this epidemic in the London *Lancet*, 1898, p. 1458, say there was no evidence that these cases were the cause of producing diphtheria in people with whom they came in contact.

Soerensen, of Copenhagen, describes a similar experience in the *Zeitschrift für Hygiene*, Bd. 29 u. 31 He found the Klebs-Loeffler bacillus in three hundred and twenty-six scarlet-fever patients during three years, and during the last years by investigation on guinea-pigs the virulence of the germs was demonstrated fifty-eight times in seventy-nine cases. The remarkable thing brought out by this study was the fact that eighty-five per cent. of these convalescents from scarlet fever developed no symptoms of diphtheria. In fifteen per cent. there was membrane in the throat. Of the entire three hundred and twenty-six not one died, if we except the case of a two-year-old weakling whose death was due to pneumonia. The mortality of real clinical diphtheria following scarlet fever is notoriously great. Soerensen's cases were simply bacterial laboratory diphtheria. The good result was not due to the use of antitoxin, for of the whole number of patients only two received injections of serum.

Finally may be mentioned the table in the German collective report, which shows a mortality of 14.9 per cent. in cases positively diagnosed by bacteriological investigation, and 15.8 per cent. mortality in those in which the bacteriological examination was negative.

Dogmatic statements, especially if sanctioned by college teachers, take a very firm hold on the medical mind, but criticisms and corrections do not so easily reach the profession. Though the claim of etiological relationship between diphtheria and the Klebs-Loeffler bacillus has for a long time been shown to be unfounded, the statement that this particular bacterium is the cause of diphtheria is still being made by men who are acquainted with only one side of the question.

So it is with the whole antitoxin theory—the evidence is all against it, but yet it is being taught in the schools as if it were an established scientific fact. To-day the student leaving college has a great deal to unlearn about this matter. If he seek an appointment in the medical department of our army, he will be handicapped in his examination unless he can accept the fantastic vaporings about antitoxin for science; because the question may be, and has been, asked about the treatment of diphtheria—and the bigoted position of the surgeon-general on this subject is well known.

It is an easy thing to suggest a theory, but quite a different matter to force it into the minds of others; especially when you completely fail to fortify it with facts. Even the evolution theory exists only as a hypothesis, and its correctness is still denied by many scientific men of the highest standing. This statement may seem hardly credible to those who had not read much about the matter, but nevertheless it is true. To refer to only a few men who stand as high as any in their own particular lines of work, and who see no convincing proof to sustain the evolution theory, may be mentioned J. William Dawson, late principal of McGill University, who had just died, and Max Müller and Rudolf Virchow. Probably evolution will never be scientifically proved. The writer has read Darwin's work several times with a great deal of interest, but can remember no convincing argument derived from this fascinating study.

When we come to the consideration of the antitoxin theory, we approach a subject which is capable of proof if it contains a germ of truth. But so far nothing has been proved to favor the idea that it is true.

And right here attention will be directed to remind the profession of the dissimilarity between toxin and antitoxin inoculation for the production of immunity.

There is evidence indicating that immunity can be obtained from toxin injection, but there is no proof that immunity has been conferred by antitoxin treatment. There is a widespread tendency to jumble the two things, and claim for antitoxin therapy all the good which has so far been derived from toxin treatment. In a previous article the writer endeavored to make this distinction clear, but in the abstract of this communication in another journal the reviewer made the usual error of confounding the two things by placing vaccination and the Pasteur hydrophobia cure under the head of serum treatment. This same mistake was committed by Fraser before a late meeting of the British Medical Association. He declared that the mortality of diphtheria and hydrophobia had been reduced, and the reader was expected to believe that the decrease in the death rate in both instances is due to the use of antitoxin treatment. Of these two diseases only diphtheria is treated by the antitoxin method. Hydrophobia is subjected to the toxin form of treatment. In antitoxin treatment the serum of another animal is supposed to contain the remedy which is injected into the patient. By this method the attempt has been made to cure diphtheria, tetanus, tuberculosis, typhoid fever, etc., but every effort in this direction has ended in failure. In toxin treatment the serum of another animal is not used, but the patient is directly treated with the disease germ or its product, or some virulent portion of the body of an infected animal. Hydrophobia, sarcoma, and smallpox are diseases which have been successfully treated by this method of toxin inoculation. Antitoxin advocates are sailing under false colors when they appropriate for serum therapy the advantages which have been attained by toxin treatment. We have satisfactory evidence of cures established through toxin treatment; but no convincing proof has ever been presented, either in the laboratory or at the bedside, of any virtue in antitoxin serum treatment.

Tracheotomy in the hands of many operators in the past, before antitoxin and intubation were introduced, gave better results, everything considered, than are now obtained with intubation in connection with the administration of antitoxin. O'Dwyer called himself a disappointed tracheotomist: if he could have saved as many as one case in ten by tracheotomy, he says he would not have turned to intubation. Other men also were unfortunate with tracheotomy, yet that is no reason to condemn the operation utterly, which was only displaced because intubation offers relief in a simpler way in many cases which would not be subjected to tracheotomy until a much later time, because of the horror entertained by most people for the latter operation. Intubation is now performed on very many cases which would never have been given the advantage of tracheotomy. Shaw, like many others, found "it almost impossible to get consent to tracheotomy until the favorable time had passed"; but now, since the improvement in intubation by O'Dwyer, this difficulty has largely been removed.

Pilcher wrote in 1893: "It is difficult to make a proper comparison of results owing to the possibilities of differences in the character of the cases submitted to the two different procedures. It is undeniable that intubation is much more likely to be resorted to in cases of less critical nature than would be tracheotomy."

These considerations should be kept in mind when making comparisons between antitoxin cases of laryngeal stenosis which have been intubated and the results which followed tracheotomy in the past when antitoxin was unknown. It will also be seen that to-day antitoxin-treated cases which require tracheotomy do not give any better results than follow when tracheotomy is performed and antitoxin is not used.

As an indication that a larger proportion of stenotic cases will receive operative aid from intubation, Pilcher states that while in the seventeen years prior to 1893 he had been operating in Brooklyn, and during which time he had been called upon to do tracheotomy in a considerable proportion of the operative cases, he had operated but sixty-six times. On the other hand, during the four years preceding 1893 McNaughton performed intubation one hundred and forty-two times. In a recent letter Dr. Pilcher tells me that tracheotomy is now very rarely called for; and Dr. Fowler informs me that during the past ten years he has done very little, if any, tracheotomy for croup. Pilcher and Fowler believe that antitoxin is largely responsible for the decline in their tracheotomy work. The correct explanation is that intubation has largely displaced tracheotomy. The use of antitoxin has not reduced the relative proportion of operations necessary in cases of diphtheritic croup.

A reference to the compilation of statistics by Maddren and McNaughton in the *Brooklyn Medical Journal*, 1893, makes it clear that operative relief by intubation is now much oftener sought for than was the case when only tracheotomy could be performed for the relief of suffocation. The figures collected by Maddern and McNaughton embraced the experience of about two hundred and fifty medical men with seventy-nine hundred and sixty-three operations. The statistics were founded on the operative work of these men, extending from the beginning of practice up to 1893, and included the six hundred and fifty tracheotomies by Jacobi, whose experience with diphtheria dates back to the middle of this century. The first one hundred intubations by O'Dwyer with eighty-three per cent. mortality were excluded.

We find these operators, during the short time that intubation was available, performed this operation 5,546 times; while the whole number of tracheotomies reported by them, representing their work with the latter operation during their entire practice, amounted to only 2,417 tracheotomies.

Experience of two hundred and fifty operators with tracheotomy and intubation:

Operation.	Time of Experience.	Number of Operations.	Mortality, Per cent.
Tracheotomy . .	Course of entire practice . . .	2,417	75.8
Intubation	A few years.	5,546	69.5

The conclusion has been drawn from these figures that intubation saves six more patients than tracheotomy in every one hundred operations. When it is considered that a vastly greater number of patients are now operated on, and at a more favorable time, by intubation than used to be possible when we had only tracheotomy to suggest, it is probably an underestimate of the present results of operation to say that the difference in favor of intubation is only six in one hundred. While the Maddren-McNaughton statistics include much too small a number of operations to be of final value, yet they unmistakably point to the conclusions above indicated.

That antitoxin has reduced the number of operations is a statement easily made, but not so easily proved. It is often said, about fifty per cent. of laryngeal cases, if antitoxin is injected, result favorably without operation. But the same percentage of recoveries was recorded in five hundred and five cases of croup treated with calomel inhalation, included in the excellent Maddren-McNaughton table—which cases did not receive antitoxin. And yet the American Pediatric Reports state, "Formerly only ten per cent. recovered from croup when cases were not operated upon."

A light dawns on the good antitoxin intubation figures when we read that one man intubated fifty-six cases out of one hundred patients. Another physician, Levy, of Brooklyn, writes to me that he intubated about fifty per cent. of the sixty-three cases he has treated in general practice with antitoxin. Be it understood that these men have not operated on fifty per cent. of laryngeal cases, but on fifty per cent. of all the cases of diphtheria they were called to treat. These men, as would be expected, produce very low mortality figures. So does the man who operates on every case of appendicitis. Intubation by itself, when properly performed and with efficient after-care, ought to be a practically harmless procedure. When fifty per cent. of all cases of diphtheria have to be intubated, one is irresistibly led to think one of two things: either the operation is often done before other means are adopted to cure the patient without mechanical intervention, or else that antitoxin is directly responsible for the aggravation of laryngeal stenosis.

When antitoxin statistics show a small proportion of operations to all cases of diphtheria in general, the explanation probably always is that many cases of bacterially diagnosed diphtheria are included to give the good figures; and the bacterial diagnosis has so often been proved to be a farce that it is becoming wearisome to repeat the fact.

Jacobi has been particularly unfortunate with tracheotomy. Up to 1893 he performed this operation six hundred and fifty times and saved only one hundred and twenty-four patients. Yet in 1893, before the antitoxin-serum chimera had deluded the profession, he was not deprived of all hope, for he then wrote: "Results would now be more favorable; results differ in different seasons." But remember that Jacobi's experience dates back to almost the revival of tracheotomy in this century. It was in 1825 that Bretonneau was made supremely happy by being able to save the life of a dear friend's child with his first successful operation; and in 1852 Jacobi was already studying the disease. He reported a case of diphtheria in New York City in that year, the first case of which the health department contains any record. The statistics of Jacobi's own operations, therefore, embrace the work done by him during a number of different epidemic waves of the disease, which fact should not be lost sight of when comparison is made between his figures and the results of a different operation and a new method of treatment, both extending over only a comparatively few years.

In 1852, Bouchut reported seventy-two per cent. mortality in one hundred and ninety-eight tracheotomies. After that, from 1864 to 1884 there was a mortality of 66⅔ per cent. in the Boston City Hospital. A mortality of 66⅔ per cent. resulted also in Pilcher's private practice from 1876 to 1893 in sixty-six operations. In 1876 the mortality in English and Scotch hospitals and private practice was found to be sixty per cent.

There were three hundred and thirty-three tracheotomies reported in Basle, Switzerland, with fifty-nine per cent. mortality. The reports of Revilliod in 1876 and Sanné, of France, in 1877 give a mortality of fifty-six per cent. in two hundred and fifteen operations.

Since the above-mentioned work was done even better results have followed tracheotomy, as shown in the following table:

TRACHEOTOMY WITHOUT ANTITOXIN.

	Mortality, Per Cent.
Soerensen, Copenhagen, 1895	25
Zurich, 1883–84	40
Drobrink, 176 cases	37
Cohen, 166 cases	33
Strassburg Hospital, 1891	25
Geneva, 1872–88	49
Strassburg, 1891–94	44
London University College, 1884	47
Dower, Brooklyn, 67 cases	25

The figures in the above table give the mortality of tracheotomy without antitoxin treatment. Not only is it impossible to match this table with equally good results with antitoxin-treated tracheotomy cases, but in New York City, Boston, and Philadelphia the much more favorable operation of intubation in connection with antitoxin is followed by a greater mortality than shown in this table of tracheotomy without antitoxin. The following list is useful for comparison:

INTUBATION WITH ANTITOXIN.

	Per Cent.
New York City, Willard Parker Hospital, 9 months, 1895	68
New York City, Willard Parker Hospital, 6 months, 1897	82
Boston City Hospital, 1895–96	53
Philadelphia Municipal Hospital, 1896	56
Philadelphia Municipal Hospital, 1897	68

The next table shows the result obtained by American operators with tracheotomy without antitoxin in three hundred and eighty-seven cases with forty-seven per cent. mortality:

TRACHEOTOMY WITHOUT ANTITOXIN.

	Cases.	Lost.	Mortality, Per Cent.
Boldt, Cocks, and Denhard, New York City	66	31	47
Twenty Brooklyn physicians	238	111	47
Hartwig, Buffalo	3	1	33
O'Shea, Chicago	3	1	33
Townsend, Bergen, N. Y.	13	6	47
Niner and Jennings, Detroit	64	34	53
	387	184	47

The following table contains one hundred tracheotomies without antitoxin by eight Brooklyn physicians, with twenty-eight per cent. mortality:

TRACHEOTOMY WITHOUT ANTITOXIN.

	Operations.	Mortality, Per cent.
Fuller	6	50
Dower	67	25
Maddren	4	50
Spencer	7	29
Phillips	3	
Beach	6	17
Corbally	2	
Stuart	5	60
	100	28

TRACHEOTOMY IN CHILDREN UNDER TWO YEARS OF AGE.

	Cases.	Died.	Mortality, Per Cent.
Without Antitoxin.			
Barzeau	12	8	66
Revilliod	16	10	62
Sonnenberg Hospital, 1896	8	3	37
Total	36	21	41
With Antitoxin.			
London Hospitals, 1896	30	21	70

According to the Maddren-McNaughton idea, that intubation saves six more cases in each one hundred operations than tracheotomy (which was the operation done on the one hundred cases in the above table), had these cases been intubated, the mortality would have been only twenty-three per cent. without the use of antitoxin.

In one of the preceding tables was given the result of tracheotomy without the use of antitoxin, in Denmark, Germany, Switzerland, England, and the United States, all the statistics given showing a mortality of less than fifty per cent. In the next table is shown that such good results have never been achieved with the same operation when the patients at the same time receive antitoxin treatment:

TRACHEOTOMY WITH ANTITOXIN.

	Mortality, Per Cent.
London, Western Hospital, 1896	63
Cassel	61
Baginsky, Berlin	71

Antitoxin advocates would have us believe that it used to be a very rare occurrence for young children to recover after tracheotomy before antitoxin was known. Such, however, is not the fact.

In an article entitled "Is the Operation of Tracheotomy in Diphtheritic Croup Dangerous?" in the MEDICAL RECORD, December 13, 1884, Winters gives a list of ninety-three successful tracheotomies on children two years of age and under. This table contains two, three, four, and in one instance six successful operations by one man. Barzeau saved twenty-five per cent. of twelve cases, and Revilliod thirty-seven per cent. of sixteen cases, by this operation in children under two years of age, to whom no antitoxin was given.

When intubation does not relieve a stenotic patient —which sometimes happens—and the attempt is made to effect a cure with a secondary tracheotomy, it is not surprising that a very high rate of mortality ensues. If antitoxin confers any benefit, it might be reasonable to expect to look for better results in this class of cases which also receive antitoxin than are obtained in patients on whom a secondary tracheotomy is necessary after intubation and to whom no antitoxin is administered. But no such benefit can be claimed in favor of antitoxin-treated cases. For comparison, fifty-six cases requiring tracheotomy after intubation have been taken from the Maddren-McNaughton table, to place beside fifty-six cases which occurred in the Hôpital Trousseau, which latter cases received antitoxin treatment, while those in the Maddren-McNaughton table were not subjected to the serum treatment. In 1897, in the Hôpital Trousseau, fifty-six secondary tracheotomies were performed, and eleven patients recovered. Taking fifty-six tracheotomies from the Maddren-McNaughton table without selection and just in the order as printed, it is found that ten patients recovered. When it is considered that the fifty-six Trousseau patients were all operated on under one roof by specially trained physicians, and watched after treatment by nurses well qualified through constant daily experience with diphtheria patients, while the fifty-six Maddren-McNaughton cases were operated on by twenty-three different operators in twenty-three different places, and aided by such nursing as it is possible to secure in average general practice, this difference of one case in fifty-six in favor of those treated with antitoxin (or less than two per cent. difference), cannot be considered an indication that better results followed in those treated with serum. Absolutely no superiority can be claimed for antitoxin from this experience; all the advantages as regards treatment and after-care were on the side of those treated with antitoxin. As the ages of the patients were not given in either table, it is impossible to consider this important factor, without which the figures given are really without value.

In a previous article mention was made of an experiment which was tried in Trieste by the physicians of that city, who in 1895 treated practically all cases of diphtheria in general with antitoxin. The result was that more patients died in that year than ever before. Kassowitz called Baginsky's attention to this fact, and in reply Baginsky contented himself by saying he didn't know anything about the circumstance. It seems as if some optical perversion prevents him from seeing that which he does not want to see. When the foolish ostrich shoves his head in the sand to cover his eyes, that act does not mislead or extinguish his pursuer any more than this evasive answer deceives the profession or removes the above-mentioned fact.

1098 Bushwick Avenue.

Treatment of Poisoning by Carbolic Acid.—Hypodermic injections of ether. Rectal injections of sodium sulphate, two ounces to three pints of water; irrigate as high as possible after the method of Cantani. Give an ounce of the same drug in a quart of warm water per os, or by means of a stomach tube. If necessary perform venesection, followed by hypodermoclysis or intravenous transfusion of a quart of decinormal saline solution. Give morphine and apply heat to the extremities. If the rectal injection has returned, inject a quantity of a strong infusion of black coffee.—Landouzy.

A COMMON CASE AND ITS PRACTICAL SUGGESTIONS.[1]

By JOSEPHINE M. WETMORE, M.D.,
GRINNELL, IOWA.

When our president requested me to present before this society a paper, or report a case, I looked about, as we all do, for some object of interest occurring in our practice, or pertaining to a subject in which others would be interested; when my attention was arrested by the visit of a patient who came to report progress.

This patient is a type of a large class of cases that are so common and so unsatisfactory to treat, unless the cause of their indisposition can be ferreted out and removed, as rather to weary the busy physician. And because of long-continued symptoms, that are seldom alarming, the case is apt to be catalogued chronic, and is not thought deserving of much valuable time and attention. It is to this class of cases that I wish to call special attention, and endeavor to relieve if possible one great element so conducive and active in their etiology.

This patient came to me some time ago, in the person of a bright, intelligent, rapidly growing boy of fifteen years. His father, dying some years ago of acute stomach trouble, was never strong, was extremely nervous, restless, irritable, and ambitious. His mother, who accompanied him, is of more than ordinary intelligence, education, and refinement. This, the youngest of her three children, all boys, is the most difficult to manage. His restless, uneasy manner, manifested particularly in the schoolroom, has caused him previous to the present term to consider his instructors his greatest enemies. He refuses to apply himself to his studies, to the preparation of which he is expected to devote the waking and some of the necessary sleeping hours. He therefore lives in an atmosphere of discontent and forced depression, most of the time at variance with all his surroundings.

As he sat in the consulting-room, and I tried to secure a full and complete history of his case, he was in constant motion. His capricious appetite is allowed its unnatural demands. He feels tired, is pale and thin in flesh, the bowels are sluggish, the breath is offensive, the tongue is coated, and the gums are spongy. He has a dull headache, and the two symptoms of which he complains the most, and has complained for two years, and for which his mother requests relief, are pain around his heart and dyspnœa. These two symptoms have of late given himself and mother much uneasiness; heretofore they had ascribed them to his rapid growth. By pressure over the point of exit of the spinal nerves this pain is greatly aggravated. There are also several points of hyperæsthesia along the spinal column. A thorough physical examination and careful questioning as to bad personal habits, the latter of which are denied, reveal no organic trouble of any kind. A rapid, slightly irregular heart action and diminished lung capacity are the only signs present.

What shall I do for this patient? Shall I insist upon uninterrupted confinement in the schoolroom, prescribe some nerve sedative, or stimulant, and lull for time at least these crying needs? He is from a family financially independent of any physical exertion or denial of any reasonable wish. He has only to occupy himself with that which will educate and refine him. He has ambitions in a mechanical line, enjoys employment with tools, and is naturally a mechanical genius, but has been rather discouraged, or at least not encouraged, by his mother, who would have him a scholar, with no thought of his health to interfere with her ideal plan. It was with much difficulty and after continued reasoning that I persuaded this mother to relax her ambition and take the boy out of school. I then laid out a plan of work, exercise, and rest; he was to rise at 6 A.M. instead of 8:30, take his cool sponge bath, with his mother's assistance until accustomed to it, have a little exercise, and partake of a plain, nutritious breakfast. During the meal he should form the habit of eating slowly and thoroughly masticating his food; then take exercise, in which he should accomplish a definite amount of work. He should attend school. recite one lesson during the forenoon, have his heavy meal at noon-time, afterward rest in the recumbent position one hour, sleeping if possible; recite another lesson in the afternoon, studying for a sufficient length of time to prepare these two lessons; he should have recreation and work of a proper kind, and retire at 8 P.M. In fact, he was to live like a child and not a young man. His only medicine after cleansing and disinfecting the gastro-intestinal tract was, along with continuous use of astringent disinfectants for the mouth and teeth:

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[1] Read before the annual meeting of the Iowa Central State Medical Society.

℞	Blaud's mass	gr. iij.
	Soc. aloes	gr. $\frac{1}{8}$
	Ext. nux vom	gr. $\frac{1}{16}$
	Arsenious acid	gr. $\frac{1}{100}$

It is needless to tell you the results of this plan of treatment. The relief from constant attendance to school duties stimulated his ambition in his studies, the change being quickly recognized by his teacher, who had exercised great patience and forbearance, and understood the great strain under which her pupil labored with this enforced education.

This rather lengthy description of a very common case fits many others which have come under my observation, not only boys, but more frequently girls, ranging in age from twelve to sixteen years. At this age ordinarily they reach a grade in school where they are obliged to devote their entire time until nine and ten o'clock at night, Saturday included, bending over their books, applying themselves as diligently as the mature adult student who is taking up a profession, with only a thought of high grades at whatever expense to the physical health.

At this very important developmental age, functions heretofore unknown are asserting themselves, and rightly demand the best and purest blood for the proper growth and development of the organs concerned in these functions—blood rich in oxygen, unburdened by vitiated air and poisons of gastro-intestinal origin, blood that flows freely with the assistance of well-developed muscles that are growing strong by sufficient physical exercise. Perhaps now, more than at any other time in life, should the activity of the unstable nervous system be kept in abeyance. As far as the child is concerned it should not know that it has nerves, but how often is such a one brought to us because of extreme nervousness!

In the girl, particularly at this age, the most important organs of her body, so far as her future health and happiness and that of her offspring are concerned, are coming to the front and eagerly demanding their rightful supply of nutrition. The languor and indisposition for mental exertion are only mute messengers to us requesting precedence for reproductive development. Our present system of education completely reverses the natural law, and our young girls about to become women are made to suffer untold agonies, mortifications, and heartaches the remainder of their lives through dysmenorrhœa, the torture of which can be second only to the pangs of parturition, and must be experienced twelve times each year with ofttimes no relief excepting of an operative nature, and even this is followed by other as distressing and incapacitating ailments.

The lack of proper and sufficient exercise during this period may well cause a debility of muscles and ligaments, whose function it is to support; this in turn allows flexions, versions, prolapsus of uterus and ovaries; the insufficiently supported blood-vessels allow a varicosity or perchance menorrhagia, or amenorrhœa, coupled with which are neuralgic horrors of various degrees and regularities. And this is not all; but constipation adds its quota to the already overburdened system; the patient suffers from frequent headaches, insomnia, and that stigma of Americans, nervousness, with all that follows in its wake.

The young girl, with more sad experiences than her great-grandmother ever dreamed of, reaches a crippled womanhood. Ofttimes she has been a regular attendant on the gynæcologist. If perchance she engages in public work, she must absent herself from work from one to four days, and suffer all the attendant mortification and embarrassment in proportion to her womanly modesty. In fully seventy-five per cent.—and I think I am not overestimating—she must seek the gynæcologist's assistance sooner or later, and not infrequently be brought to death's door reaching the crown of her womanhood—maternity.

Should we not as physicians and guardians of the public health use our influence to prevent, in so far as preventable, causes which strike at the heart of physical health?

I believe that when the physical development of womankind—and by this I do not refer to the gymnasium, bicycle, or tennis courts—is put in the ascendancy during her period of special development, we shall have reached the millennium in health both of men and women. Of course we cannot expect all the results in the next two generations, nor will such a reform probably eradicate all deformities. Every girl should have work during this period of partial mental suspension; she should under no circumstances be allowed to idle away her time, do fancy work, read light, trifling novels, or attend parties, balls, etc. There is no better time in her life than now to put her at work which is often considered undignified, viz., housework. There is no work in gymnasiums, cooking-schools, etc., equal to everyday dutiessu pervised by a thrifty, intelligent mother. It is not drudgery. but is elevating and broadening; the very precision used in the artistic arrangement of table or china closet, the preservation and proper preparation of plain articles of food, economically handled, can be made of far greater value in the future welfare and happiness of mankind in general than all the trigonometry and astronomy known. Do not understand me to deprecate the higher and college education of our women—far from it; I only plead your attention to the more perfect physical development during this important period.

When nature has well established her higher task, there is plenty of time for further mental education, which has been held in check for a time only. No more unreasonable is it to tear open the beautiful bud to see its beauty and hope to enjoy its fragrance, before nature is ready, than to crowd a young creature beyond the limits imposed by this common law. The results are comparatively as disastrous in the one as in the other. In the great struggle for education and mental attainments, the suitability of such crowding and over-encouragement to young minds, aside from the effect upon health, is overlooked. Not every pupil will make a scholar; some who are educated at great expense and sacrifice for the learned professions would achieve far greater success and happiness following the plough.

Because our neighbor's boys and girls are brilliant professional workers is no reason that our children should follow in their footsteps. Ofttimes the ambition for the child overcomes the better judgment of the parent, and a life-work from which the young man feels ashamed to turn back is entered upon, and his discontent finds its only relief in pleasures that degrade rather than elevate. It seems to me that this period of lessened mental strain might be one in which a child could show its natural capabilities.

What I have said applies equally to both boy and girl; the higher education should be secondary to the physical. Neurasthenia, in its various degrees, is our prevalent condition. Why is it so? Is there not a close relation between our developing young and our adult neurasthenic? Where is the trouble, and who is at fault?

But, many will say, we are not consulted in regard to these cases until they are practically incurable. They mistake; they do not recognize the necessity for a careful examination and diagnosis in the little patient who is brought, complaining of headache, backache, or stomach-ache, and is so tired, and, the mother explains, so nervous, but accept too readily the diagnosis so unhesitatingly offered, of some stomach trouble, eye-strain, or worms; treatment for either of which will result in a slight improvement for a time at least, and the case is discharged, probably with satisfaction to the mother, but it should not be so to the physician.

A few years later he may be called to care for a nervous wreck which might have been prevented had sufficient time and attention been given years before.

When we physicians take time from our busy lives carefully to diagnosticate these cases, and to lay out a plan of treatment which shall include exercise and rest, and do it definitely, with as much precision and insistence of its importance upon our patient as we prescribe arsenic, strychnine, etc., this being coupled with this judicious administration of a little medicine as indicated, we shall be spared the anxiety that will come to us while attending these same children, older grown, through some acute disease when we know their nervous resistance to be low.

When we have done our duty in these seemingly minor details, then and then only may we hope truly to benefit humanity, which is the ambition of every worthy physician. We ask pardon for using the time allotted for other than scientific technicalities, for not relating some very unusual case, instead of calling your attention to a subject which, if recognized and attended to, means far more to humanity at large than many severe and interesting operations. This is a matter that confronts every general practitioner, perhaps every day of his life, and upon his intelligent appreciation and management a large amount of the good he does depends. Our patients come to us for advice far oftener than for medicine or the knife. They are well informed regarding foreign topics, politics, and war problems; but how helplessly ignorant of the proper care of themselves they are only the doctor knows.

I do not advise closing up our public schools, but I do advise modifying and arranging the work of our boys and girls at the age of puberty, that they be confined in the schoolroom a much shorter time than now, that studying out of regular school hours be entirely prohibited, that during their time spent outside of the schoolroom they be systematically employed at occupations that shall rest and refresh and fit them for future life-work. They must not be idle.

Their occupations should bring into play all parts of their growing bodies, give them healthful exercise and fresh air, work as unlike their studies as is possible, that they may during this period be allowed to cultivate natural ambitions, unhampered by over-zealous parents and teachers, who are to temper and correct, hold in abeyance rather than over-stimulate. Some pupils will stand more crowding in mental work than others; each one is a law unto himself. We cannot lay down hard-and-fast rules for the school to go by; we cannot look to the school board, superintendents, or teachers for this help, for the direction of such matters is entirely within the province of the family physician, and the accomplishment will be obtained with the co-operation of the parents whom we now educate for the coming generations.

After the functions of the adult being are thoroughly established, then may our student take up higher studies and find himself able to accomplish much without detriment to his physical body or mental capacity.

Undoubtedly this nervous strain causes many a young and promising woman to lose her ambition and gradually drift into semi-invalidism because she feels incapable of keeping up with the demands made upon her; the pity and compassion of over-sympathetic friends magnify and intensify her symptoms until she easily resigns herself a martyr to her feelings. Not even the physician or sensible friends can persuade her otherwise; not until some actual necessity arises by which she is obliged to forget herself and unconsciously accomplish a reasonable amount of work does she awaken to her possibilities, and her invalidism becomes a thing of the past.

In conclusion, does it not seem reasonable to believe that by a proper direction of the education of our young at puberty, they will be better able to withstand the great strain incident upon any line of work? May we not in a great measure prevent these complete wrecks, which the physician is expected to endow with life and ambition, and in which in so far as he is successful is his professional ability estimated by the laity?

GYNÆCOLOGY AND GYNÆCOLOGISTS IN EUROPE.[1]

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In the present communication I purpose to describe some of my experiences in the clinics and hospitals of Berlin, Paris, and London during the two months dating from September 20 to November 15, 1899. As my object in going abroad was primarily for rest, the scientific work was necessarily limited and followed up rather in the sense of diversion than active work. But for the physician abroad in pursuit of pure scientific knowledge, it is wonderful how much can be accomplished in the short space of two months.

Although I was fully armed with letters of introduction, I wish to state at the outset that they are not essential, and that the ordinary visiting-card will serve all practical purposes. A knowledge of French and German is necessary, however, for immediate and rapid work, otherwise the visitor may flounder about for months accomplishing very little.

As at home, very little is done abroad during the summer months. In Berlin a special preliminary course of instruction is given by "Privat-Docenten" toward the end of September and beginning of October. Some of the professors take part in these courses. In France and England very little will be seen before November.

Naturally my chief interest was centred in gynæcology and surgery, although from time to time I trespassed upon other branches of medicine.

At Berlin, the best location for the medical visitor is the neighborhood of the Friedrichstrasse Bahnhof, which is centrally located and within walking distance of the principal hospitals and clinics. It is well to call at the Langenbeck-Haus (5-9 Ziegelstrasse) and make inquiries of the secretary regarding the courses one chooses to take. In order to be admitted to the operating-rooms it is customary for the visitor first to call on an operator and present his card. With the exception of Olshausen I found the operators very cordial during one or two visits, after which it was made painfully clear that, in the absence of "taking the course," such visits would be cheerfully excused.

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[1] Read at a meeting of the Eastern Medical Society, held December 8, 1899.

Olshausen is the chief of the Universitäts-Frauenklinik(at 20 Artillerie-Strasse). He is a man of about sixty-five years, with full gray whiskers and thin hair. His face is wrinkled and puffed under the eyes. His sight is good and he works without glasses. He has the best record for Cæsarean section. His methods are precise. Everything about him has an air of quiet dignity, and nothing in the course of an operation seems to disturb the gentleness and serenity of his disposition. He talks very little, and that in a quietly subdued tone of voice. He works with wonderful rapidity, helping himself to his own instruments from a little tray at his elbow. I saw him remove an immense ovarian tumor, and close up the abdominal wound in three layers of sutures, within fifteen minutes. He works in a small room, and the visitors are requested to leave at the end of each operation. Although my notes are very copious, I shall content myself by stating that I saw Olshausen do quite a number of major operations—laparotomies for different tumors and hysterectomies. I saw him do his first Alexander operation, and, although working more slowly than usual, he succeeded in finding the ligaments. He very seldom resorts to drainage or flushing of the peritoneal cavity (relying on gentle wiping with gauze), and closes the abdominal wall in tiers (three or four) of sutures. He uses catgut exclusively. After the wound is sewed, he dusts the line of approximation with powdered bismuth and seals it with gauze and collodion. He does not rely on clamps for permanent hæmostasis, but uses ligatures. One assistant gives chloroform. His house surgeon simply holds retractors; one nurse threads needles, and almost everything else down to applying the bandage he does himself. I fear, however, that he is a little ultra-conservative, and I have seen him leave diseased tissues which most operators would have removed. In hysterectomies (abdominal) he leaves the cervix in all cases, although he confessed that recently one of the women in his wards had succumbed to secondary carcinoma developed in such a stump.

Koblanck assumes full charge in the absence of Olshausen. He is a thin-built individual of about thirty-five years, with dark sandy hair and whiskers, the latter trimmed to a point. I saw him do a laparotomy for a intraligamentary ovarian cyst which was adherent to the anterior peritoneal wall, small intestine, and mesentery. Although a very difficult case, he handled it like a master. In a second operation for prolapsus uteri the vagina was narrowed by plastic work, and then the uterus ventro-fixated by wormgut and catgut passed simultaneously in the eye of one needle. In this case, as in several other chloroform cases which I witnessed, the patient almost succumbed to the narcosis. Olshausen frequently enters the operating-room when the younger men are at work, and does not hesitate to criticise and reprove them when he finds the technique faulty. In one case of perineorrhaphy he obliged the operator to remove his sutures because the vagina was too much contracted.

Gebhard, the pathologist to the Universitäts-Frauenklinik, is a remarkable individual. He is under forty, combs his hair (which is jet black) à la Pompadour, and has a thickly scarred face, adorned with a little mustache. He is equally at home at the operating-table and in the pathological laboratory—a most unusual state of affairs for a German clinic. He has written recently a most excellent book on gynæcological histology. When I asked him how long it took him to write it, he quietly replied: "Two years for the writing, and all of my medical life for the preparatory work."

Landau's private hospital is located at 21 Phillipstrasse. The chief of the clinic is Leopold Landau. He is assisted in its management by his brother Theodore. The house surgeon is Thumim; and Pick is in charge of the laboratory. The medical visitor to Berlin must not fail to call at this little hospital (which is a model of its kind). Under Pick, I spent nearly four weeks almost daily in the laboratory, preparing, staining, and mounting specimens. Pick has discovered a method of preserving the natural color of tissues indefinitely. There are hundreds of jars in the laboratory containing specimens of gynæcological pathology. The system followed is ideal. After operation the specimen is sent up to the laboratory, where it is placed in a jar and labelled. A gross report is added to the clinical history and description of the operation. Slides are mounted with sections for microscopical study, and the result is added to the former notes. These slides are preserved in special cases where they are carefully numbered and labelled; so that, in any given case, not only are the histories available, but the gross and microscopical specimens are ready for immediate consultation.

The Nitze and Casper methods of examining the bladder are almost universally employed in Germany, and I determined to master the subject. I found Thumim giving instruction in this field, and took a course with him. After six or seven sessions, working on a model and on a number of women, I felt quite at ease in the use of the cystoscope and ureteral catheter.

Leopold Landau seems to be a man aged nearly fifty, with full beard trimmed to a point and progressive baldness beginning at the back of the head. I saw him operate on three occasions: three vaginal hysterectomies, one abdominal hysterectomy, and several laparotomies. He is extremely radical in his work, and in my presence he stated that he had already done eight hundred and thirty hysterectomies. He frequently removes two or three uteri in the course of a morning's operations. He takes no stock in leaving a portion of an ovary to prevent the sudden onset of the menopause. I shall not enter into the details of his methods of operating beyond stating that he is one of the chief exponents in Germany of the clamp method in hysterectomy. His last one hundred and twenty or more cases have been done with the Thumim angiotribe (which is a modification of the instrument devised by the French surgeon, Tuffier). As a matter of fact, I witnessed the successful employment of the instrument in the hysterectomies done in my presence. The abdominal hysterectomy was done after the method published by Doyen, but Landau said that the operation was original with himself. Excepting the first inspiration from Péan, he claimed originality for all his technique, as far as the French were concerned, in connection with hysterectomy. Be that as it may, he is one of the best operators in the world. I will simply add that he rapidly closes his abdominal wounds after laparotomy with one row of silver-wire sutures.

Dührssen's "Privat Heil-Anstalt" is an old private residence converted into a hospital, and is situated at N. W. Schiffbauerdamm 31. He is a tall, handsomely built man of forty-five, with blond mustache and short cheek-stubs. I saw him do a vaginal hysterectomy with a new ligature material known as 'Celluitzwern." The patient was a spinster, aged fifty years, who had once suffered from gonorrhœa, and recently had been troubled with excessive hemorrhages due to a soft submucous fibroma. As an operator, I consider Dührssen slow and painstaking. He seemed to be exceedingly irritable toward his assistants. Like Landau and Olshausen he employs a nurse to thread needles and hand instruments. Two assistants are at the wound, and a third gives the anæsthetic. I noticed a Snegireff vaporizer in the room, which Dührssen told me had done him good service in a number of cases of uterine hemorrhages.

Mackenrodt has a private hospital at Johannisstrasse 10. He looks to be about forty-five, and has reddish pointed chin-whiskers. He was courteous enough to send me an invitation to an operation which I was unfortunately unable to attend.

I saw Gusserow do several vaginal operations for diseased adnexa at the Charité (13 Luisenstrasse). He is a stout, thick-necked, thin-haired, plethoric individual of sixty, with a heavy dirty-gray mustache. He is very rough toward his assistants, and has a very uninviting appearance. I did not talk to him, having been warned that he sometimes treats his visitors rather discourteously.

Martin is no longer at Berlin, but his former private clinic is under the management of Orthmann, who made me feel good by telling me that he had read my name in the medical journals, particularly in connection with the proceedings of the Obstetrical Society. He is a heavy, stout person with blond whiskers trimmed to a point, who sweats profusely and incessantly while operating. I saw him do a laparotomy for tuberculous adnexal disease, and after two hours' work when I left he was just beginning to close up the abdominal wound.

König, Jr., is the first assistant to v. Bergmann. He is an exceedingly modest but able surgeon. Under his supervision I enjoyed the privilege of rehearsing quite a number of intra-abdominal operations on the cadaver and on living dogs.

Besides my work in gynæcology I made single visits to various places. Thus, I was invited by Nagel to attend his class when he was teaching the various gynæcological operations on formalin-preserved genitals removed from cadavers and sewed into obstetric phantoms. I visited Virchow's museum and saw some of the famous specimens which have been collected by the master during a half-century.

One day I called at Rosenheim's polyclinic, where clinical instruction is given in the disorders of digestion. It is a filthy set of apartments situated in an upper story of a rear building. The dust in places was quite thick. Rosenheim himself, however, is a very clever diagnostician, and I think his course can be taken with advantage by visitors interested in general medicine.

At the Charité, König, Sr., was operating for the benefit of military surgeons, and at the Kaiserliche Krankenhaus I saw quite a number of the younger men do all sorts of general surgery. Some mornings three operations were being done simultaneously in the one operating-room.

Altogether, I am satisfied that at Berlin a great deal of good work can be done by the medical visitor in every branch of medicine and surgery. Unfortunately the work is scattered and quite expensive. One morning I visited at the large public Kaiserliche Krankenhaus the surgical clinic of a young surgeon named Lexer in company with two American colleagues, and he actually sent the janitor up to us to find out if we had taken tickets for the "course."

There are a good many foreign physicians studying in Berlin—Russians, Turks, Japanese, Belgians, and Americans The last variety is rated very low. One Privat-Docent told me that the American physician had very little standing, unless he was a graduate of Johns Hopkins, Harvard, Yale, or Princeton. He thought that Columbia was beginning to assert herself —which was a slight relief to me.

At Paris, I could see no evidence of a systematic course of instruction for foreign graduates in medicine as we understand this in America. Unfortunately for the visitor interested in gynæcology, all the operators in Paris have selected the same three mornings in the week (Tuesday, Thursday, and Saturday), at the same hour in the morning (10 A.M.), for performing operations. The consequent waste of time (in case one of them fails to operate) can readily be understood.

It is necessary to speak French at these clinics. Only a few of the Parisian operators (notably Pozzi) speak English. Even broken French is better than nothing, for the Frenchman is much more charitable toward the foreigner speaking the language imperfectly than his German colleague. Again, the sense of constraint in the atmosphere of the German clinics is entirely absent in the French hospitals. The visiting surgeon often enters the operating-room with a cigarette in his mouth. The signs on the walls of the German operating-room, "Favete linguis" and "Noli tangere," do not haunt the visitor in France. The visitor is usually invited to a seat at the back of the operator's chair. In Germany also he is permitted to stand close to the operator. In England he is placed behind a railing at a distance. In France, as well as in Germany, the visitor is given a linen coat—excepting at Landau's clinic, where the visitor simply removes his coat. In England these precautions are regarded as superfluous.

With the exception of a few like Pozzi, the French gynæcologists prefer to be called surgeons; and, as a matter of fact, many of them do all sorts of general surgery. This is notably true of Doyen and Tuffier. Pozzi, being a senator, seems to have a mighty "pull," for the government has erected the magnificent "Annexe Pascal" at l'Hôpital Broca (111 Rue Broca), where a pure gynæcological service is maintained. The walls are decorated with beautiful oil paintings, which must have a happy and cheering effect on the patients as they gaze at them from their beds. These walls are regularly scrubbed as if the paintings were not present. There are two operating-rooms, of which one is reserved for purely aseptic operations. Every modern arrangement for ventilation, heating, plumbing, etc., will be seen here. The largest sterilizing apparatus in the world will be found in one special room. The out-patient department is isolated from the hospital proper, and on one of the walls I read the notice, "Never introduce the sound without first inquiring as to the date of the last menstruation"—a very suggestive recommendation.

Pozzi is a dark-haired, swarthy-complexioned man with black whiskers, tinged with gray and carefully trimmed to a point. His nose is somewhat aquiline, his forehead recedes, and he wears a skull cap while in the hospital. I met him a number of times on the street, dressed in the height of fashion and presenting a scrupulously elegant appearance in his tall silk hat and snugly fitting, long English overcoat. Although present during operations by his assistants, I failed during these visits to catch the master himself at work.

I saw Ségond operate at La Salpétrière, which is situated on the Boulevard de l'Hôpital on the other side of the Seine. It is the largest hospital I ever visited, although I am told that it is smaller than the Vienna hospital. It accommodates nearly four thousand patients. Imagine a town enclosed in four stone walls and containing many dozens of stone buildings separated by lanes, streets, and large courts.

Most of these buildings, or "pavillons," are wards for patients, and have been named after the famous men of France. They are usually two or three stories high. In other buildings are housed the engineer, the machinist, the blacksmith, the barrel-maker, the laundry, the kitchen, etc. Under a large shed quite a number of ambulances and hospital wagons were seen. Opposite was the barn with a few horses. Then there were different kinds of stores in which fruits, vegetables, and tobacco were exposed for sale. In some of the oldest buildings (probably four centuries old) which seemed to present a dilapidated, crumbling appearance, signs of "To Let" were visible in the windows. They were probably intended for hospital internes residing on the premises. Of course the usual chapel was present and occupied a building for itself. It faced the beautiful, large, tree-lined main entrance or main court. Several groups of fine old statuary occupied the hall of the central building, and just to one side of the outside entrance gate was the statue of Charcot recently presented by the friends and disciples of the master who has made the Salpêtrière famous throughout the civilized world.

The grounds of this hospital are so large that it has been found necessary to lay tracks over which small wagons with their loads of food or clothing are pushed by women. A quaint sight is that of women, in the open courts, washing linen and underwear on stone slabs with soap, water, and scrub-brushes; then rinsing in little tubs and placing the wash on the grass to dry. It is the same picture that one sees below the surface of the street in the little compartments along the borders of the Seine, where sometimes a dozen women can be seen washing in this antiquated fashion.

Although La Salpêtrière is ancient and crumbling, and far behind our ideas of a modern hospital, one cannot avoid a sensation of pleasure at the air of quaint neatness and cleanliness which everywhere prevails. One sees the picturesque atmosphere of centuries ago, handed down in all its primeval freshness. The contrast with the rest of Paris (which is so glaringly modern in everything else) is so sharp that one certainly misses a most interesting feature of internal Paris in failing to visit La Salpêtrière.

Ségond is a man of fifty, with waxy complexion and gray color to the hair, mustache, and chin-stub. He is an incessant cigarette smoker. He operates on a table which he brought back from his recent visit to New York. He is pushing the American method of abdominal hysterectomy. I saw him do three vaginal hysterectomies with clamps, besides a number of smaller operations. When I called his attention to the fact that one of the hysterectomies took just five minutes by my watch, he replied: "That's nothing, *mon enfant;* on my prize-days (*jours de fête*) I do them in three minutes."

Tuffier is a slim individual, nearing forty, with black mustache and whiskers trimmed to a point. He has the dark complexion and tendency to wrinkles so noticeable among the French. Unlike Ségond, who is constantly cracking jokes during operations, he is very quiet and serious while at work. He does most of his operating at the Hôpital Lariboissière, on the Boulevard de la Chapelle, and named after a countess who left her entire fortune to the state. I saw him do quite a number of operations: an abdominal hysterectomy (by the Howard Kelly method), several laparotomies for tumors of the ovaries and ectopic gestation, and a transperitoneal nephrectomy for an unrecognized cystic kidney. He drains most of his abdominal cases with a specially constructed metal drainage tube. He also does general surgery. Thus he tried to remove a bullet from the hard palate of a case of attempted suicide; and he showed me a successful case of gastro-enterostomy. He is the inventor of the angiotribe (which, by the way, Doyen denies), and he applied it in one case in my presence. I noticed that after sufficient tightening of the screw he immediately removed the instrument from the broad ligament, and all bleeding was controlled. He ridiculed Thumim's claim of having discovered any improvement on his instrument. Just the same, however, he does most of his operations with hæmostatic forceps and ligatures.

I cannot help alluding to a little building on the Boulevard de Clichy, at which Tuffier also operates, and which is known as the "Dispensaire Gratuité." It was constructed from the private funds of a marchioness, and is managed by the same lady, who resides in the little institution. Although accommodating only six patients, it controls an immense outdoor service among the poor of the neighborhood. The neatness and simplicity of everything in the place are exquisite. The plain wooden operating-table, Tuffier told me, cost just $5; and all the other furnishing in the operating-room, including sterilizers, vessels, tables, chairs, etc., cost just $20 more. And Tuffier does hysterectomies, gastro-enterostomies, and all sorts of major operations in this cheaply fitted operating-room, with brilliant results. There was one ornament in this little operating-room. evidently placed there through the religious zeal of the estimable lady in charge. On one of the window-sills (but excluded from the room proper by the intervention of a thick plate of glass) could be seen a little group of plaster casts in colors representing the Virgin and Child with two kneeling angels.

Le Dentu mixes a little gynæcology with much general surgery at the Hôpital Necker. He is one of the best "all-round" men I ever saw. He is over fifty, has gray hair and whiskers, and wears glasses. Besides several general surgical operations I witnessed the removal of a large suppurating intraligamentary cyst. Most operators, under the circumstances, would have contented themselves with simply evacuating the liquid and sewing the sac into the abdominal wound. Le Dentu, however, separated the tumor from surrounding adhesions, taking painfully close chances of seriously injuring the intestine, and finally succeeded in completely enucleating the sac.

I saw Richelot at the Hôpital St. Louis—one of the oldest and largest of the Paris hospitals, and known to Americans chiefly because Fournier (the eminent syphilographer) is on the visiting staff. Richelot is under fifty, and has the index finger of one hand completely ankylosed after a surgical injury, and which he told me caused him no difficulty in his work. His beard was closely trimmed and quite gray. He was very cordial, and invited me to be present during the ensuing week, when he proposed doing a hysterectomy. As I left Paris several days later I was unable to take advantage of this invitation. He did a small operation in my presence. After locating a vesico-vaginal fistula by injecting the bladder with milk, he touched its edges with the Paquelin cautery. The fistula was the disagreeable sequel of a vaginal hysterectomy which he had done several weeks previously.

Reclus, whom I met at the Hôpital Laennec, is a small, wiry man over fifty, with grayish beard and a very high forehead. Contrary to the custom of most of his fellow-colleagues, he arrives punctually at the hospital each morning at nine o'clock, where he meets a dozen to twenty students and visitors, who follow him from bed to bed. He is an exceedingly clever diagnostician, and one of the best teachers I ever listened to. Without any ado, he picks out a man from the surrounding group, and, giving him a patient, makes him explain every step in the process of reasoning, essential to a correct diagnosis. At my first visit I was a little nonplussed at being requested to examine several patients, and express an opinion. This was not at all very agreeable with my imperfect French in the presence of a large class—especially as he did not hesitate to criticise my views. But altogether he is such an amiable person that I shall always recall with pleasurable feelings my three or four visits to his clinics. At one of these he did an interval operation for appendicitis, but was unfortunate in losing the patient. As luck would have it, the case was one in which we were opposed as to the advisability of operating just at that time.

The sessions of the Congress of the French surgeons were held while I was in Paris. Among other things I remember that Championnière advocated the novel theory of passive motion from the start, instead of the customary immobilization in cases of diseases of the joints. Another surgeon presented a series of beautiful Roentgen-ray pictures of bone tumors. Doyen—a blond-bearded individual of fiery temperament—savagely attacked the reader and his paper. He reminded me of some of our ultra-positive surgeons at home, who have no use for anybody on this earth but themselves. I was told that he had a great many personal enemies in France, the reasons for which I could readily understand.

I also attended a meeting of the French Surgical Society, of which Pozzi is president. I shall never forget the noise and turmoil of that meeting. During the reading of a paper or its discussion, the audience was divided into talking groups. There were such a buzz and clamor that the chairman kept continually rapping his desk and jingling a little bell in his vain and hopeless efforts to preserve a little order. Ségond is made responsible for the criticism that the French Surgical Society is a "lot of crazy dogs let loose."

The Académie de Médecine on the Rue des Sts. Pères is a dilapidated old building no longer made use of by the profession, and given over to the health authorities for vaccination purposes.

The magnificent addition to the Pasteur Institute (known as the Institut Biologique) which cost the Baroness de Hirsch $400,000, is nearly completed, and faces the institute proper on the opposite side of the street.

Dupuytren's Museum is situated on the ground of the École de Médecine. It is an antiquated, crumbling structure. It contains a nice but not a very large collection of prepared pathological specimens. It is particularly rich in illustrations of bone pathology.

The museum of the Hôpital St. Louis is, however, one of the features of Paris not to be missed by the medical visitor, particularly if he is interested in skin and venereal diseases. The specimens are masterpieces in wax representing all the varieties of dermatological lesions and tumors. These are reproduced with such extreme faithfulness that a feeling of nausea overcomes the visitor when looking at the specimens representing ulcers and the various lesions of syphilis. The coloring is truthfully natural, and the artist has not even failed to imitate the glossy conditions dependent on sebaceous secretions. This museum is in a building by itself. The walls of the main floor and gallery are lined with shelved closets containing several thousand of these wax models, which have been prepared after original lesions presenting at the clinics chiefly of Fournier and Péan. Each specimen is described on the label—sometimes with explanatory remarks. In an outside room a library, rich in literature referring to this special branch of medicine, can be consulted by the visitor. I could easily devote much more than the space of this paper allows in enumerating the specimens to be seen and studied in this wonderful museum. The visitor with plenty of time can profitably spend several weeks in this one building, and would probably emerge a fairly full-fledged dermatologist.

I shall not have much to say about London, where I spent nine days. Most of the surgeons begin work in the afternoon, about two o'clock. A great deal of general surgery can be seen. At St. Thomas' Hospital (facing the houses of Parliament on the opposite shore of the Thames), operators are usually at work in two operating-rooms separated by a wooden partition; so that one needs only to look to either side of this partition in order to see two simultaneous operations. I did not, however, see very much gynæcological surgery, for some of the operators, like Herman, do not post their operations. As a rule it is only necessary to spend the mornings visiting the various hospitals and consulting the bulletin boards, in order to select the operations one cares to witness during the afternoon. The medical journals (*Lancet* and *British Medical Journal*) devote a page to the operative work for the ensuing week at the hospitals, a decided advantage for the stranger.

I had the pleasure of meeting Cullingworth, one of London's prominent gynæcologists, at the St. Thomas' Hospital. He operates Thursdays in a small room at the back of the Adelaide ward. He looks like a man of fifty, has thin hair, large nose, grayish mustache, and wears glasses. He operates with a very few instruments. He opened the abdomen in one case of fibroid uterus, and, after accidentally injuring the bladder wall, decided the case to be inoperable, and closed up the wound. In a second case he succeeded in doing a supra-vaginal hysterectomy after a very slow and tedious operation. When I suggested the Trendelenburg position he said he had tried it once, but had got no benefit from it; and besides he had become accustomed to the old method. I noticed that he left a large portion of the uterus in the stump. Although very slow and tedious in his work, I was told that his results are excellent.

I was surprised to find a very young man of thirty-five in Bland Sutton, who works at the Chelsea Hospital for Women. He has a thin black mustache, a boyish face, and thick black hair carefully parted and brushed. For an English hospital, the Chelsea Hospital for Women is rather small. It is a newly built modern hospital of ideal construction. Before entering the operating-room the visitor is required to sign his name and address in a register, in which he reads the printed notice that he is expected during the preceding forty-eight hours not to have visited the dissecting or autopsy rooms, or to have attended a septic case. He then may enter the operating-room, where he stands at a distance from the operating-table on a graded platform guarded by railings.

During my hour-and-a-half stay I saw Mr. Sutton do the following operations: 1, Laparotomy for an ovarian cyst about the size of a large orange; 2, operation for umbilical hernia in which the whole umbilicus was exsected, and the extensive abdominal wound closed up with a buried layer of wormgut and a superficial layer of catgut; 3, removal of a small mammary cysto-fibroma; 4, flap operation for extensive perineal laceration, during which the operator unintentionally buttonholed the vaginal flap; 5, curettage and cauterization with pure zinc chloride of suppurating inguinal glands. To four patients ether was administered by means of the Clover apparatus by a woman anæsthetist. I noticed that ether is pushing its way rapidly in the operating-rooms of Germany, France, and England. Cullingworth employs ether and oxygen after the method of C. S. Cole, of New York. I noticed the free employment of nitrous oxide to start anæsthesia in some of the English hospitals.

Without entering into possibly wearisome details, I will say that I have seen the following eminent English surgeons at work: Cullingworth, Sutton, Pitts, Clutton, Butlin, Battle, and Hurry Fenwick. I shall simply allude, in passing, to an interesting gastro-enterostomy done by Battle, and to two kidney explorations done by Hurry Fenwick. In these kidney operations the operator separated the kidney from its fat capsule, and brought it clear out of the lumbar incision. After exploring the region of the pelvis—in one case actually opening and probing it, the kidney was dropped back, and the wound closed and drained. In neither case was anything found, although a stone was suspected in each. But Mr. Fenwick assured me that he had done forty or fifty operations of this kind, and had never seen any ill results.

Of course in the short space of nine days one can hardly begin to form a fair conception of the amount and quality of work done in a large city like London. But of one thing I am certain, and that is that there is less purely aseptic surgery done in London than in Berlin, Paris, or New York. This is rather a serious accusation to make against the birthplace of Listerism, but I think a few examples, which I witnessed in the largest hospitals in London, will bear me out. Thus I have seen the nurse in charge of sponges during an abdominal hysterectomy push tables, hand over basins, and otherwise subject herself to infection without washing her hands a single time. I have seen operators of surpassing skill wipe the nose, scratch the forehead, twirl the mustache, or adjust eye-glasses, and proceed with the same hand in their work (sometimes in the abdominal cavity), without dipping it even in water.

I spent a number of mornings pleasantly in taking notes and making sketches of pathological specimens in the museum of St. Thomas' Hospital. It is in a new building, and consists of a main floor and two galleries, the walls of which are shelved and piled with hundreds of jars containing pathological specimens. There are four descriptive catalogues giving very interesting details regarding each specimen. In the reading-room of the hospital I noticed only one American journal—the MEDICAL RECORD.

At 20 Hanover Square, a very fashionable neighborhood, I attended a meeting of the British Gynæcological Society. Several dozen members were present, mostly in evening dress. Contrary to the atmosphere of the French Surgical Society (and some of our American societies, I am sorry to add), everything presented an air of order and quiet refinement. McNaughton Jones presided. He has come over from Dublin (I was told by a member), and has immediately taken rank among the foremost of London's fashionable consultants. He looks about sixty, and has magnificent thick steel white hair and beard. His bearing is very distinguished, and his discussions were exceedingly logical and convincing. I was particularly gratified to hear in the course of the evening continuous allusions to the work of American gynæcologists.

I cannot close these brief extracts of my experience with the profession abroad, without alluding to the fact that the American surgeon—particularly the gynæcologist and abdominal surgeon—is positively forcing himself in a very emphatic manner upon the notice of our colleagues across the ocean. The time has already arrived when the names of Thomas, Emmet, Murphy, Senn, Frank, Kelly, Noble, Polk, Wylie, Mundé, Boldt, and others are perfectly familiar to the workers in surgery and gynæcology on the other side; and it was a great pleasure to me to note that, in England and France particularly, the stars in our firmament were alluded to with the same feelings of reverence and respect as at home.

112 EAST SIXTY-FIRST STREET.

On the Free Use of Drinking-Water in Acute Hemorrhage.—Louis Kolipinski says that the prime indication in the treatment of acute hemorrhage, after the temporary or permanent closure of the bleeding vessels, is to refill the vascular septum with its normal fluid without delay. A plan which yields brilliant results is the very liberal exhibition of drinking-water. He cites the case of a girl, aged eighteen years, suffering from typhoid hemorrhage, who drank twenty-four tumblers of water in one night. The next morning the patient had revived completely and her radial pulse was strong at 108 beats per minute. Cold-poultice treatment was also used.—*Maryland Medical Journal*, December 30, 1899.

Deformity following Excision of the Knee.—Henry Ling Taylor says the knee of a child should practically never be excised for ostitis. Excessive shortening often follows from destruction of the epiphyseal junction, and there is often recurrence of deformity from failure to get bony union. Opening and washing out, with erasion when necessary, will preserve the epiphyseal line.—*Pediatrics*, December 15, 1899.

Incipient Insanity.—J. Outterson Wood says that some of the most distressing cases of uncertifiable mental disorder are those in which the patient, although otherwise sane, is tormented by "horrid thoughts." There is danger of a breakdown of mental control and the development of an impulse which may end in disaster. The general health should be improved, insomnia overcome by twenty grains of sulphonal on alternate nights, indigestion carefully treated, and cheerful surroundings provided for the patient, or some new and healthful outside elements introduced into the family. A nervine tonic may be given, and hypnotic treatment is sometimes of value.—*Treatment*, December 14, 1899.

Cases of Bullous Eruption of Undetermined Nature.—T. Colcott Fox relates an unusual instance of bullous eruption affecting the entire body in a woman aged thirty-six years, which differed from pemphigus in commencing as inflammatory nodules of considerable size, which rapidly became vesicular and the contents blood-stained. The patient steadily lost ground and died. The total duration of the eruption was nine weeks. After rupture of the bullæ there were ulcerations which spread as in phagedæna. The first suspicion was that the affection was due to iodide of potassium, but no history could be obtained that this drug had been taken. Another theory was based upon the possibility of glanders infection.—*British Journal of Dermatology*, December, 1899.

The Offspring of Congenital Syphilitics.—George Pernit relates the history of a congenitally syphilitic mother who, out of seven pregnancies, gave birth to only one living child at full term. This boy was a weakling who showed no actual signs of syphilis. The father, although blind, could not be made out to be syphilitic. The mother showed unmistakable signs of congenital syphilis.—*British Journal of Dermatology*, December, 1899.

Extra-Genital Chancre.—W. T. Freeman records an instance of chancre upon the outer side of the right gum in a girl, aged sixteen years. It was not known how long the ulcer had existed. There was some swelling of the submaxillary gland, but it was not noticeably hard. A consultation on admission to the hospital confirmed the diagnosis. The ulcer steadily healed under mercurial treatment. An erythematous rash subsequently developed.—*British Journal of Dermatology*, December, 1899.

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A SET-BACK FOR OSTEOPATHY IN KENTUCKY.

KENTUCKY, in striking contrast to some of the other States, has ever studied the best interests of the community at large, and of the medical profession in particular, in stoutly and persistently discountenancing the practice of osteopathy within its borders. Quite recently a decision has been rendered in the Jefferson circuit court of Kentucky which is probably the most discriminating and apposite of any that have yet been delivered in regard to osteopathy.

The judgment referred to was the result of a suit brought by a professor of osteopathy against the State board of health of Kentucky, to enjoin it from prosecuting him for practising osteopathy in the State. By the statutes of Kentucky the following regulations must be complied with in order to practise medicine:

"1. A diploma from a reputable medical college legally chartered under the laws of this State. 2. A diploma from a reputable and legally chartered medical college of some other State or country, indorsed as such by the State board of health. 3. Satisfactory evidence from the person claiming the same that such person was reputably and honorably engaged in the practice of medicine in this State prior to February 23, 1884. 4. Satisfactory evidence from any person who was reputably and honorably engaged in the practice of medicine in this State prior to February 23, 1884, who has passed a satisfactory practical examination before the said board."

The plaintiff in the case against the Kentucky State board of health did not possess the first, third, or fourth qualification named in the above-quoted regulations, but had received a diploma from the American School of Osteopathy at Kirksville, Mo., a legally chartered school under the laws of that State. Therefore, as by another section of the Kentucky statutes it has been enacted that there should be no discrimination against any institution, school, or system of medicine, the question to be decided was whether the American School of Osteopathy at Kirksville, Mo., was a reputable medical college. The State board of health fully investigated the said school. It sent a committee of three of its most prominent physicians to that institution, who after an exhaustive examination of its equipment and facilities for teaching, and after satisfying themselves as to whether its professors were competent or incompetent educators, came to the conclusion that the American School of Osteopathy at Kirksville was not a reputable medical college, and that consequently the diploma from it held by the plaintiff was entitled to no respect. That this decision was justified by the facts of the case was undoubtedly proved absolutely. Of the fifteen professors of the faculty only three were possessed of a degree in medicine, while the explanation of osteopathy given in the catalogue of the institution is a farrago of the greatest conceivable nonsense. The plaintiff had the unblushing assurance to testify that osteopathy cures all diseases except cancer, syphilis, and consumption; that he treats Bright's disease by manipulation, and diabetes by manipulation stimulating the renic splanchnic; that he treats diphtheria by manipulation, stimulating the vasomotor centre in the back of the neck, and by putting the finger down the throat of the patient, and manipulating the soft palate or fauces; that he treats scarlet fever, lock-jaw, milk leg, varicose veins, dropsy, retention of urine, fistula in ano, anal fissure, acute rheumatism, hip-joint disease, simple, benignant and malignant tumors, chronic syphilis, eczema, shingles, carbuncles, bone felons, bruises, puerperal convulsions, flooding after child-birth, laceration of the cornea of the eye, all by manipulation; but he refused to state how or in what manner this manipulation is applied. Many of the foremost physicians of Kentucky gave evidence for the defence, among whom was Dr. J. M. Matthews, the president of the American Medical Association, who testified that he understood the theory and practice of osteopathy, and that osteopathy is not a system for curing diseases, and is to be feared for dangerous results which would naturally be caused thereby. He furthermore stated that manipulation of the body, instead of being a cure for Bright's disease and diabetes, and for scarlet fever, appendicitis, retention of urine, and other diseases which osteopaths aver could be cured by manipulation, would do the patient no good, but on the contrary positive harm. Dr. Matthews even went so far as to assert that osteopathy, upon the lines of the treatment laid down by the plaintiff, was as a system very foolish and would be more likely to kill patients receiving it than benefit them. According to the testimony proffered in the foregoing trial, massage is the magical means by which osteopaths perform their vaunted cures. The fact that massage exerts a beneficial effect upon a certain class of maladies will be denied by no physician. But when its exponents claim that it will relieve and cure organic disease, it is time indeed that the gullible public should be defended against itself.

Perhaps even in the middle ages, before medicine was a science and quackery of every description was rampant, there has never been a time when charlatans abounded and flourished as they flourish in this country now. Four or five States—in this enlightened age and in a land which proudly lays claim to possessing among its inhabitants the most acute brains to be found in the world—actually legalize osteopathy, while faith healers, Christian scientists, hypnotists, and many others of the irregular fraternity swarm at every corner. The action of Kentucky, in excluding from the practice of medicine all those who have not gained by a course of study and by practical experience the knowledge of how to treat the ills of their fellow-men, is just both to the general public and to the qualified medical practitioner, and it is a matter for deep regret that all the States of the Union do not follow its good example.

TYPHOID FEVER IN SOUTH AFRICA.

The prediction was made, some considerable time ago, by those familiar with South Africa and with the diseases incidental to the country, that the evil most to be dreaded by the British soldiers campaigning there, and especially by those besieged in the towns, was enteric fever. In every war yet undertaken typhoid fever has probably claimed a larger share of victims than has any other disease. The explanation of this is comparatively easy. Soldiers in camp do not live under healthy hygienic conditions; their drinking-water supply is often impure, and their food and cooking, despite the utmost care that may be taken in these respects, are frequently bad. The season has now arrived when typhoid fever, the most prevalent and deadly disease of South Africa, rages most virulently.

In the Galeaka-Gaika campaign of 1877–78, and in the Zulu war of 1879, the British troops suffered so severely from its inroads that Helpmakaar had to be evacuated. Professor Sambon, writing in the *Journal of Tropical Medicine* of December 15th, says that in these two wars the British appeared to have suffered principally from a mixed infection of enteric and intermittent fevers, and refers to the fact that the term "typho-malarial" was applied by Dr. Woodward to the mixed infection while serving in the federal army of the Potomac in 1861. Dr. Sambon, however, does not think that this condition is of frequent occurrence, but is rather inclined to hold the opinion that although in a malarious region intermittent fever may develop in a patient suffering from typhoid, it happens far more often that the typhoid fever attacks a man actually suffering from malarial paroxysms, or it evokes into activity a latent malarial infection.

The origin of typhoid fever in South Africa will be doubtless thought by the majority of medical men to be the same causes which are usually considered to occasion its outbreak in other countries. On this point Dr. Sambon is not altogether in agreement with the majority, for while allowing with a certain degree of reservation that the most common cause of typhoid epidemics in South Africa is a polluted water supply, he points out that many medical practitioners in South Africa assert that the origin and dissemination of the malady depend chiefly on infected cattle. A much more potent vehicle of infection than diseased cattle is probably flies. A bright light was cast upon the harm wrought by these insects as carriers of disease by the finding of the United States commission appointed to inquire into the cause of camp epidemics of typhoid fever in this country during the war. The commission inspected the camps at Chickamauga, Huntsville, Fernandina, and Jacksonville, and found that the typhoid fever in each instance was brought by the volunteers from their State camps. The water supply was in most places good, and was not responsible for the spread of the fever. This was effected, in the opinion of the members of the commission, by the flies which swarmed in all the camps, and devoted their attentions impartially and alternately to the fecal matters in the open and not disinfected sinks and to the food of the troops. The great prevalence of enteric fever in South Africa during the hot season would appear to add further confirmation to this theory, as the statement may be made without fear of contradiction that in no other portion of the world do flies abound in such numbers.

Whatever may be the predominating cause of the origin and spread of typhoid fever, the fact remains that the disease has broken out among the British troops at the front, and especially in two of the towns encompassed by the Boers. Of the three besieged towns, Kimberly is in every respect the most healthy; its situation is good, its water supply is pure and sufficient, and its sanitary arrangements are conducted on approved modern principles. Mafeking, which is but a small place, is constructed and its sanitation managed on much more primitive lines. In addition its water supply is inadequate and impure; consequently much sickness is there present. But it is when we come to Ladysmith that we find by far the most serious condition of affairs, both on account of its natural insalubrity and owing to the large number of soldiers who have been cooped up within its boundaries for the past two months. This town even in times of peace is by no means healthy. It lies low and amidst swampy surroundings; its sanitation is defective, while its water supply is lacking in quality and quantity. It has been a military station since May, 1897, and has always suffered from a prevalence of enteric fever, dysentery, and ague. The news then that enteric fever and dysentery have broken out on a large scale in Ladysmith can be matter for no surprise, and must add greatly to the difficulty besetting the beleaguered garrison on every side.

With regard to the question of immunity to typhoid fever, or rather of comparative immunity of the British troops in South Africa, past experience teaches us that those from India and those who had been previously stationed in the country are not likely to suffer so much from the disease as are the young soldiers who have come direct from England. When typhoid fever gains a foothold among bodies of men living under the conditions in which the British troops in South Africa are compelled to live, the likelihood is that the disease will continue to spread, and that it will be very difficult to put into force measures for its successful suppression. Doubtless the medical and sanitary officers of the British army will exercise a strict supervision over the sanitary arrangements of the camps and towns, but the fact is evident that their skill and energy will be taxed to the utmost.

THE STREET AMBULANCE SERVICE IN GREAT BRITAIN.

THE London *Lancet*, in an editorial in its issue of December 9th, severely criticises the defective arrangements for removing to hospitals those individuals who may be injured or attacked by illness in the streets of British cities, and at the same time pays a well-merited and graceful tribute to the excellence of the ambulance service in American cities. Comparison in this respect between London and New York is certainly startling, and does not augur well for the intelligence and enterprise of the inhabitants of the largest and richest city in the world. The facilities provided for conveying to a hospital those in need of prompt surgical or medical care appear in London to be primitive to a degree.

The Lancet comments on the matter thus: "Considering the wealth of London, its position as a centre of civilization, and the enormous number of its street accidents, there is probably no city in the world where such inadequate provision is made for dealing with these misfortunes. The unhappy victim of accident or sudden illness in our streets depends for his safety on the intelligence of the chance passer-by and the nearest policeman. . . . A little crowd of well-meaning but ignorant and therefore dangerous persons surrounds the patients, limiting the supply of fresh air and precluding any medical man, if he happens to be near, from even seeing that there is a case in which his presence might be of immediate service. By this time a policeman has arrived, and with the help of one of the original witnesses of the accident the victim is helped into a cab, and probably arrives at a hospital with a compound instead of what was at first a simple fracture, or with an extensive cerebral hemorrhage where there might have been only a limited one had he been in medical hands before removal from the street. Obviously the sooner that medical aid can reach the victims of illness or street accident the better. Yet there is absolutely no method for quickly bringing such aid to the injured, and as a community we rely simply on the dangerous alternative of getting the injured by the best means that chance to be available to the nearest place where we may expect to find medical aid."

The foregoing strictures are decidedly pungent, but to the person who is acquainted with London they will appear to be fully justified by the facts of the case. Horse ambulances and ambulance calls are unknown in Great Britain, and the sick or injured person in the street is either hustled into a cab or borne by policemen on a hand-stretcher, and, as *The Lancet* puts it, horse ambulances are a dream of the future for the injured Londoner. Americans are ofttimes accused by Britishers of unduly extolling the methods and conveniences of their own country. It is therefore grateful and refreshing when a journal of *The Lancet's* repute freely acknowledges the superiority of our system of dealing with the sick and injured in the streets, and furthermore advises the towns of its own land to go and do likewise. The article in *The Lancet* will doubtless tend to arouse the sense of the usually somewhat phlegmatic British public to the necessity for reforms in this line.

THE WAR IN SOUTH AFRICA: ITS MEDICAL ASPECTS.

THE war in South Africa between the British and the two Boer republics is going to be a protracted affair, and the lessons to be learned from it by other nations will certainly be of the first importance. In military circles the operations are being watched with intense interest, for since hostilities broke out questions have been started relating to the management of artillery, to the value of rough-riding cavalry, to the difficulty of sea transport, and to the methods of maintaining long lines of communication—we mention only the points which occur immediately to our mind—whose answers are of the greatest importance to all military powers. The medical arrangements of this campaign will similarly form an object-lesson for all medical men, as well as for those who in a business or humanitarian capacity have to take into consideration the way in which the modern soldier is cared for during war.

We have therefore decided to give our readers week by week a *résumé* of medical events as they occur in South Africa, prepared for us by a special correspondent who is in an exceptional position for hearing all that is to be heard from official or private sources. Our readers may rely upon his facts.

(From our Special Correspondent.)

A Summary of Past Events: Sir George White's Force.—It will be convenient to summarize as briefly as possible the medical events of the war up to the end of 1899, so that the whole story may be consistently told from beginning to end.

In October, when war broke out, the British War Office sent out the Natal field force under Sir George White, who took with him Lieutenant-Colonel R. Exham, R.A.M.C., as principal medical officer. Sir George White's business was to arrest the rush of the Boers down to Natal to the coast, and with some losses and much hardship he succeeded. But although he saved Pietermaritzburg and Durban by hard fighting, he was hemmed in at Ladysmith, where he and his medical officers at present are. The medical experiences of this force have yet to be given to the world, and the beleaguered garrison will be fortunate if there is not a dismal tale of typhoid fever to tell. At the battles of Glencoe and Elandslaagte, as well as during the retreat from Dundee to Ladysmith, the members of the Royal Army Medical Corps behaved with great bravery, and all the arrangements for the care and transport of the sick worked satisfactorily. Surgeon-Captain Buntine, an Australian medical volunteer, was mentioned in the dispatches for conspicuous gallantry. At Dundee the British wounded, among whom was General Symons, the British officer in command, were left in the hospital, for undoubtedly the retreat was a hasty one. The Boers took possession of the hospital and looked after the wounded with every consideration, availing themselves also of the services of the British surgeons for the Boer wounded. These circumstances make all the stories of the persistence with which the Boers fire upon ambulances and hospitals rather doubtful. The Boers were found to have but rough-and-ready arrangements for dealing with their wounded.

The South African Field Force.—Hard upon the heels of Sir George White the army corps followed under Sir Redvers Buller. This consisted of the commander-in-chief's staff, two brigades of cavalry, three divisions of infantry, three brigades of artillery, certain companies of engineers, and certain regiments to maintain lines of communication. Surgeon-General W. D. Wilson, who had great Indian experience, went out on the staff as principal medical officer of the force; and the other principal medical officers were: Colonel Townshend, R.A.M.C., with the first division under Lord Methuen; Colonel Gallwey, R.A.M.C., with the second division under Sir Cornelius Clery; Lieutenant-Colonel Edge, R.A.M.C., with the third division under General Gatacre; Colonel Donovan, R.A.M.C., with the cavalry under Lieutenant-General French; and Colonel Stevenson, R.A.M.C., with the lines of communication. The army corps consisted of 52,000 officers and men with 114 guns, making with Sir George White's troops, Indian and colonial troops, and local garrisons some 70,000 men. The medical equipment for the corps consisted of 155 officers in addition to those already mentioned. Of these, 53 were detailed to the different regiments by battalions; 24 were in charge of eight bearer companies, whose duty takes them to the fighting line to bring in the wounded to the field hospitals; 64 were in charge of twelve field hospitals; 4 were in charge of stationary hospitals, 8 were in charge of general hospitals, and 2 were in charge of medical stores at the base.

Hospital Ships.—Two hospital ships were sent to South Africa by the War Office, and two were afterward dispatched at the expense of private donors, viz., the *Princess of Wales* and the *Maine*, whose outfit was defrayed by the American women of London. All the hospital ships were transformed passenger ships, but the transformation was very complete, for in each case the insides were ripped out, the familiar furniture abolished, the woodwork painted, and the saloons transformed into airy wards containing swinging cots.

Lay Assistance.—Hardly had the war commenced when Sir George White met with a serious reverse, losing two infantry battalions, and a battery of mountain infantry amounting to a force of thirteen hundred men. To lose the men was bad, but the loss of more prestige was worse for the British. It must be remembered that the seat of war, especially in northern Cape Town, was occupied by British subjects allied by blood to the Boers. These men were sitting on a fence until this event decided many of them to throw in their lot with the temporary victors. Thus the British forces were decreased as the Boer forces were increased, and the British government at once decided to send out more troops. The Royal Army Medical Corps was by this time becoming depleted, and lay assistance was required to carry on the work left behind them by those who had gone to South Africa, when it occurred to the director-general that as he must fall back upon laymen he might as well have the advice of great civil surgeons. Accordingly Sir William MacCormac, the president of the Royal College of Surgeons of England, Mr. Frederick Treves, and Mr. G. H. Makins were appointed civil surgeons to the forces; and later Mr. Watson Cheyne, Mr. Cheatle, Sir William Stokes, and Mr. Kendal Franks were similarly requisitioned. The Royal Army Medical Corps did not resent having the lay surgeons put over their heads in an advisory capacity, but on the contrary welcomed their assistance. This fact will have an important development in Great Britain, it is believed, for it will lead to the formation of a sort of scientific reserve to the Royal Army Medical Corps, consisting of operating surgeons whose services can be obtained by the army in times of peace. Such a system exists in Germany, and will probably be adopted in Great Britain.

The Progress of the War.—The progress of the war became most unfortunate for the British. When Sir Redvers Buller arrived at the Cape, he was compelled to abandon his plan of marching at the head of an army to the capitals of the Orange Free State and the Transvaal, as British forces surrounded at Ladysmith and Kimberley demanded immediate relief. Consequently Buller and Clery went to Natal to try to get into Ladysmith, Methuen went to try to get into Kimberley, French went to Colesberg, and Gatacre to Stormberg to check the Boers in north Cape Town, now become numerous by rebellion reinforcements. The army corps thus split up met with reverses in every direction, and reinforcements were ordered out under Lord Roberts.

This brief summary of previous events may be known to most readers, but it seemed to me to be necessary, if the information to follow about the medical events with the various columns is to be quite comprehensible. I shall in my next article describe in detail the equipment of the Royal Army Medical Corps, and give an account of the way in which the wounded have fared in the engagements which have now taken place all over the field of war.

News of the Week.

The Genito-Urinary Section of the Academy of Medicine.—At a recent meeting of the Genito-Urinary Section of the New York Academy of Medicine, Dr. W. K. Otis was elected chairman for the ensuing year. The date of meeting was also changed from the second Tuesday to the third Wednesday of the month.

Delaware County (Pa.) Medical Society.—At the annual meeting held at Chester on January 12th the following officers were elected for the ensuing year: *President*, Dr. McMasters, of Ridley Park; *Vice-President*, Dr. Gallagher, of Glenolden; *Secretary*, Dr. Leon F. Fussell, of Media; *Treasurer*, Dr. D. W. Jefferies, of Chester; *Librarian*, Dr. Trimble, of Lima; *Reporter*, Dr. M. A. Neufield, of Chester; *Censors*, Dr. D. W. Jefferies, of Chester, and Dr. Bartleson, of Clifton Heights.

Symptoms of Sanity in a Christian Scientist.—A woman in Boston was run over by the cars while returning from a Christian Science meeting, and her foot was crushed. She refused to go to a hospital and insisted upon being taken to a Christian Science healer. The latter, however, was strangely sane, and refused to give the woman any treatments, but advised her removal to a hospital at once. She was taken to the City Hospital and the foot was amputated. The healer said the woman had attended only one meeting, and was evidently carried away with the idea that the science of Christian healing included surgical cases, which, however, "scientists" were not prepared to treat. The healer's remarks were manifestly heretical and call for a bull of excommunication from "Mother."

English as She is Wrote in Philadelphia.—The putative editor of a medic journal some miles below New York, with that fatal fatuousness which impels men of his sort to rush in where angels fear to tread, has set himself the task of teaching others how to write. The following is a sample of how he does it. He is berating a correspondent for daring to criticise one of his myriad lapses, and says: "The word-fetich man, the sneerers at change and progress in philology, are amusing people, at least until dogmatism and silliness reach madhouse-intensities. To refract a person, or his eyes, are terms used thousands of times every day by all oculists, and aid us so much in expressing facts that if they were as illogical and absurd as the pernickety sticklers themselves, could not be killed; nor can they be kept from the written language when so habitual in colloquial use."

A Scientific Study of the Results of Hanging has been begun under the auspices of Jefferson Medical College. In the case of a murderer hanged recently in Philadelphia it was found that death had not resulted from either fracture of the vertebræ or asphyxia, but from traumatism of the structures of the neck, which were much lacerated. The crystalline lens was intact. Life persisted for eighteen minutes after the falling of the drop, although it is thought consciousness was lost at once.

The Plague.—Assistant Surgeon Havelburg of the Marine-Hospital service reports from Rio de Janeiro on January 11th that there had been one death from the plague in that city, the diagnosis having been confirmed by bacteriological examination. A Brazilian of this city, in a communication to the daily papers, denies this report, affirming that he had received a dispatch on January 12th in which Dr. Nuno Andrade, chief of the health department at Rio, is quoted as saying that no cases of the disease had yet been found there. Paraguay has declared a quarantine against all vessels which had sailed from suspected ports since the first of this month.—In Bombay the plague is reported to have reappeared, the number of deaths in the city on January 12th having been three hundred and seventy-six. The average death rate, when no epidemic prevails, is seventy-five.—In Japan the disease still exists, but the authorities have succeeded in preventing any epidemic as yet. In Kobe and Osaka, where the danger is greatest, there is an average of only about one case a day reported. The health officials in Tokio have instituted a thorough cleansing of the city, every house being visited and, if necessary, swept out and disinfected.—In Honolulu twenty-two deaths had occurred from the plague up to January 9th. Nearly every case has ended fatally. Among the deaths one was of an American woman, and this has caused alarm, as it refutes the statements made by the health authorities that the disease was confined to the natives and the Asiatics. The lifting of the quarantine on Chinatown just before Christmas is thought to have been responsible for the fresh outbreak of the disease. On December 31st it was decided to destroy all infected houses. Since then five sections of Chinatown have been destroyed. As soon as a case of sickness is found or a suspect discovered the board of health physician examines it. If found to be the plague the victim is removed to one of the two camps and the premises are burned. In this way it is hoped to stamp out the infection. In the mean time a house-to-house inspection is going on, especially in the Asiatic quarter. This inspection has revealed several cases of leprosy that had escaped the vigilance of the authorities. The port quarantine is absolute. No passengers are allowed to depart until they have spent ten days in quarantine, and in-coming steamers cannot put any passengers ashore nor can any one board them. Many tourists on the island are unable to get away. Freight is carried to the steamers in lighters, and no vessel is permitted to tie up at the wharf.—Two cases of the plague are reported from Adelaide, South Australia, one of them terminating fatally. The patient was a runaway sailor from a British bark.—The disease is apparently beginning to spread in Manila, a dispatch from there dated January 16th reporting three additional cases.—Several cases have occurred at Noumea (or Port de France) in the island of New Caledonia, lying about half-way between Australia and the Fiji Islands.

Influenza is very prevalent in England, in the provinces as well as in London, and many deaths have been caused by the disease. In Barcelona also it is said that half the residents of the town are ill, and the mortality has largely increased.

Mr. William Cadge, the well-known surgeon of Norwich, England, has been seriously ill, and a report of his death was published on December 23d. He was not dead, however, and has had the opportunity to read many kindly obituaries in both medical and lay journals.

Surgeons of the Thirteenth Regiment, N. G. S. N. Y.—Colonel Austen, of the Thirteenth Regiment in Brooklyn, has appointed Dr. James P. Warbasse assistant surgeon with the rank of captain to succeed Dr. Henry P. De Forest, who has become surgeon with the rank of Major.

Sale of Tuberculous Meat in Berlin.—The unpleasant discovery was made a few days ago in Berlin that, through the connivance of officials in the city stockyards, large quantities of condemned tuberculous beef have been smuggled through and sold to a large restaurant and to several big sausage-makers. An official investigation has been ordered.

War on the Cigarette.—A bill has been introduced into the New York legislature to regulate the sale of cigarettes. Dealers must obtain a tax certificate and must make oath that the cigarettes to be sold contain no injurious drugs or narcotics. The application for a certificate must be signed by five reputable citizens of the place where the applicant resides, and no cigarettes can be sold to persons under eighteen years of age.

Yellow Fever in Mexico.—It was officially declared some time ago that Vera Cruz was free from yellow fever, but a number of new cases have broken out recently, and several deaths have occurred in the military and civilian hospitals. The sanitary agent stationed in Orizaba reports that the yellow fever has also reappeared in that city. One case was noted in Tehuantepec on January 2d, but since that date no cases have been reported there.

A Physician to be Court-Martialled.—It is reported from Cape Town that Mr. Hoffman, a member of the Cape Assembly, who joined the Boers as a surgeon, is a prisoner at De Aar, and in all probability will be court-martialled.

The Berks County (Pa.) Medical Society, at its annual meeting held at Reading on January 9th, elected the following officers for the ensuing year: *President*, Dr. F. W. Frankhauser; *Secretary*, Dr. James W. Keiser; *Treasurer*, Dr. A. S. Raudenbush.

Consulting Physicians for the State Hospitals.—A bill has been introduced into the New York legislature by Senator Ambler, amending the insanity law, so as to provide for the appointment of a staff of consulting physicians for hospitals for the insane, whose duties shall be similar to those of a staff of consulting physicians to a general hospital.

Dismissal of Hospital Internes.—The internes of the Metropolitan Hospital (the Homœopathic City Hospital on Blackwell's Island), in order to express their dislike for the superintendent, hung the latter in effigy one night and then danced around the dummy. Their prank was discovered and reported to the commissioner of charities, who at once, without a hearing, expelled the entire house staff, consisting of twelve young graduates.

The Cumberland County (Pa.) Medical Association, at its annual meeting held at Carlisle on January 9th, elected the following officers for the ensuing year: *President*, Dr. J. C. Davis, of Carlisle; *Vice-Presidents*, Dr. M. M. Daugherty, of Mechanicsburg, and Dr. George W. Borst, of Newville; *Secretary*, Dr. Hildegard Lonsdorff, of Carlisle; *Assistant Secretary*, Dr. J. A. Lefever, of Boiling Springs; *Treasurer*, Dr. J. H. Bowman, of Riverton.

A Mineral Diet.—A dime-museum performer, who was called "the man with ostrich stomach," has been earning an honest living for a year or so by swallowing pins, nails, coins, watch chains, and other dainties. He got along fairly well until he began to gorge himself with pins, when his stomach rebelled, and he was forced to go to a hospital in Brooklyn. There he was operated upon, and two nickel watch chains, one brass chain, two latch keys, six hairpins, one hundred and twenty-eight common pins, ten two and one-half inch iron nails, two horseshoe nails, one finger ring set with a stone, and several other equally digestible articles were removed.

An Epidemic of Typhoid Fever due to Drinking-Water.—A small epidemic of typhoid fever has occurred in a section of Wayne, a suburban town near Philadelphia, in which investigation disclosed that in all of the houses in which cases occurred the water supply was derived from a spring and two dug wells. On chemical analysis of the water the presence of a large percentage of chlorine was found, indicative of sewage contamination. The surface of the ground in the neighborhood of the wells was covered with stable manure. The first of the cases occurred in a man who returned from Europe with the disease, and was treated at a house the drainage pipe of which runs within forty feet of the spring and one of the wells from which the water supply was obtained. The disease developed shortly afterward in the neighborhood supplied with water from this source. No cases occurred in the districts supplied with water from the two other sources.

A Female Hygienic Exposition will be opened in St. Petersburg the latter part of January. The object of the exposition is to bring before the public all that has been done by women to make hygienic living more attainable.

The Brooklyn Society of Neurology.—At the annual meeting of this society, recently held, Dr. William Browning was elected president; Dr. R. C. F. Coombes, vice-president; and Dr. W. H. Haynes, secretary.

Dr. Victor C. Vaughan, professor of hygiene and of physiological chemistry in the University of Michigan, and late lieutenant-colonel Thirty-third Michigan volunteers, U.S.A., has been elected surgeon-general of the Spanish-American War Veterans.

Philadelphia Medical Club.—At the annual meeting held January 5th, the following officers were elected for the ensuing year: *President*, Dr. J M. Anders; *First Vice-President*, Dr. H. A. Wilson; *Second Vice-President*, Dr. W. L. Rodman; *Secretary*, Dr. Guy Hinsdale; *Treasurer*, Dr. F. Savary Pearce.

Malaria in Central Asia.—According to the *Turkestan Messenger*, five hundred and ninety-five persons died from malaria in the latter half of September in Tashkend. The number of persons severely ill with the disease during that time was one thousand seven hundred and eighteen.

Marine Hospital for Honolulu.—The President has issued an order setting apart seven acres, more or less, out of the government reservation east of the "Punch Bowl," in the island of Oahu, Hawaii, as a site for a United States marine hospital for the port of Honolulu.

An Unusual Breach-of-Trust Case.—A claim of $5,000 has recently been brought against a Hartford, Conn., physician on the following somewhat extraordinary grounds: The doctor had agreed to take charge of a maternity case, but was not present when the child was born; a few days later the child died. The physician was then sued for breach of trust in the case and as being responsible for the death of the child. The defence demurred to the complaint, stating that the father could not have acted as the agent for the child, and that the doctor did not contract with the unborn child for its delivery. As the case was brought because of the death of the child, the defence claimed that it should be quashed. The judge ruled that suit may be brought in behalf of a child unborn when its parents had made a contract to deliver and care for it after its birth, and found true cause for action on the part of the parents. The case has caused considerable interest throughout the State, and is the first of the kind brought under Connecticut statutes.—*Boston Medical and Surgical Journal.*

Drs. James A. Roache and James P. Glynn, of Brooklyn, have been appointed physicians in the department of charities in that borough.

Dr. Sidney L. Laselle, of Orange, N. J., has started for Hainan, China, where he will serve as a medical missionary. He has gone out under the auspices of the Presbyterian Board of Foreign Missions.

A Breisky Memorial.—On December 14th, in the obstetrical clinic of the German University of Prague, a memorial to Professor Breisky was unveiled in the presence of a large assembly.

Insanity in the Army.—Fourteen soldiers, declared to be insane, have been sent to Washington from the Presidio military reservation in California. Nearly all of them became insane while on duty in the Philippines.

Medical Practice in Brazil.—According to a recent decree the holder of a medical diploma from a foreign university of recognized standing is now allowed to practise in Brazil. Formerly foreign physicians desiring to practise in that country were obliged to pass an examination in the Portuguese language.

The German Balneological Congress will be held in Frankfort-on-Main on March 8–13, 1900. The sessions will be held in the forenoon of each day, three of the afternoons being devoted to excursions to Soden, Nauheim, and Homburg. Information regarding the congress may be obtained from Dr. Brock, 18 Melchiorstrasse, S. O., Berlin.

The Second Cuban Medical Congress.—The following is the constitution of the executive committee of the proposed congress of Cuban physicians: *President*, Dr. Vicente B. Valdés; *First Vice-President*, Dr. Diego Tamayo; *Second Vice-President*, Dr. Rudesindo García Hijo; *Treasurer*, Dr. Antonio González Curquejo; *Secretaries*, Drs. Enrique Núñez, José A. Presno, and Jorge Le Roy.

Quack Medicines in Vienna.—The Austrian government has forbidden the sale in Vienna of "pink pills," a quack remedy made in Paris. Physicians are forbidden to prescribe them, druggists and others are forbidden to sell them, newspapers are forbidden to advertise them, and the distribution of circulars, through the mail or otherwise, setting forth their alleged virtues is also forbidden. The reason given for this action is that the composition of the pills is kept secret, and further that the remedy is put forth as a cure-all.

The Montefiore Home.—We learn from the fifteenth annual report, just issued, that six hundred and nine patients were treated during the year at the Montefiore Home for Chronic Invalids, with a death rate of 16.91 per cent. One hundred and ninety-four were discharged, of whom thirty-six were cured, and one hundred and fourteen improved. Only about a third of the applicants for admission during the year could be received, owing to the lack of sufficient accommodations. The directors of the home are building a sanatorium at Bedford Station, Westchester County, to which it is purposed to remove all of the patients suffering from pulmonary tuberculosis.

A Foreign Body Removed from a Bronchus.—Professor Schraetter, of Vienna, recently removed a piece of lead from the lung without a cutting operation. The foreign body, which had entered a bronchus, was located by means of the *x*-rays at the level of the fourth rib. By means of the bronchoscope and a specially contrived forceps the lead was extracted without the necessity of a resort to tracheotomy.

The Tri-State Medical Association of North Carolina, South Carolina, and Virginia will hold its second annual meeting at Charleston, S. C., on February 20, 1900. The meeting last year was in Charlotte, N. C. The set discussion at the coming meeting, to be opened by Dr. Paul A. Barringer, of the University of Virginia, will be on the negro, his sexual life, his character, and the influence of his past and present surroundings.

Virchow Jubilees.—A man whose life has been so full and so varied as Virchow's finds, after passing his three-score and ten, the jubilees crowding thick and fast. On November 25th the University of Würzburg celebrated the lapse of fifty years since Rudolph Virchow delivered his first lecture there. In the vestibule of the Pathological Institute was placed a bust of the great pathologist crowned with a wreath, and Prof. v. Rindfleisch delivered an oration in which he reviewed the development of the science of pathology during the half century, and dwelt upon Virchow's influence in that development.

A Duel between Hospital Internes.—Two hospital internes at Bordeaux quarrelled, and the trouble ended in a duel in which the four seconds were also internes. One of the principals was killed, and the other was tried for murder, and the four witnesses were also brought into court as accessories. Thus far the case was exceptional, for French duels as a rule are noted for their bloodlessness; but the subsequent proceedings were eminently Gallic. When arraigned in court the accused said the murder was a pure accident, for each duellist shot at the word of command without having time to take deliberate aim; therefore of course neither could have intended to kill the other, since he had not aimed at him. The survivor expressed his regret at the unfortunate occurrence, and the four witnesses, who were also on trial, assured the court that they thought he really was sorry; so the judge acquitted them all.

The Craig Colony.—The following constitute the board of consulting physicians and surgeons for this colony: *Neurologists*—M. Allen Starr, New York City; George W. Jacoby, New York City; Henry Hun, Albany; James W. Putnam, Buffalo. *Surgeons*—Charles McBurney, New York City; Roswell Park, Buffalo;

John W. Whitbeck, Rochester. *Physicians*—Charles E. Jones, Albany; Charles Cary, Buffalo; William S. Ely, Rochester. *Orthopedic Surgeons*—Henry Ling Taylor, New York City; Louis A. Weigel, Rochester. *Ophthalmologists*—Lucien Howe, Buffalo; Wheelock Rider, Rochester; George M. Gould, Westfield. *Gynæcologist*—Matthew D. Mann, Buffalo. *Pathologist*—Ira Van Gieson, New York City. *Bacteriologist*—Harlow H. Brooks, New York City. *Psychologist*—Boris Sidis, New York City. *Pathological Chemist*—Christian A. Herter, New York City. *Dentist*—Charles J. Mills, Mount Morris.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending January 13, 1900. January 5th.—Assistant Surgeon R. W. Plummer detached from the *New Orleans* and ordered to the *Petrel* and also to the Cavite naval station. Assistant Surgeon D. G. Beebe detached from the *Bennington* and ordered to the *Petrel*.

Hospital Fire in Santiago de Cuba.—The yellow-fever hospital, situated on an island across the bay from Santiago, was destroyed by fire on December 20th. The building had been used by the Spanish as a pest house before the American occupation. During the epidemic last summer many hundreds of American soldiers and civilians were treated there. The adjoining building, containing a hundred bodies of American soldiers in sealed caskets, ready to be shipped to the United States, was saved by the firemen. The fire was of incendiary origin. A new hospital will be erected immediately on the same site.

Mr. Felix Morris, a well-known actor, who died in this city on September 13th from pneumonia, was educated as a physician at Guy's Hospital, but after obtaining his qualifications abandoned medicine for the stage.

The Late Dr. Charles E. Jones.—At a meeting of the board of managers of the Craig Colony, held at Sonyea, N. Y., January 9, 1900, the following note was recorded in the minutes:

"The board of managers of the Craig Colony record with genuine sorrow the death of one of their number, Dr. Charles E. Jones, of Albany, N. Y., who died in that city December 1, 1899. He was a man who had won a high place as a skilful and faithful physician, a man of upright dealing always, and a man who was regarded with affectionate consideration by patients and friends alike. He was the late Governor Flower's family physician, and upon signing the bill creating the Craig Colony, the governor appointed Dr. Jones a member of the board of managers, which position he held from the founding of the colony to the day of his death. He took the deepest interest in this charity, and greatly aided its development by his earnest zeal and broad-minded consideration of all matters relating to it. We feel his death to be a public loss which this board especially deplores.

"Signed for the board of managers of the Craig Colony: FREDERICK PETERSON, President; H. E. BROWN, Secretary."

Obituary Notes.—DR. CHARLES A. SIEGFRIED, medical inspector United States navy, in charge of the naval hospital at Coaster's Harbor Island, died at his cottage in Newport on January 14th, of pneumonia, after an illness of only two days. He was a graduate of the Jefferson Medical College in 1872, and entered the medical corps of the navy in the same year. He had had charge of the naval training-station at Newport for several years, though during the war with Spain he was temporarily stationed at Key West. He was to have been an official delegate to the International Medical Congress at Paris in August.

DR. ERNEST SCHRODER died at his home in Brooklyn on January 12th, of apoplexy. He was born in this city in 1852, and was a graduate of the Long Island College Hospital Medical School in 1882.

DR. JOHN CLARK CLEARY died in Port Chester, N. Y., on January 14th, from typhoid fever. He was born in Clyde, N. Y., thirty-one years ago, and was graduated from the medical department of the University of Buffalo in 1898.

DR. WILLIAM H. LYONS, aged fifty-three years, died January 13th, at his residence in this city. He was born in Ireland, but his parents removed to New York when he was three years old. He was a graduate of the College of Physicians and Surgeons in the class of 1877, and had been an active practitioner in this city for twenty-five years.

DR. GUSTAVE MAHE, formerly of New York, died suddenly in Sioux City, Iowa, on January 11th. He was born in Paris, but came to this country with his parents when he was nine years old. He was a graduate of the Bellevue Hospital Medical College in 1889.

DR. J. C. MULHALL, of St. Louis, was found dead in his office on January 11th, having killed himself with a pistol. He was forty-nine years of age. He was a graduate of the St. Louis Medical College in the class of 1873, and the following year obtained the licentiate of the Royal College of Surgeons in Ireland. He was professor of diseases of the throat and chest and of climatology in the Beaumont Hospital Medical College. He was a member of the American Laryngological Association, the American Climatological Association, the American Medical Association, and the Missouri State Medical Society.

DR. WASHINGTON L. ATLEE, of Philadelphia, has died at his home of heart disease. He was born in May, 1842. At the outbreak of the Civil War he enlisted as a hospital steward, and served until the end of the war. He afterward entered the Jefferson Medical College and was graduated in medicine in 1870. He was a son of Dr. Washington L. Atlee, who performed the first ovariotomy in Philadelphia in 1849.

DR. J. ELMER COOK died at Harrisburg, Pa., on January 13th, at the age of fifty-six years. During the Civil War he was a soldier in the Union army.

DR. I. LEO MINGLE died at Reading, Pa., on January 9th, at the age of sixty-one years. He was a graduate of Jefferson Medical College.

DR. WILLIAM A. CANTRELL died at Philadelphia on January 7th, at the age of fifty-eight years. He was graduated from Jefferson Medical College in 1862, and was for a time a surgeon in the United States army.

Progress of Medical Science.

Journal of American Medical Association, Jan. 13, 1900.

Chalicocis Pulmonum, or Chronic Interstitial Pneumonia Induced by Stone Dust.—In this paper William Winthrop Betts remarks on the increased danger to human life involved in the advent of the cyanide process of milling, and then reports on his observations among the workers of such a plant. He says that every man who works in the mill for two or three weeks becomes subject to attacks of acute bronchitis, due in great measure to the irritating effects of the dust. The bronchitis is followed by soreness along the course of the trachea and bronchial tubes, with loss of weight, shortness of breath, and general malaise. Treatment is of little avail, though much can be done to prolong life by improving hygienic conditions and stimulating the general nutrition.

Contagiosa Bullosa.—John S. Windisch records under this title his observations of epidemic pemphigus during the late Spanish-American war. He says that people from northern climates are more prone to the affection than are natives, as is seen among the English who go to China and India, the English families born and bred in India being less liable to it. This was also true of the troops encamped in our Southern States during the war; few cases were found among the Southern troops, while, on the other hand, few Northern regiments escaped. Windisch thinks it can hardly be doubted that the disease is caused by some local agency, but neither the microscope nor culture tests have shown any specific organism. The treatment is chiefly local. Mercury acts like a specific, either in the form of an ointment or as a mild antiseptic wash.

Poliomyelitis Anterior Acuta Adultorum.—Herman H. Hoppe says that because of the newer views of the pathology of poliomyelitis, and especially because of the difficult differential diagnosis, he desires to place on record two cases of this rare disease which are beyond dispute. In treating of this disease in the "Twentieth Century Practice of Medicine," Drs. Bruns and Windscheid stated that poliomyelitis is almost always seen as a complication of or sequel to acute infectious disease. The author, arguing from the two cases reported, takes a radically different view, and claims that it may occur as a primary affection, at least in the adult.

Notes on Catelectrolysis (Electrolysis) in the Treatment of Skin Disease.—Frederick J. Leviseur says that the list of skin diseases in which catelectrolysis is recommended is continually increasing. The operation is indicated whenever it is important to avoid scar formation, and when strictly limited local action is desired.

Case of Spinal Anterior Subacute General Paralysis.—C. Eugene Riggs reports a case of this disease in its bearing upon the difficulties of diagnosis that may arise between poliomyelitis and polyneuritis.

Practical Use of Radiograph and Fluoroscope in Diseases of the Lungs.—By T. Mellor Tyson and William S. Newcomet. See MEDICAL RECORD, vol. lvii., p. 67.

Case History.—B. Merrill Rickets presents an illustration of supposed axillary sarcoma in which pain was checked by applications of x-rays.

Medicine and Law.—By Duncan Eve. See MEDICAL RECORD, vol. lvi., p. 565.

Formaldehyde Disinfection.—W. K. Jaques claims numerous advantages for formaldehyde over all other methods of disinfection.

Boston Medical and Surgical Journal, January 11, 1900.

A Case of Perforating Gastric Ulcer.—F. B. Lund reports a case of this nature in which operation was performed sixteen hours after perforation had occurred. The patient, a laborer, thirty years old, made an excellent recovery. The author reviews the literature of the subject and tabulates the statistics of the operation. These show forty-five per cent. of recoveries, and in cases operated upon within twelve hours seventy-nine per cent.

A Pistol Wound of the Abdomen.—C. A. Atwood reports the case of a man who died from shock following a pistol wound in the abdomen. Laparotomy was performed but the ball was not found. At the autopsy it was found in the iliacus muscle.

The Case Method of Teaching Systematic Medicine.—W. B. Cannon approves of this form of teaching, because it requires of the student accurate judgment, close reasoning, precise expression, and wise employment of knowledge.

Relapsing Fever.—George O. Ward reports and describes a sporadic case which occurred in an Armenian immigrant in New York in 1899. Cases of the disease are rare in this country.

Tabes Dorsalis.—Alfred H. Lindström obtained marked success from postural or mechanical stretching in a case of this disease. General tonic treatment assisted in the cure.

Medical News, January 13, 1900.

Experimental Tests at Vera Cruz, Mexico, of the Doty-Fitzpatrick Serum for the Prevention and Cure of Yellow Fever.—A. Matienzo concludes from numerous experiments with the Doty-Fitzpatrick serum that, (1) although both intravenous and subcutaneous injections of the serum produced a general reaction, revealed by the hyperthermia and acceleration of the pulse, (2) they neither controlled the disease nor modified in the least the appearance, development, or duration of the symptoms of yellow fever. (3) It is not possible to form conclusions regarding the value of this method on account of the small number of cases in which it was employed. (4) The reaction caused by the injections of the toxin in the convalescents of yellow fever demonstrates Sanarelli's assertion that the curative powers of the serum in animals is not due to the antitoxin substances, and confirms by its analogy to the typhoid serum the opinion, given by some bacteriologists, that the icteroides is an Eberthiform bacillus.

Report of a Case of Scorbutus in an Infant.—Walter Lester Carr reports a case of scorbutus in a female infant of twelve months, from improper food. Beef-juice, orange-juice, and a small quantity of fresh milk were ordered; also an opiate if necessary, for excessive pain and restlessness. In three days there were few signs of the scurvy. The opiate did not have to be given, and recovery was uninterrupted.

Myomectomy Per Vaginam Combined with Shortening the Round Ligaments for Retroversion, etc.—A lecture by J. Riddle Goffe.

New York Medical Journal, January 13, 1900.

The Lung Reflex.—A. Abrams has found that when an ether spray is directed over the borders of the lungs posteriorly, the borders of these organs can be made to descend (as determined by physical signs and the fluoroscope) from two to four inches; that is, an irritation of the skin will cause the lungs to dilate. Dilatation may be recognized by diminished excursion of the lung border, extension of pulmonary percussion note, and obliteration of areas of cardiac and hepatic dulness, hyper-resonance of the lungs, and obliteration of the apex beat. From these results is deduced the following procedure to determine whether an area of dulness, say in the broncho-pneumonia of children, is due to consolidation or to atelectasis: If the latter is present, vigorous irritation of the skin will cause the dulness to disappear because the irritation leads to dilatation of the lung. If the dulness is due to consolidation, irritation will have no effect upon it.

The Therapeutic Application of Carbonic Acid Gas.—A. Rose concludes an enumeration of the various diseased conditions in which carbonic acid gas has proved of service. The list includes scorbutic ulcerations, ozæna, hyperæmia of the Schneiderian membrane, cancerous ulcerations, various neuralgias, and different skin affections. Rose has used the gas with good effect in whooping-cough, dysentery, vomiting of pregnancy, sexual neurasthenia, and vaginismus. Previous practical difficulties in the use of the gas have been the necessity of cumbersome gas-holders, defective working of the same, dangers connected with pressure, etc., and, as a consequence of all, the expense of using the gas except in the case of the well-to-do. These difficulties have all been overcome by the introduction of the steel flasks or capsules, some of which are so small that they can be carried in the pocket.

The Anæsthetic Properties of Nirvanin.—C. A. Elsberg says that this new remedy has valuable anæsthetic properties when injected into the tissues according to the infiltration method; it is less poisonous than cocaine or eucaine; it has distinct antiseptic properties; and it is a stable compound.

Echinacea Angustifolia.—This is the name of a remedy highly extolled by J. C. Stinson as a powerful aphrodisiac.

Taking Cold.—By G. V. Woolen. See MEDICAL RECORD, vol. lv., p. 846.

President's Address before the Society of Alumni of Bellevue Hospital, by C. E. Quimby.

Philadelphia Medical Journal, January 13, 1900.

The Anatomical Relations in Pelvic Hæmatoma following Labor.—W. Reynolds Wilson says that hæmatomata in the labial and perineal regions are due principally to the accumulation of blood from the branches of the pudic vein. Hæmatomas are often multiple, this showing an inherent tendency to venous rupture.

Cerebral Rheumatism.—Francis P. Morgan denies that cerebral rheumatism is a sequel of hyperpyrexia. He inclines to the belief that rheumatism is a pyæmia and that the cerebral, cardiac, and other complications are simply toxic manifestations. His treatment is symptomatic.

Diplococci—A Case of Erysipelas.—G. E. Pfahler has found and isolated a diplococcus in eight cases of erysipelas, and has produced the disease in rabbits by inoculation.

Varicose Veins of the Vulva.—William Edgar Darnall pictures a case of this sort, and says that the condition usually does not seriously complicate labor.

Excretion in the Treatment of Acute Infectious Diseases.—H. A. McCallum advocates thorough purging in the early stages of typhoid fever and pneumonia.

Certain Essential Points in the Technique of Staining Nerve Cells.—By Stewart Paton.

The Lancet, January 6, 1900.

An Address on Acidity.—J. F. Goodhart believes that all the clinical forms of acidity are due simply to uric-acid excess. This acid should be regarded as an ash common to the various metabolic processes going on in the body. The causes of the condition which presents itself for treatment include visceral sluggishness from nervous exhaustion, an hereditary condition which works itself out in gouty attacks, a sudden shock, an exhausting illness, an early defect of the kidney, or a primary manifestation of advancing age. The author finds that many persons who try to remove their acid tendencies by strict adherence to a vegetable diet will find far quicker relief from a diet containing a generous allowance of beef and mutton and less vegetable matter. The article is written in an attractive vein, and is a protest against wholesale dietetic rules without reference to the problems in each individual case.

The Histology and Prevention of Blackwater Fever.—W. H. Crosse describes a case of this affection ending in death on the sixth day. The vomitus was markedly green in color, the urine was finally suppressed, and hiccough with some dyspnœa and pain in the limbs persisted to the end. A microscopical examination of the various organs showed nothing that could not be found in the tissues of a patient who had had several attacks of malaria. The author suggested that blackwater fever bears to malaria a relation similar to that borne by hyperpyrexia to rheumatic fever. As regards prevention, he believes that all the precautions useful in guarding against malaria should be taken here. These include especially the destruction of all breeding-grounds of mosquitoes.

Internal Derangements of the Knee Joint (Popularly Called "Slipped Cartilage").—Basing his paper upon an experience of three hundred cases, W. H. Bennett discusses the causes, symptoms, and treatment of the condition and utters a plea against indiscriminate operation. Even under modern antiseptic precautions the operation is attended with some risk, and should, therefore, not be undertaken lightly.

Report on "Henpuye" in the Gold Coast Colony.—A. J. Chalmers describes a peculiar disease called "henpuye," or dog-nose, which occurs in the regions named. It consists of a nasal deformity produced by the deposition of new bone under the periosteum on the external aspect of the nasal bones, the nasal process of the superior maxilla, and the body of the latter bone itself. It is more common in men than in women, and comes on during or after an attack of yaws.

Three Cases in which Movable Kidney Produced All the Symptoms of Gall Stones.—F. Treves reports three cases, all in women aged about thirty-five years, in which attacks of hepatic colic were followed by jaundice. The latter was due, he thinks, to the pressure of a movable right kidney on the bile ducts.

Hemorrhagic Ascites.—T. Fischer's patient was a woman aged thirty-eight years who suffered from chilliness, abdominal swelling, pain, occasional vomiting, and constipation. The greater part of the belly was resonant, but shifting dulness was present in the flanks. Autopsy showed the presence of twelve pints of deeply blood-stained fluid.

Bullet Wound in the Head: Removal of the Bullet from the Nose Twenty Months Afterward.—C. Woakes records a case in which the bullet entered the skull just below the left frontal eminence. The man recovered, and came under the author's observation twenty months later with a foul discharge from the left naris. Probing detected a hard substance, which was removed, and proved to be a mass of lead covered with a bit of khaki cloth.

The Differential Diagnosis of Mongolism and Cretinism in Infancy.—G. A. Sutherland gives a table of differential diagnostic signs, but says that the final test is the therapeutic one. In the cretin thyroid extract renders wonderful service, while the Mongolian infant remains unaffected. Mongolism is a form of congenital imbecility in which certain facial appearances suggest a Chinese origin, hence the name.

Multilocular Cystic Epithelial Tumor of the Jaw; Excision of Half the Lower Jaw; Recovery.—G. P. Newbolt reports the case of a woman aged sixty-six years who had complained of the growth for twenty years. The cysts were laid open and scraped, but refilled, and a radical removal was made. No history of tooth irritation as the exciting cause could be made out.

An Unusual Case of Embolism in the Fundus Oculi.—H. W. Thomson reports a case in which an embolus was arrested in the common macular or cilioretinal artery. The occlusion lasted eight days, during which time the nutrition of the part of the retina involved was maintained by the arteria centralis retinæ, through its small branches.

The So-Called Danger from the Use of Boric Acid in Preserved Foods. O. Liebreich regards the popular prejudice against this agent as used for preservative purposes as illogical and not borne out by any information at our disposal, so far at least as concerns the absorption of either borax or boric acid from the intestine.

Case of Impacted Extra-Capsular Fracture of the Neck of the Femur.—H. E. Belcher reports a case of this sort in a man, aged twenty-six years, who was thrown from a wagon. The chief signs of injury were eversion of the foot, broadened appearance of the thigh, and the helplessness of the limb.

The Orchitis of Mumps.—C. Dukes says that the orchitis of mumps is not a metastasis; that it never arises before puberty, and that it does not occur after puberty if the patient can be kept in bed over the eighth day.

A Boy's Ear Bitten Off by a Horse.—J. M. Mote reports a case of this kind in which the ear had been taken off as cleanly as if cut by a knife.

British Medical Journal, January 6, 1900.

Observations on General Metabolism and the Blood in Gout.—Chalmers Watson sums up the result of his observations as follows: (1) The alkalinity of the blood is not diminished during an attack of gout. (2) The excretion of uric acid is not diminished, but the reverse; there is, therefore, no reason for supposing that there is temporary diminution in the capacity of the kidneys to excrete uric acid. (3) The amount of uric acid in the blood is not greater during an attack than at other times. If these points are accepted we must search elsewhere for the cause of the acute paroxysm. The author adds that it would be well in this connection if less attention were paid to the excretion of uric acid alone as the all-important factor in attacks of gout.

Scarlet Fever Without Eruption.—H. Ward Irvine reports this case, in which diagnosis was finally made after microscopical examination of the urine, showing the presence of large quantities of renal and vesical epithelia, and was verified by the subsequent desquamation.

A Case of Acquired Syphilis in a Child.—C. Hamilton Whiteford reports the case of a boy aged six years who presented himself with a sore on the eyelid diagnosed as Hunterian chancre. This diagnosis was confirmed by the appearance of secondary phenomena.

The Unimportance of the Presence of a Trace of Albumin or Nucleo-Albumin in Urines of Extremely Low Specific Gravity.—F. Parkes Weber argues that "a very faint trace of albumin" in otherwise healthy urine has no diagnostic value whatever.

Injuries Produced by a Six-Pounder Hotchkiss Shell.—J. R. Dodd reports a case illustrating the terrible effects of modern shells, and points out the vast amount of work they will entail on medical officers after a serious engagement.

A Case of Sodium Salicylate Poisoning.—H. Hilton Heffernan reports this case as being worthy of interest owing to the large dose of the drug taken (130 grains), the long period of sleeplessness (nearly four days), and the absence of depression.

Treatment of Molluscum Contagiosum with Sodium Ethylate.—Thomas F. Raven reports a case of this disease in a pregnant patient. He found the treatment by sodium ethylate entirely satisfactory.

Primary Nephrectomy for Rupture of the Kidney.—William Rogers reports a primary nephrectomy for rupture of the kidney in a girl aged fifteen years. Death ensued the following day.

Salol in Smallpox.—Charles Begg urges the use of salol in smallpox on account of its power to control irritation, to take away the desire to scratch, and thus to prevent suppuration.

The Political Aspects of Current Medical Topics.—An address delivered at a meeting of the Aberdeen, Banff, and Kincardine branch of the British Medical Association, by R. Farquharson.

Dislocation of the Radio-Carpal Joint.—Guy J. Branson reports this case as being of interest on account of the rarity of the accident.

Retention of Menstrual Blood from Atresia of the Vagina.—A clinical lecture by Charles J. Cullingworth.

Minor Epilepsy.—A clinical lecture by Sir William Gowers.

Illustration of an Improved Prostatic Catheter.—By John Ward Cousins.

Medical Press and Circular, January 3, 1900.

Anuria, Transfusion of Saline Fluid, Nephrectomy, Death.—Murrell relates the case of a woman in a semi-comatose state, who had passed no urine for two days. The temperature was subnormal. A diagnosis of toxic anuria was made. A quart of saline infusion was injected into the vein of the right arm. Although the pulse improved in quality no urine was secreted. Right nephrectomy was advised with a view of relieving a possible obstruction suggested by tenderness. Upon incising the capsule there was free escape of a serous fluid mixed with venous blood. No further exploration was attempted. Death occurred six hours after the operation. The kidneys were found to be granular, each weighing three and a half ounces, and were highly congested.

Cinematograph in Teaching Surgery.—E. Doyen advocates the use of the cinematograph, having demonstrated its advantages in a number of operations. One of these advantages is, he holds, that surgeons will be able to teach the real progress made. It has enabled the writer to correct, simplify, and perfect operative technique. The most delicate manœuvres, such as suturing the pelvic peritoneum in abdominal hysterectomies, opening the dura mater in craniotomies, etc., may be followed.

Otorrhœa and its Treatment.—Paul Rauge says that when pus from otitis media is collected aseptically and examined immediately, it is, as a rule, found to contain only a single species of microbe. The moment an artificial or spontaneous opening in the membrane occurs secondary infection becomes possible. Prevention is the best treatment for otitis.

Münchener med. Wochenschrift, December 26, 1899.

Chorea and Fever.—Kurt Witthauer calls attention to the peculiar influence of fever on the whole symptom complex of chorea as noted by him in two cases recently under his care. There was no other feature of special interest in either case. The first was of hysterical chorea in a boy, aged six years, the affection first coming on suddenly after punishment at school. The second, in a girl of twelve years, was of the rheumatic form. In both cases, immediately upon the onset of fever the twitchings became diminished, and after a few days ceased.

Dermatitis Herpetiformis.—F. Köhler reports a case of this nature in a woman twenty-one years old, and gives the four cardinal symptoms which serve to separate it from similar skin affections, such as erythema multiforme, urticaria bullosa, pemphigus, etc.: (1) Tendency to polymorphous appearance; (2) cutaneous or deep-seated paræsthesia; (3) almost constant recurrence; (4) relatively good general health.

Tuberculosis of the Nasal Duct.—O. Seifert believes the three most probable channels of tuberculous infection of the nasal duct to be: (1) Extension of the infection from the bony walls of the duct; (2) extension from the nose; (3) extension from the connective tissue of the eye.

The Early Diagnosis of Carcinoma Uteri.—Adolf Gessner states his belief that scrapings from the lining of both the fundus and the cervix uteri will establish a sure diagnosis at an early period, before any other methods could be employed.

Annual Review of the Work of the Royal Gynæcological University, Polyclinic of Prof. Dr. Amann for 1898.—Carl Braun gives a brief résumé of the work of the University Polyclinic for 1898.

The Effect of Heroin on Respiration.—C. J. Santesson, judging from numerous experiments on animals, says that heroin in small doses does not appear always to deepen respiration.

Wiener klinische Wochenschrift, December 21, 1899.

Etiology of Tuberculous Pneumothorax.—Drasche gives the results of his experience with this affection in more than forty years of general hospital practice. Of 10,212 patients with pulmonary tuberculosis 6,686 were men and 3,526 were women. Of all these, 198, or 1.93 per cent., developed tuberculous pneumothorax, 2.36 per cent. being men and 1.13 per cent. women. As to age, the greatest number of patients were between twenty and thirty years. Of the 198 cases, the trouble was in 108 cases, or fifty-five per cent., on the right side, and in 90 cases, or forty-four per cent., on the left side. Three cases were bilateral. Coughing, vomiting, straining at stool, lifting heavy weights are etiological factors. As tuberculosis develops earliest and most often in the apex, so pneumothorax is found most often in the upper lobes.

History of Carcinoma of the Pancreas.—C. Hödlmoser reports a case in a man twenty-seven years of age. The points of special interest in this case were the youth of the individual, the absence of undue quantities of fat and albumin in the stools, and the absence of sugar in the urine. A tumor could be felt in the median line. The patient had suffered intense pain at first; he hardly complained at all in the last weeks. Examination of the stomach contents showed absence of hydrochloric acid and but little pepsin, on which account a diagnosis of carcinoma of the stomach was made. The true condition was discovered at autopsy.

Rupture of the Symphysis Pubis.—Rudolf Savor says that cases of rupture of the symphysis appear in the last ten years to have markedly decreased, probably because the forceps is much less frequently employed now that we are acquainted with many other methods of delivery.

Measure of Blood Pressure by Gaertner's Tonometer.—George Kapsammer describes this very simple but ingenious instrument, which was presented by its inventor July 16, 1899, to an assemblage of physicians at Vienna.

Berliner klinische Wochenschrift, December 25, 1899.

The Specific Treatment of Tuberculosis.—J. Petruschky concludes a temperate article upon the specific treatment of tuberculosis with special reference to tuberculin. He is in accord with the dictum of the recent Berlin Congress, that no true specific is as yet known to us, and calls attention to the very important fact that the cessation of reaction to large doses of tuberculin must not always be taken as evidence of the disappearance of previously existing tuberculous tissue. He traces the gradual development of Koch's theories, and also touches upon the substance prepared by Klebs, from which much was at one time hoped. To the inquiry, "Can cases be cured by tuberculin?" he gives an affirmative reply, showing a tabulated list of twenty-two cases which had been under his own care and resulted in cure by this means. He call attention to the fact that those patients who in the course of the tuberculin cure have ceased to react thereto may after three or four months again become sensitive, so to speak, to the remedy. This he regards as a favorable circumstance, for it enables us again to bring the system under the effects of the remedy. From the serums of Behring and Maragliano he expects but little. Moreover, for cases of mixed infection sanatoria are best. But for the purely tuberculous, tuberculin offers in many cases a certain arrest of the disease. Its use should be only in the most careful hands, preferably in institutions, and should not be entrusted to assistants who are frequently changed.

Endolaryngeal Treatment of Cancer of the Larynx.—E. Meyer reports the case of a man aged fifty-eight years, who had complained of husky voice for eight months. A nodular growth was found on the anterior two-thirds of the left vocal cord, which was reddened and congested throughout its whole extent. A projecting process of the tumor overhung the right cord toward the anterior commissure, but the cord itself was unaffected. Diagnosis of carcinoma was confirmed by the microscope. Glandular enlargements were not noted. The tumor was removed in eight sittings by means of forceps and curette. The author discusses the advantages and limitations of the endolaryngeal method.

Total Extirpation of a Large Cyst of the Mesentery.—J. Schramm reports the case of a widow aged forty-eight years, from whom he removed a large cyst of the mesentery. Recovery was uneventful. He then discusses the question of the origin of these tumors, and refers to the literature of the subject.

French Journals.

Capillary Emboli Following Injections of Calomel.—A. Renault publishes an instance of embolism following injection for syphilis, and gives the literature briefly of similar instances. From 1891 to 1896 the author made 8,353 injections of thymol-acetate of mercury, and in nine per cent. of these cases the injections were followed by pulmonary phenomena of more or less severity, with subsequent symptoms of hemorrhagic infarctions due to an embolic process. In conclusion he states that we have no means of preventing with certainty the penetration into the blood current of soluble mercurial salts. He calls to mind the fact that calomel, even in fine powder, is composed of particles which show a very appreciable volume under the microscope, and alone may obstruct capillaries of the lungs. He believes that while the soluble mercurial salts are very powerful they should be used only under exceptional circumstances, when life is endangered, and it is necessary to act energetically. Injections should be given only after a careful examination as to the general integrity of the emunctories, while taking all precautions of technique.—*Le Progrès Médical*, December 23, 1890.

The Functions of the Thymus Gland Based upon its Physiology and Pathology.—L. M. Bonner says that the thymus represents, so far as its functions are concerned, a double organ. It is a hæmatopoietic organ, and it is also a gland having an internal secretion. This has a multiplicity of influences, especially in connection with nutrition. Physiology and pathology are in accord in demonstrating that the thymus presents physiological connections with other analogous viscera. There is, in the normal state, an equilibrium between the various internal secretions: when one of these glands is injured, the equilibrium is broken. It is, perhaps, to re-establish it (in any case it is because of this disparity of normal equilibrium) that we see some other vascular gland become hypertrophied. The thymus is, perhaps, that which presents the most frequently, and under the most variety of circumstances, this vicarious hypertrophy.—*Gazette des Hôpitaux*, December 19, 1899.

Stercoræmia Following Delivery.—A. Brindeau relates several cases showing that elevated temperature, not otherwise accounted for, is wrongly attributed to puerperal fever in some instances. There is usually intense headache, absolute anorexia, foul tongue, fetid breath, and tenderness of the abdomen, all of which symptoms are relieved after salines have been given to produce several abundant passages which are usually fetid. The symptoms may come on anywhere from one to fifteen days even in patients whose bowels have appeared to be regular before delivery. The temperature may go up gradually or at one bound. At times the condition is serious, and may prove fatal. Perforation has been reported, while intestinal hemorrhages and ulcerations have been noted.—*Le Bulletin Médical*, December 30, 1899.

The Remote Results of Perineal Urethrostomy, a Clinical Study Based on Twenty-Three Observations.—In a communication to the Academy of Medicine of Paris in 1892, Antonin Poncet described, under the name of perineal urethrostomy, an operation consisting in the creation in the perineum of an artificial meatus in patients with incurable strictures. He now takes a somewhat less favorable view of the results of this operation than he originally held. He reviews twenty-three cases, in seven of which the stricture returned seven years after the operation; in two, five years; and in two, three years after operation.—*Gazette Hebdomadaire*, December 27, 1899.

Heredity in Chronic Nephritis.—R. Romme relates a family history in which there were eighteen instances of chronic nephritis in three generations. The number of such reports is very rare, there being only five authentic instances in literature.—*Le Progrès Médical*, December 23, 1899.

Respiratory Gymnastics in Pulmonary Tuberculosis.—E. Ripard supplies, with illustrations of the movements, a scheme for giving tone to the respiratory muscles, developing the thoracic cavity, and increasing the breathing capacities.—*Le Progrès Médical*, December 23, 1899.

Vratch, December 11 and 18, 1899.

A Peculiar Disorder of Respiration in Hysteria.—Y. P. Gorshkoff reports a case of hysteria in a soldier, twenty-five years old, who suffered several times a day from laryngeal and diaphragmatic spasms during which respiration was temporarily arrested, all the abdominal muscles were in a tetanoid condition, and several inarticulate expiratory sounds were emitted. The lines of the face were drawn and expressed suffering. Accompanying the respiratory spasm was a tremor in the hypogastric region. There were no special psychical disturbances during these attacks; memory and the reasoning faculty were unchanged, but the patient's spirits seemed a little depressed.

Sanatoria for Consumptives.—S. F. Unterberg treats of sanatoria for tuberculosis and of their educational value. But he says that efforts to prevent infection are not sufficient, that the mere employment of sanitary spittoons will not abolish tuberculosis, and that the most effective means of combating the disease are hygienic and dietetic measures to strengthen the organism. He advocates the adoption of many of the sanatorium regulations in the household, and says that even the nursery should be converted into a domestic sanatorium.

Malarial Insanity.—I. E. Tikanadze reports three cases of this sort, the first of mania, the second of acute confusional insanity, and the third of melancholia recurring with each febrile paroxysm. The author regards as the chief causes of malarial insanity an intensity of infection and a special predisposition, either inherited or acquired. The prognosis is favorable, and the proper treatment is the exhibition of quinine in large doses together with warm baths.

Disinfection with Formaldehyde.—As a result of numerous experiments, together with a review of the literature of the subject, V. A. Levasheff concludes that the disinfectant action of formaldehyde is exerted, ordinarily, chiefly on the surface of objects, and becomes rapidly attenuated from the periphery toward the centre. The best means of destroying the odor of formaldehyde is the employment of ammonium carbonate, which when heated separates into CO_2 and NH_3.

Sclerosis of the Spine.—Under this title M. O. Shaikevitch describes a case of gradually acquired posterior curvature of the dorsal spine, occurring in a man thirty-nine years of age. The actual disease present was somewhat indefinite. There was no spinal caries; the case was not one of rheumatism, although cold seemed to have played the rôle of exciting cause, and the author was inclined to regard it as a diffuse sclerotic affection of the spinal column, first described by Bechterew in 1892.

Thomsen's Disease with Tabes Dorsalis.—S. S. Malbandoff reports a case of myotonia congenita observed in a man twenty-five years of age, who presented also marked symptoms of locomotor ataxia. The patient's brother, eighteen years old, was also a sufferer from Thomsen's disease. He reports briefly also another case of tabes dorsalis combined with myotonia.

Pyramidon and its Therapeutic Uses.—K. I. Korovitski describes this new drug, which is a derivative of pyron, having a formula of $C_{13}H_{17}ON_3$. Its action is similar to that of antipyrin, though more prompt, and as a rule smaller doses are required.

The Dental Division of the Clinical Institute.—A. K. Limberg describes the course of instruction in dentistry given at the Elena Pavlovna Clinical Institute at St. Petersburg.

The Crusade against Consumption.—I. N. Lange enters a plea for the use of tuberculin in cattle as a protection to man.

Jour. of Cutan. and Genito-Urinary Dis., January, 1900.

A Case of Macular Lepride of the Scalp, with Remarks on the Localization of Leprous Lesions.—Prince A. Morrow says that a curious fact about leprosy is that the two principal forms, although etiologically identical, show marked differences in character of the cutaneous lesions, and also in their localization. It may be said that the erythematous patches of the tubercular form are transient in duration and may disappear and reappear a number of times before becoming the seat of tubercular infiltrations, while those of the anæsthetic form are essentially permanent. The case reported is unique in so far as it is the only one which the author has found recorded presenting a macular lepride of the scalp. The distribution of the eruption over the cheek and forehead, extending into the hairy scalp, is shown in the illustration.

The Urethroscope in the Treatment of Strictures.—Henry Koch relates a case showing that the present urethroscope with heatless light is not only an instrument for diagnosis, but can be used for other and very important practical purposes for which the endoscope could not be used. The tube used in the case related differed from others so far constructed by having the lamp carrier and lamp held separately in a small tube under the larger endoscopic tube proper. Light is thrown through the opening on the surface to be illuminated.

The Etiology and Rational Treatment of Urethro-Arthritis and Allied Affections.—A. MacKenzie Forbes says that urethral arthritis is due either to the migration of the gonococcus or some other microbic habitant of the urethra to the joints, or to the absorption of the toxins eliminated by these habitants. To effect a cure the urethra must be kept as absolutely sterile as it is possible to keep that canal, and its mucosa must be without abrasion. Notes of cases are given.

A Case of Blastomycetic Dermatitis Engrafted on Syphilitic Ulceration.—Henry G. Antony and Maximilian Herzog report the case of a patient who had suffered from extensive ulcerations for twenty years, which were distinctly syphilitic in character, being of the type of syphilis cutanea vegetans. After staining sections of the tissues blastomycetes were found. Under iodide of potassium in large doses marked improvement occurred.

St. Louis Courier of Medicine, December, 1899.

Complete Inversion of the Uterus from Fibroids; Vaginal Hysterectomy; Recovery.—Henry H. Mudd, in the last contribution of his life to medical literature, reports a successful operation for the rare condition of total inversion in a non-puerperal uterus. After operation interstitial fibroids were found. The Rotunda Hospital had but one instance of acute inversion in one hundred and ninety thousand births; at St. Petersburg this complication did not occur in two hundred thousand nor in Vienna in two hundred and fifty thousand deliveries.

Suprapubic Prostatectomy.—A. E. Rockey says operations for enlarged prostate by sexual mutilation have failed so often that they are to be condemned. He has evolved from McGill's method one of his own—a combined morcellation, enucleation, and evulsion through a short suprapubic incision, with an assistant's finger in the rectum raising the gland. He has been satisfied with suprapubic drainage. Opening the bladder when symptoms warrant is preferable to attempts at fine diagnosis beforehand.

Some Phases of Lues in Early Life.—Charles W. Allen relates several instances of infantile syphilis evidently of congenital origin, in which evidences of the disease could not be found in the parents. The acquired disease of unexplained origin was also found in young children. In one of the instances of family syphilis recorded, an infant contracted the disease from a wetnurse, and inoculated the mother, who in turn infected the father and at least one other child.

Beef-Gall Enemata in the Treatment of Post-Operative and Intestinal Obstruction.—F. C. Ameiss recommends fresh bile enemata (four cases), claiming that, aside from mechanical effect, absorption of bile salts acts as an exciter of cholagogue action. Reopening the abdomen is not always advisable.

Indications for Cæsarean Section, Symphyseotomy, Craniotomy, and Induced Premature Labor.—By Leopold. See MEDICAL RECORD, vol. lvi., p. 497.

Archives of Pediatrics, January, 1900.

A Clinical Study of Laboratory Milk in Substitute Infant Feeding.—Louis Starr declares that although laboratory milk is theoretically the most perfect substitute for normal human milk now known, this theory is not upheld by clinical experience. He does not absolutely condemn this milk, for its introduction has called attention to the importance of cleanliness and accuracy in the quantity and chemical composition of cow's milk foods. It is also of great use in feeding infants who must be artificially nourished from birth, and may often be used with advantage to the end of the second month. However, its applicability is limited, and much more so than the process of modification in which unseparated milk is employed.

Cerebro-Spinal Symptoms in Influenza in Infancy.—Thompson S. Westcott reports two such cases. This condition has been described as pseudo-meningitis grippalis, and simulates meningitis in every particular, but in the event of death it shows at the most hyperæmia of the pia and brain, or a permeation of these parts with serum.

A Case of Fracture of the Pelvis with Rupture of the Urethra.—Joseph B. Bissell reports this case, of a boy aged nine years, and believes the favorable result to be due to the youth and good health of the patient, and to early incision, perfect drainage, and simplicity of technique.

The Practitioner, December, 1899, and January, 1900.

The Relationship of Membranous Inflammation of the Nose to Diphtheria.—Eugene S. Yonge defines membranous rhinitis as a subacute or chronic affection of the nose, characterized by a fibrinous or membranous exudation on the mucous membrane of one or both nares. The deeper tissues are not, as a rule, involved, and the membrane rarely extends to the throat. The course may exceed eight weeks. The Klebs-Loeffler bacillus in various degrees of virulence is found in the majority of instances. The disease in both children and adults may be ushered in by chilly sensations or more rarely by a definite rigor, which is soon followed by a general febrile condition. Symptoms of acute rhinitis rapidly supervene. The dry stage is omitted, and the discharge begins at once. In three days a membrane will have formed. Nasal stenosis becomes severe and is associated with headache and loss of smell. The thermometer registers 101° to 103° F., but falls to 100° or 101° F. in a day or two, and in children remains at this point during the entire attack of three to six weeks. The clinical course does not seem altered by the fact of the presence or absence of the Klebs-Loeffler bacillus, while true primary diphtheria of the nose, which is rare, runs a very malignant course.

Mongolian Imbecility in Infants.—G. A. Sutherland says that subjects of Mongolian or Kalmuc idiocy usually drift into asylums if they survive long enough. Mental and physical characteristics easily distinguish them from normal infants. Their resemblance to one another is very striking. Growth proceeds at a slow rate. Antero-posterior shortening of the skull may render the face and occipital regions flat. The fontanelle is large and slow in closing. The mouth is usually kept open, and the tongue often protrudes and there may be a habit of drawing it in with a smacking noise. The abdomen is large and distended. Intelligence lags; the infant usually requires no attention through excess of "goodness." Dentition is much delayed, while muscular power and co-ordination are slowly acquired. There is strong predisposition to disease and to early death. The thymus, thyroid, and suprarenals are structurally healthy, and treatment by the extract of thymus and thyroid has proven useless; treatment in the absence of any known cure must be general and symptomatic.

The Operative Treatment of Fibroids.—In a clinical lecture, delivered by G. E. Herman, the reasons pointed out for operating are: First, hemorrhage sufficient to weaken the patient, which is not brought under control by ergot and similar drugs. Secondly, size, making the patient unwieldy or bedridden; or the tumor may be relatively large in relation to the space in which it lies, and may press upon adjacent parts, causing symptoms which warrant operation. Thirdly, a fibroid may rapidly increase in size, indicating that the tumor is degenerating, or is a sarcoma rather than a fibroid. The best operation is one which removes the tumor without taking away anything else. One advantage of the vaginal over the abdominal route is that it is easier to separate the ureters from the bladder from below than it is from above. Vaginal treatment is only appropriate, however, when the tumor is not larger than a child's head and can be pressed down into the pelvis. The electrical treatment is looked upon as now almost extinct.

Temporo-Maxillary Ankylosis, and its Relief by Excision of the Neck and Condyle of the Lower Jaw.—David M. Greig claims that the results of operation in temporo-maxillary ankylosis are eminently satisfactory, the muscles, after years of disease, reassuming their functions almost at once. The causes are traumatic or non-traumatic. The first are extra-articular or intra-articular; the second suppurative or non-suppurative. Cases and illustrations are given.

Affections of the Cornea.—Marcus Gunn calls attention to the anatomy of the cornea and the especial clinical importance of the smoothness of its anterior surface and its transparency, the latter being due to the disposition of the lamellæ of fibrous tissue. Disease of the cornea may be recognized by lack of one of these qualities.

Pneumonia.—Sir William Broadbent treats of the etiology, symptoms, signs, prognosis, and treatment. From time to time the pneumococci seem to acquire a degree of virulence which renders the disease contagious, causing epidemics. Apparently the diplococci are carried about in the mouth and pharnyx. Should the crisis not have come by about the ninth day it may be concluded that there is some underlying cause such as tubercle or septicæmia. Unabsorbed pneumonic deposits are practically unknown post mortem. Catarrhal pneumonia is the form which complicates measles and pertussis, or, later in life, may supervene upon bronchitis. No definite line can be drawn between the catarrh of the finer bronchial tubes and broncho-pneumonia. The temperature is not a source of danger. We can afford to wait. Antipyretic drugs given continuously are not only useless but dangerous, and in exceptional cases a considerable amount of spirits, such as brandy in champagne, may be given. For the persistent sleeplessness morphine should be given, especially if there is delirium. Venesection is advisable when the right ventricle is unable to cope with the constant resistance in the pulmonary circulation, and is paralyzed by over-distention. There are cyanosis, turgid temples, small and short pulse. The pulse improves and the breathing is relieved when sixteen to twenty ounces of blood have been taken.

Pneumonia from a Public-Health Standpoint.—Arthur Newsholme says it is clear that the heaviest rate of mortality falls in the earliest, and the next heaviest in the last, years of life. He considers questions of transference between pneumonia and phthisis and bronchitis, and the influence of seasons, weather, race, occupation, and epidemics of pneumonia. Hirsch's statistics show that the largest number of cases occur from February to May. He maintains that the death rate rises to its maximum in December. It is a cold-weather disease. This by no means disproves its specific febrile character. Iron-workers and coal-heavers give the largest percentage of cases, lock laborers the next, then hotel servants, cabmen, and innkeepers. Doctors and musicians stand an equal chance. The history of many localized outbreaks favors the idea of a direct infectivity. Cases are cited showing exceptionally direct personal infection due to overcrowding, defective house sanitation, etc., which accounted for certain epidemics.

Etiology and Symptomatology of Goitre.—J. G. Adami reviews at length the whole question of the cause of goitre, especially as it concerns the island of Montreal. In some French Canadian villages scarcely a family is to be found without one or more goitrous members. It is generally accepted that weather has to do with its development, but how it does so is absolutely unknown. In favor of the infective origin not a few facts have been brought forward. In one instance one thousand and nine soldiers of a regiment, whose quarters had been changed to a goitrous region, became affected. Lustic and Carrele found a bacillus constantly present in goitrous waters. If the individual is removed from the goitrous region sufficiently early, the tendency is for the enlargement to disappear.

The Mortality and Frequency of Pneumonia as Affected by Age, Sex, Seasons, and Habits.—Hector Mackenzie says that pneumonia causes very nearly as many deaths as typhoid fever, diphtheria, smallpox, measles, and scarlet fever together. Deaths from pneumonia amount to 5.6 per cent. of the total number of deaths from all causes. In males between the ages of twenty-five and sixty-five years, eight per cent. of all deaths are due to this disease. Alcoholism appears to diminish the chances of recovery. A history of rheumatism is to be obtained in about six per cent. of the cases, and pericarditis occurs in about twelve per cent. of the fatal cases.

The Treatment of Pneumonia.—Sir William Gairdner reviews old methods and dwells upon historical and personal matters. Antimony and blood-letting are valuable in very exceptional cases. His treatment is mainly expectant. Opium he considers a dangerous remedy, especially about the period of crisis, having a tendency to increase the cyanosis, there being practically a paralyzing action upon the respiratory centres.

The Journal of Tropical Medicine, December, 1899.

Possible Causes of Sickness among the British Troops in South Africa.—In the present instalment of a continued article, L. W. Sambon discusses bilharzia disease, or endemic hæmaturia, and the plague. The true endemic region of plague, he says, is in Thibet, whence it makes incursions into China, India, and Persia. He regards fleas as the chief conveyers of the disease from rat to rat, from rat to man, and from man to man.

A Case of Parasitic Hæmoptysis.—J. Preston Maxwell reports the case of a man, sixty-four years old, who suffered from occasional attacks of hæmoptysis. There were no signs of tuberculosis. The blood coughed up contained many ova, which, however, the author did not succeed in hatching. The administration of thymol and santonin was followed by the passage from the bowels of about fifty round worms.

Malaria and Anopheles in Lagos, West Africa.—Henry Strachan discusses, from the point of view of his experiences in West Africa, the relation of mosquitoes and malaria, and mentions several points of distinction between Anopheles and Culex in both the larval and the imago stages.

Further Results of Haffkine's Anti-Cholera Inoculation.—Arthur Powell presents some statistics of cholera inoculations in nine estates and villages in India. There were 198 cases with 24 deaths among 6,549 not inoculated, and but 27 cases with 14 deaths among 5,778 inoculated.

On Tropical Anæmia and its Relation to the Latent and to the Manifest Forms of Malarial Infection.—This is an instalment of a continued article by F. Plehn of Kamerun.

Edinburgh Medical Journal, January, 1900.

The Infectivity of Malignant Growths.—G. Bellingham Smith holds from experimental research that these growths are local in origin, possessing the power of affecting adjacent and distant parts; that inoculation may take place from one part to another of the individual, apart from transference by the natural channels; that one individual may be infected with growth from another; that growths may be transferred from animal to animal of the same species by inoculation. There have been found in many malignant growths bodies resembling micro-organisms, which are regarded as either protozoa or blastomycetes. A new growth with the structure and behavior of carcinoma has twice arisen from inoculation with a form of blastomyces. The experiments suggest that the bodies found in cancer cause the disease.

Febrile Albuminuria.—F. Parkes Weber prefers the term "rheumatic albuminuria" to that of "febrile albuminuria" in cases of rheumatism accompanied by albuminuria, because he thinks it cannot be maintained that the symptom is caused merely by pyrexia. It is much more likely that in most cases it is due to the causes of the pyrexia—to the presence of irritants in the kidneys or from a toxæmic condition of the blood, and such toxæmic conditions of the blood may be due to infectious (microbic) causes or may be the result of any kind of abnormal tissue change in the body.

Some Observations on the Excretion of Uric Acid, with Especial Reference to its Connection with Leucocytes.—Carstairs C. Douglas from clinical studies concludes that there is a discrepancy between the amount of uric acid thrown off from the body and the number of leucocytes. That nuclein containing tissues or ingestion may increase the amount of uric acid excreted is proved by experimentation, but the observations made do not support the view that normally the source of uric acid is to be found in the nuclein of the leucocytes.

Urinary Calculus.—George Buchanan reports a case of calculus which was impacted in the prostatic urethra, and was removed by perineal section. It measured two and one-fourth by one and three-fourths by one and three-fourths inches.

Purulent Ophthalmia.—A. Maitland Ramsay considers nitrate of silver the best remedy, so long as there is much secretion; when the discharge lessens this should be replaced by sulphate of copper.

Dysentery as it Occurs in Fiji.—Charles T. W. Hirsch says that dysentery is endemic, and occurs among the European settlers, natives, and Indians, and Polynesian immigrants in May, June, and July.

Canadian Journal of Medicine and Surgery, Jan., 1900.

The Hospital Room in Each Dwelling.—W. J. Telfer describes the advantages of the home hospital room. This apartment should be the favorite one when there is no sickness in the family; nevertheless, when occasion arises, it may in half an hour be changed into a more or less complete hospital. The ceiling, walls, and floor must be finished so that they can be washed clean. The furniture should be such as to be readily rendered aseptic. Water and toilet adjuncts should be at hand. A special bath and water-closet should be accessible; movable substitutes could be used in the country. When isolation is imperative either the front or back entrance may be temporarily monopolized by the patient's attendants.

Anæsthesia by Chloroform and Ether.—William B. Jones emphasizes the importance of employing a skilled anæsthetist. He should be acquainted with the patient's history and present condition. The right stage of narcosis must be obtained under all circumstances, the least possible amount of ether or chloroform being used. The hue of the face tells more than the pulse as to the condition of the circulation. The pupils should be almost continually watched, they being the best index of the patient's condition.

Cases of Puerperal Sepsis Treated with Antistreptococcus Serum, with Notes.—George T. McKeough, after noting several cases of this nature, declares that, although the reports of the use of the serum are conflicting, and possibly not very encouraging, yet it exerts no pernicious effects and does merit a continued use.

The History of Medicine.—Ezra H. B. Stafford states that the history of medicine teaches the unity of aim, the singleness of purpose, the undeviating allegiance to an unchanging ideal through long ages, that can be claimed by no other art, no other fraternity.

The Treatment of the Acute Digestive Disorders of Infancy.—By Andrew R. Gordon. See MEDICAL RECORD, vol. lvi., p. 424.

Monatsschrift für Geburts. und Gynäk., December, 1899.

The Clinical Significance of Retroversion of a Movable Uterus.—B. Krönig and J. Feuchtwanger assert that since we accept Schultze's teaching that anteversion of the movable uterus is its normal position, we must admit that retroversion is a pathological condition. Symptoms of retroversion are both local and general. The more or less localized symptoms are profuse menstruation, dysmenorrhœa, backache, abdominal pain, and "bearing down" sensations. Among the general symptoms are dyspepsia, vomiting, meteorism, palpitation, and headache. Some authorities believe that retroflexion should not be treated unless it is accompanied by troublesome symptoms, while others believe in treatment as soon as the condition is discovered, even if no symptoms present themselves.

Pseudo-Myxoma of the Peritoneum.—C. Peters states that Werth in 1884 defined pseudo-myxoma of the peritoneum as a peculiar affection which often made its appearance after the bursting of a pseudomucinous cystoma. He notes as most worthy of mention, in several cases which he reports, the complication of metastases, which frequently occur after the spontaneous rupture of pseudo-mucinous cystomata or from the soiling of the abdominal cavity by the cyst contents during operation. The prognosis is not very good. A perfect cure cannot be claimed till the patient has remained free from recurrence for a year.

The Influence of Sugar on Metabolism in Pregnancy and Labor.—Adolf Payer comes to the conclusion on this subject that small quantities of sugar (30–60 gm.) given once, or several times, increase uterine contractions and hasten labor, especially in its initial stage. The whole course of labor is influenced by the administration of a large dose (100–130 gm.) before it begins. Sugar has a sedative influence on labor pains. For all these purposes sugar may be recommended.

A Metal Instrument as a Substitute for the Balloon in Cervix Dilatation.—Schwarzenbach describes an instrument for dilating the cervix in pregnancy, called the "tulip." It is used to induce premature labor; also in the course of labor coming on at the usual time when pains grow weak and other measures fail.

Ovarian Tumors Arising from the Origin of Accessory Supra-Renals.—Heinrich Peham gives a résumé of his work on these tumors, including a careful microscopical study of the tissue.

Monatsberichte für Harn- und Sexual-Apparate, December, 1899.

Lubricants for Urological Instruments.—Felix Schlagintweit calls attention to the difficulty of keeping ordinary fatty lubricants sterile, and the further difficulty of removing them from instruments after use. They are likewise often destructive to the prism of the cystoscope. Glycerin has the disadvantage of exciting a watery flow from the mucous membrane of the canal, which interferes with instruments of observation. Finding an objection to almost all soapy and other substitutes advocated, he has at last settled upon the one recommended by Guyon: Gum tragacanth, 2.5; glycerin, 10; carbolic solution (three per cent.), 90; this he encloses in tubes which have been previously sterilized.

Annales des Maladies des Organes Génito-Urinaires, December, 1899.

Impotence in Man.—J. Zabludowski, in discussing the treatment of impotence, shows that the bed of the patient who suffers from pollutions should be changed; he should be made to sleep on the sofa instead of the bed. He should also take up some unusual bodily exercise. In a very obstinate case, in which the disease had lasted more than twenty years, a good result was obtained by advising the patient to wear a condom, instead of bathing-trunks which he was in the habit of wearing at night to prevent soiling the bed linen. The pollutions ceased at once. These patients should also be advised not to take their habitual drink at night, and to change their dining-hour. Patients who suffer from spermatorrhœa, and who give a history of having practised interrupted coitus, as well as those who suffer from prostatorrhœa, being often subjects of posterior urethritis, should be given massage of the prostate and abdomen, and be advised to avoid interrupted coitus. In cases of general depression following violent emotions, excellent results have been obtained by general massage, especially dorsal tapotement. This variety of massage will take the place of a strict régime in cases complicated by diabetes or general obesity. It is absolutely necessary to give a good prognosis from the start, especially to candidates for marriage, who do not dare to enter into the contract because of previous experiences. In cases complicated with difficulties of urination, the whole attention should be directed to the prostate, perineum, and bladder. As an aid to general treatment, the whole make up of the bed should be changed, especially in the coverings and draperies, etc., to impress the mind.

Etiology of Infectious Cystitis.—R. P. Van Calcar concludes, as the result of his researches, that, in a large number of cases of infectious cystitis, the infection has not taken place from without by way of the urethra, but directly from the intestine, not by way of the kidney or through the circulation. It is very probable that the microbes follow the subperitoneal route. The chief predisposing conditions are retention and dilatation of the bladder. These conclusions are based upon the following facts: (1) The organisms which are found in cases of cystitis differ completely, as a rule, from those which we find in the urethra. (2) The urethra, be it diseased or healthy, is most sterile for the special organism of cystitis, the bacterium coli communis. (3) In circumstances predisposing to cystitis the microbes of the urethra show no tendency to ascend. (4) The microbes of cystitis, at least the chief ones among them, are found pre-existing in the intestine. (5) The presence of microbes, which, under the influence of pathological conditions, infect the bladder from the intestine, is revealed in this organ sooner than in the urine from the ureters.

Treatment of Prostatic Suppurations.—F. P. Guiard, after reviewing the various methods of surgical treatment of prostatic suppurations, gives his experience in puncturing with a trocar through the rectal wall, followed by antiseptic washings, and gives the special technique for incision under the eye and for applying the ligature in cases of hemorrhage. He believes that puncture, followed by antiseptic lavage, could be applied to various suppurations more or less deeply situated, so as to do away with the more serious operations, and he questions whether it should not be attempted in regions where it is desirable to avoid disfiguring cicatrices.

Revue de Médecine, December, 1899.

Malarial Infection and Epilepsy.—Marandon de Montyel, while not in opposition to the recent theory that, the infectious diseases exercising a beneficial action upon epilepsy, the latter may be cured or modified by inoculation with the germs of various maladies, believes that infection is a two-edged sword, and that its influence is not always beneficial, but sometimes indeed injurious. Malaria has by some authorities been held to be a sovereign remedy, so that they had advised the construction of epileptic hospitals in malarial regions, or the sending of epileptics to malarial districts, with the view of substituting the latter disease for the former and then curing it by the administration of quinine. The author reports fourteen cases in which malaria distinctly aggravated the epilepsy, or caused a return of attacks which had long been absent, or even induced attacks for the first time in some neuropathic patients. Therefore he thinks that caution should be exercised in the treatment of epilepsy by other infections, although it is very possible that in some cases the influence exercised might be a beneficial one.

The Sonorousness of the Abdomen.—De Sigaud says, in regard to the tympanitic sounds, that they consist (1) of a simple initial sound produced by the vibrations of the sonorous membrane; (2) harmonic sounds superadded to the first, and giving it its volume and characteristic tone. There are four varieties of tympanitic sound: sharp, amphoric, deep, and cavernous. The tone varies with the dimensions of the resonant cavity—the sharp tone corresponding to the minimum capacity and the cavernous to the maximum capacity. There are other and perhaps more important factors in the production of the sound, but as yet we are not familiar with them.

Exophthalmic Goitre.—Edouard Boinet says that the complex pathogenesis of this disease and that of diabetes offer many resemblances. Just as the overactivity of the liver in diabetes proceeds from the central nervous system, so are the hypersecretion of the thyroid gland and the dilatation of its vessels, of the base of the neck, and the retro-ocular tissue usually dependent upon an initial stimulation of the Basedowian centres. Later, a secondary thyroid intoxication may occasion the series of Basedow symptoms of toxic origin, and even react upon the nerve centres.

Cracked-Pot Resonance.—Fr. Duplant reports facts from which he concludes that this form of resonance is produced in pulmonary cavities: (1) When there is a large superficial cavity containing much air and communicating with a bronchus; (2) when a deep cavity is separated from the thoracic wall by indurated parenchyma; (3) when a small, superficial cavity containing little air and communicating but slightly with the bronchi is situated within resistant tissue, such as hepatized lung tissue.

Stomatitis and Pseudo-Membranous Angina.—Vincent Griffon reports a case which occurred in a patient suffering from pneumonia accompanied by a typhoid state, in which, thanks to serum diagnosis, the pneumococci were found in the early stages.

Revue de Chirurgie, December 10, 1899.

Intralaryngeal Cysts.—E. Louys says that these growths are usually benign, but the great sensitiveness of the organ in which they are situated, the delicacy of action of the apparatus of phonation, and the necessity of free aperture of the larynx for respiration render them of importance. The author believes that many of these cysts are of embryonic origin, some of them being branchial, some proceeding from the lateral lobe of the thyroid gland, and some from the thyro-lingual duct. The symptoms of these cysts are those of any foreign body—dyspnœa, dysphonia, sometimes accompanied by pain and cough. Indirect treatment consists in the use of revulsives to the neck, these acting upon the symptoms of laryngitis to which the cyst may give rise, or in the use of medicated inhalations or of mineral waters. Direct treatment may consist of endolaryngeal puncture alone, or with aspiration, or incision and excision of portions of the laryngeal wall. The galvanic cautery is sometimes efficacious. Laryngotomy is the operation to be preferred, and can best be performed under local anæsthesia by cocaine.

The Infection and Disinfection of Wounds due to Fire-Arms.—E. Tavel's experiments upon rabbits, described at great length, lead to the conclusion that a masterly inactivity is apparently the best treatment for wounds by contaminated missiles. Iodoform gauze he found to be not very harmful, retarding recovery by only six days, while glass drainage tubes caused a delay of sixteen days. Disinfection of the wounds is impracticable as a rule, and the chemical or physical means employed for the purpose merely serve further to injure the tissues and put them in a condition to be invaded by the microbes carried into the wound by the ball.

Abdominal Hysterectomy.—F. Terrier reports fifty-nine operations performed by him during the past year, with a mortality of 8.47 per cent. His preference is for total hysterectomy when practicable.

Inguino - Scrotal Lymphangioma. — Brant Paes Leme reports a case in which embryonic filaria sanguinis hominis, although not found in sections of the tumor, were found in the patient's blood.

Reviews and Notices.

TREATMENT OF SKIN CANCERS. By DR. W. S. GOTTHEIL. International Journal of Surgery, New York, 1899.

A SMALL book, in which is briefly reviewed the etiology, pathology, diagnosis, and treatment of cutaneous carcinomata. The author dwells especially, in his chapter on treatment, on the value of caustics for the radical cure of skin cancers. He fails, however, to indicate to what particular types of these malignant new growths caustics are more applicable than is excision.

LECTURES UPON THE PRINCIPLES OF SURGERY, delivered at the University of Michigan. By C. B. Nancrede, A.M., M.D., etc.; with an Appendix containing a *Résumé* of the Principal Views held concerning Inflammation, by W. A. SPITZLEY, A.B., M.D., etc. Illustrated. Philadelphia: W. B. Saunders. 1899.

THIS volume contains the lectures of the author, as given at the University of Michigan, upon the subject of the title. There is no pretence that the book is any more than a collection of lectures, so that we may expect and understand a certain amount of lack of continuity. The subjects are discussed interestingly, though we cannot say that anything novel or particularly worthy of comment is offered. The students who come under the immediate supervision of the author will undoubtedly find the book a very valuable one, and we suppose that it is intended primarily for their use as a text-book in connection with didactic lectures.

LEHRBUCH DER KINDERKRANKHEITEN FÜR AERZTE UND STUDIRENDE. Von DR. ADOLPH BAGINSKY, a. o. Professor of Diseases of Children in the Berlin University, and Director of the Kaiser und Kaiserin Friedrich Children's Hospital. Sixth improved and enlarged edition. In two parts. Braunschweig: Published by Fried. Wredn. 1899.

THIS new edition, consisting of over one thousand pages, has just appeared in two volumes. Part I. commences with the description of the physiological functions of an infant, mentions the growth and development of a child, and then enters into the details pertaining to infant feeding—both artificial and natural methods. Whoever has followed the previous publications of Baginsky will be greatly impressed with this chapter, which we consider the most vital and valuable in the new edition. To begin, the author does not only ignore the most recent publications of Heubner, but discards the theories of that writer. Baginsky is emphatic in his assertions that we must recognize the value of studying each child individually and responding to the individual needs of children. Some children will thrive on a given feeding which is wholly inadequate for another child of the same age. He emphasizes the value of examining the fæces, quoting Escherich in this regard. Speaking of the decomposition of milk, particularly in summer, the author calls attention to the dangers by the formation of poisonous peptone bodies which he calls "pepto-toxins." His deductions are based on personal observations in the nursling pavilion. Next follows the description of the usual methods of examining a sick child in making a diagnosis, and all the diseases of the new-born are detailed. Following this chapter we are brought into the description of the eruptive (exanthematous) disorders. All typhoid lesions are thoroughly described, and every detail pertaining to the diagnosis, pathology, and especial therapeutic management is carefully considered. In mentioning the general infections like diphtheria we ask: "Who is more competent than Baginsky to speak on serum therapeutics, and to whom is the profession of the whole world more indebted than to this author for disseminating the true status pertaining to the value of antitoxin?" In reading the author's views on tuberculosis we cannot but call the chapter a masterpiece. The chapters on cerebral and, in fact, all diseases of the nervous system are complete in every detail, based as they are on studies in which anatomical and pathological details are considered. It is interesting to note *en passant* that although the author is one of the first to attach to bacteriology its true value from an etiological standpoint, he does not believe that, when we are not absolutely positive, all pathological conditions must be included and compelled to conform to either (1) specificity, (2) infection, (3) sepsis. The author believes that other agents equally important are frequently at work and deserve distinct etiological recognition. Based as this work is on the experience of one of the largest children's hospitals in the world, with a very large staff of assistants in the various departments, we have the latest wrinkles, views, and therapeutics in pædiatrics. The work appeals to every one desiring a complete insight into any and all details of the diseases of children.

TRANSACTIONS OF THE ASSOCIATION OF AMERICAN PHYSICIANS. Vol. XIV., 1899. 8vo, pp. 366.

THIS is an unusually interesting volume of its series, which is saying a great deal for the general excellence and practical value of its contents. The papers contributed by the members are on practical subjects, are exhaustively treated, and well selected.

LECTURES ON TUMORS. By JOHN B. HAMILTON, M.D., LL.D., Professor of Surgery, Rush Medical College, Chicago. Third edition. Philadelphia: P. Blakiston's Sons & Co. 1899. Pp. 143.

THE third edition of this work comes in its original form. In a condensed and lucid manner it treats of morbid growths in all their bearings, and is in all respects a practical book for the student and practitioner.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL SOCIETY. Vol. XXIV., for the year 1899. 8vo, pp. 520.

THIS volume contains a large number of monographs on all the more recent gynæcological operations, numbering nearly thirty in all. The reader cannot fail to notice that in all the operative manœuvres advocated there is a disposition to conservatism which is in striking contrast to gynæcological practice years ago. Radical methods are being replaced by simpler ones, and altogether gynæcology is making rapid strides along rational lines.

DEAVER'S SURGICAL ANATOMY: A Treatise on Human Anatomy in its application to the Practice of Medicine and Surgery. By JOHN B. DEAVER, M.D., Surgeon-in-Chief to the German Hospital, Philadelphia. In three royal octavo volumes. Volume I. Philadelphia: P. Blakiston's Son & Co. Royal octavo, pp. 632.

THE author informs us in his preface that his work, the first instalment of which appears in the present volume, has occupied his earnest thought for twelve years. To say that the time has been well spent is perhaps sufficient commendation in a general way. In many respects the plan and scope of the book are unique, and follow the intention of the author in representing what a model and practical treatise on applied anatomy should be, not only for the surgeon but for the every-day practitioner as well. To the former the numerous and finely executed plates, representing superficial and deep anatomy, with their accurate regional relations, it will serve as an ever-ready and reliable guide in times of emergencies, when cadavers are beyond reach, and where there are no similar means for refreshing the memory; while to the busy physician abundant opportunities are afforded for readily acquainting himself with "every phase of anatomy superficial or deep, as applied to disease, and the most modern methods of treatment of injuries." The first volume of this remarkably elaborate and profusely illustrated work treats of the upper extremity, back of the neck, shoulder, trunk, cranium, scalp, and face. The reader is not only taken by easy and natural stages from the more superficial to the deeper regions, but the various important regional landmarks are also indicated by schematic tracing upon the limbs. Thus the course of arteries, veins, and nerves are indicated in a way that makes the lesson strikingly impressive and easily learned. No expense, evidently, has been spared in the preparation of the work, judging from the number of full-page plates it contains, not counting the smaller drawings. Most of these have been "drawn by special artists from dissections made for the purpose in the dissecting-rooms of the University of Pennsylvania." In summing up the general excellences of this remarkable work, we can accord our unqualified praise for the accurate, exhaustive, and systematic manner in which the author has carried out his plan, and we can commend it as a model of its kind, which must be possessed to be appreciated.

Society Reports.

THE MEDICAL ASSOCIATION OF THE GREATER CITY OF NEW YORK.

Stated Meeting, January 8, 1900.

AUSTIN FLINT, M.D., IN THE CHAIR.

Report of a Case of Properitoneal (Interstitial) Hernia.—DR. L. GRANT BALDWIN reported this case. On December 10, 1899, Mrs. B—— was referred to his service at St. Peter's Hospital with a probable diagnosis of intestinal obstruction. She was thirty-eight years of age, had never borne children, and her previous health had always been good. On admission the patient stated that five days previous she was compelled to go to bed on account of a feeling of nausea, but this was relieved by the use of home remedies, and the next day she was able to be up. Two days later, December 7th, she was seized with severe vomiting, which continued until her admission into the hospital; the vomiting was very severe and was accompanied by marked abdominal pains, chiefly located in the epigastrium. The vomiting at no time became fecal, and was constant except when the patient was under the influence of morphine. The bowels last moved on the morning of the 5th. On admission to the hospital the pulse was 130; temperature, 99° F. There was no abdominal distention, and doubts were entertained as to the case being one of intestinal obstruction. Abdominal examination revealed nothing definite. Hot saline solution was administered by the mouth, as were copious enemata. Six hours after admission there was felt a small lump in the left inguinal region about an inch and a half above Poupart's ligament. It first gave the impression of a distended Fallopian tube that had become adherent to the parietal peritoneum; there was only the slightest ocular evidence of swelling. Bimanual examination eliminated tubal or ovarian trouble, so it was learned that the tumor was intestine. There seemed to be no doubt whatever that the hernia was incomplete, and was interstitial. Operation on the following morning confirmed the diagnosis. The internal ring was displaced upward and toward the median line. The tumor, which consisted of a coil of small intestine with some serous fluid, was not larger than half of an English walnut; it had come through the peritoneum and struck the transversalis muscle at least three-quarters of an inch above its lower border or the ordinary location of the internal ring, and then was deflected inward almost to the border of the rectus muscle. The fleshy part of the transversalis muscle was cut for a distance of an inch and the constriction relieved from without inward. The sac was opened and the constriction was found to be absolute and complete, yet the entire calibre of the gut was not through the opening, the constriction being complete by the sharp bend rather than by the involvement of the whole gut. The sac was cut off flush and stitched carefully with catgut. This having been done and the parts being allowed to resume their natural relations, the internal ring with its contents was the full width of the hernial opening below and external to it. A modified Bassini was done, and convalescence was uninterrupted. The chief point of interest seemed to be the ease with which the true condition might have been overlooked, and a diagnosis not made in time to save the patient's life. A median abdominal section done in search of the cause of the obstipation might not have located the trouble. All cases hitherto reported have been in males, and have been very generally due to an undescended testicle.

DR. WILLIAM B. DE GARMO mentioned a case of a woman, aged seventy-six years, seen by him two years ago, who had a properitoneal hernia probably due to the wearing of a poorly fitting truss. She, too, had symptoms of intestinal obstruction, but the tumor could be felt. A loop of intestine was found to be strangulated under the transversalis fascia. There was a pocket extending almost to the median line.

The Etiology and Treatment of Acne Vulgaris.—DR. ROBERT ALFRED SANDS read this paper. Published statistics showed that this name included about eight per cent. of all skin diseases. What was acne? There were no less than seventeen distinct diseases included under this term of acne. Unna claimed that the term meant nothing definite. He stated that "it is a disease of the skin limited to the cheek, nose, forehead, chin, and shoulders, and to the period of puberty. It rarely extends to the whole back, still more rarely to other parts of the body, and usually disappears with adolescence. It is characterized in the first stage by a superficial hyperkeratosis of the epidermis, which, extending to the follicular mouths, leads to the formation of comedones. While the sebaceous glands with the follicles are stopped with horny plugs, the coil glands are active; indeed there is often hyperidrosis oleosa. . . . On this basis a more inflammatory development of the disease takes place in two directions, one progressive, dry, and inflammatory, with thickening of the whole skin, hypertrophy of the sebaceous glands, and formation of the inflammatory nodes (acne indurata), the other accompanied by secondary suppuration of the sebaceous glands (acne pustulosa)."

Constitutional Causes Favoring the Formation of Acne.—Text-books led one to infer that acne was a local manifestation of a general systemic disturbance, such as anæmia, dyspepsia, constipation, and derangements of the genito-urinary apparatus, etc. Some even believed that it was a disease of the blood. The speaker disagreed with this. A careful analysis of five hundred cases of acne showed that seventy per cent. were free from constipation. He had noted the fact that patients did not develop new lesions during the menstrual period with any greater frequency than during the intervals, although many complained that the pre-existing nodules became somewhat more tender. The point he wished to emphasize was that while possibly an acne already in existence might be slightly modified by the health of other organs, the relationship between the two was so slight that one could disregard it in the treatment.

External Treatment.—First, asepsis, which meant a separate soap for the face, a separate rag for the face, washing the hands prior to washing the face, and a nightly changing of the pillow in the case of patients having much pustulation. The patients must keep their hands from the face. A watch-key should never be used, because its hollow tube was so difficult to disinfect. Second, the comedones should be expressed, softening the face with hot towels or the steam atomizer for ten minutes, and expressing the comedones with the finger covered with sterilized gauze. Third, pustules and indurated nodules were dealt with according to the case. If suppuration had advanced so far that only a thin film of necrotic skin covered the pus, they should be opened; otherwise not. If it should be decided not to open them, then a forty-per-cent. salicylic plaster could be applied, or a drop of carbolic acid. This frequently would abort them. Laying the pustules wide open and scraping out the contents were never done. Fourth, as to medicinal agents, mercury, sulphur, and resorcin easily led the list in the choice. If the case was a very bad one, the patient should remain in the house and wear a mask formed of mercurial plaster; this should be worn constantly for three days, when the skin should be cleansed with benzene and all comedones and pustules emptied. This plaster treatment should be kept up until no new pustules formed, when Lassar's paste should be applied for a few days. Sulphur was preferable for office work, but it should be used in far greater strength than usual. It was of special value with oily skins, when the following lotion should be ordered to be applied:

℞ Sulphur lac	30
Alcohol	30
Water	37
Gum arabic	3
	100

On drying, this formed a thick powder and rapidly produced a scaling of the skin in most instances. If seborrhœa oleosa was present, resorcin was of special value, but it should be used strong enough to get its caustic effects and so reduce the thickened outside layer of the skin; thus:

℞ Zinc oxide	10
Resorcin	40
Benzoated lard	50
	100

This should be applied for fifteen minutes and then wiped dry. The application should be stopped as soon as desquamation appeared, and soothing pastes should be applied. In any case the scaling had to be done repeatedly. He had never seen a single case end in recovery under the use of sulphur ointments.

Dr. Samuel Sherwell, of Brooklyn, said that acne did not occur in children, but in young adolescents or young adults. He did not believe the speaker had laid sufficient stress upon the cases of constitutional origin, *i.e.*, the so-called diathetic or constitutional causes. Acne stood in great and close relation to the general economy. It was essentially connected with developmental causes and developmental troubles of the pelvic organs; also with dyspepsia of the lower bowel. Some people were constitutionally prone to acne—those with the hard, butcher type of skin, who had thickening of the mucous membranes, which did not appear silky as occurred in more healthy persons. He thought there was certainly some direct causal relations between pelvic troubles and acne, as well as between uterine functions and acne. He had seen at the periodic disturbances aggravation of the skin trouble; he had seen women either cured or greatly relieved of acne by the employment of catharsis and an oxytocic such as ergot, which acted upon the unstriped muscular fibre. In persons at the menopause he insisted upon catharsis and fewer but regular meals, thorough mastication of the food, and the relief of the pelvic viscera, for he believed that pelvic stasis was the determining etiological factor of acne. It may be due to sluggishness of the nervous system. Treatment of the reflexes from below the waist he considered to be the best for acne. Startin's tonic was advocated; this consisted of sulphate of magnesia, sulphate of iron, dilute sulphuric acid, syrup, and water. Although Startin was not a scientific man, he was accustomed to cure his patients in cases of acne by purging with sulphate of magnesia, by giving anti-rheumatic treatment and wine of colchicum, and, in cases of women, by tonic doses of ergot.

Dr. E. B. Cragin said that acne should be more prevalent at puberty when the glandular organs developed: it seemed perfectly natural that the sebaceous glands should be stimulated as well as the other glands at puberty. He had often thought that if the male sex were as particular about their complexions as the female, and went to the doctor, acne would be found in them as frequently as in women. After the age of puberty it was seldom that we saw cases of acne, except at the menstrual period. He had seen exacerbations of acne during menstruation.

Dr. Beverley Robinson had seen a great number of young men and young women at the time acne showed itself, and he begged leave to differ from some of the opinions of those present. The general conditions were all important, more so than local ones. It was rare to find young women with acne without some functional disturbances of their pelvic organs, with abundant, slight, or no menstrual flow. Sometimes the bowels were regular, and acne showed itself when there was some great strain upon the nervous system or bodily strength. He found acne more or less connected with the condition of anæmia, more or less pronounced. Personally he did not believe in allowing these patients to be in the hands of the specialist too much; we should keep control of these patients, although many specialists in cutaneous medicine managed these cases with great skill. The general health should be built up, and if the patients did not then improve, they should be sent to the specialist. He was skeptical regarding the treatment instituted in curing these patients unless they were kept in the best bodily shape. In view of the past he would insist upon the all-important influence of the general condition.

Dr. Frank C. Raynor, of Brooklyn, believed that the treatment of acne bore out the fact that we could not disassociate one organ from another. In the clinic with Dr. Sherwell the administration of a tonic combined with a laxative was employed, methods directed toward restoring the patient's general health.

Dr. L. Grant Baldwin, of Brooklyn, referred to one condition being present more than any other in cases of acne; that was, posterior deflection of the uterus. One case, treated by the dermatological department for a considerable time, without any effect, was brought to the gynæcological department and a complete retroversion was found; as soon as it was corrected and held in place the acne was practically cured in a week's time. There certainly was a close relation between the pelvic-organ disturbances and acne.

Dr. Sands closed the discussion by stating that he had never seen a case of acne in children, but he had seen it before the menstrual period set in, in one case three years prior to that event. The causal relations between acne and pelvic disturbances should be proven. If the replacing of a pelvic organ cured an acne, the placing of it again in its bad position should bring on acne again. The statement made by him in his paper, that only eight per cent. of all skin cases were acne, he thought to be too small; this was taken from the report of the American Dermatological Association, from their collection of eighteen thousand cases of skin diseases.

Officers Elected.—*President*, Dr. Robert F. Weir; *Vice-President*, Dr. William McCollom; *Recording Secretary*, Dr. P. Brynberg Porter; *Corresponding and Statistical Secretary*, Dr. Frank C. Raynor, of Brooklyn; *Treasurer*, Dr. Augustus D. Ruggles; *Members of the Executive Committee*, Dr. John H. Hinton (for four years), Reynold W. Wilcox (for two years); *Chairman for Borough of Manhattan*, Dr. J. Blake White; *Chairman for Borough of the Bronx*, Dr. S. Carrington Minor; *Chairman for Borough of Brooklyn*, Dr. Charles P. Gildersleeve; *Chairman for Borough of Queens*, Dr. Joseph F. Bloodgood; *Chairman for Borough of Richmond*, Dr. William C. Walser.

Erythrol Tetranitrate is especially useful as a prophylactic in preventing the onset of anginal pains. —C. R. Marshall.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Stated Meeting, January 8, 1900.

CHARLES N. DOWD, M.D., CHAIRMAN.

Aneurism of the Innominate.—DR. A. L. FISK presented a case of this kind as a contribution to the special subject for the evening, *i.e.*, aortic aneurisms.

Recurrent Spindle-Cell Sarcoma with Glandular Involvement, Treated Successfully with the Mixed Toxins.—DR. WILLIAM B. COLEY presented this case. The patient was a man forty years of age, a carpenter by occupation. In September, 1896, he had first noticed a swelling in the parotid gland. This had gradually increased in size, until it was as large as an English walnut. It had then been removed by operation in March, 1897. It had quickly recurred, and had grown more rapidly, so that in May, 1897, a second operation had been performed by Dr. J. W. Wright at the Bridgeport Hospital. It had been found impossible to remove the whole tumor. The latter had continued to grow, and by July, 1897, had involved the submaxillary gland. Having at this time been regarded as a totally inoperable case, the use of the mixed toxins of erysipelas and bacillus prodigiosus had been begun by Dr. Wright. Very little improvement having been noticed after three weeks of this treatment, the patient had been referred to Dr. Coley for advice and treatment. Inasmuch as only moderate doses had been given, and in view of the fact that the patient's general condition was sufficiently good to warrant giving very large doses, it had been decided to give this treatment a further trial. The man had accordingly been admitted to the New York Post-Graduate Hospital on August 18, 1897. Physical examination at that time had shown a tumor occupying the entire left parotid region, and extending from the left auditory meatus forward nearly to the angle of the mouth, and from the angle of the jaw nearly to the orbit. The tumor was circular in shape, and measured three and one-half by four inches in diameter. It was markedly protuberant and ulcerated in the central portion over an area the size of a silver half-dollar. Just beneath the angle of the jaw was a secondary tumor the size of a hickory nut. The tumor had every appearance clinically of malignancy, and was hopelessly inoperable. The microscopical examination, made at the Bridgeport Hospital, had shown the growth to be a spindle-celled sarcoma. Daily injections of the mixed toxins had been made directly into the tumor, and the dose had been rapidly increased up to the point of giving a severe chill and a temperature reaction of 104° or 105° F. After about a week slight improvement had been noticed, as evidenced by diminished vascularity and decrease in size. This improvement had steadily continued, and the treatment had been kept up about ten weeks. At the end of this time the neoplasm had apparently disappeared, leaving a bright granulating area in the region of the ulceration. This had rapidly cicatrized, and a few weeks later the patient had been presented to the New York Surgical Society entirely free from any trace of the tumor. He had remained in good health up to the present time, nearly two years and a half since the beginning of the treatment.

Successful Double Resection of Cæcum and Small Intestine.—DR. COLEY also presented a patient upon whom he had successfully performed a double resection of the cæcum and small intestine for carcinoma seven and one-half months before. The patient was a physician, forty-three years of age, who had enjoyed good health up to the spring of 1898, when he had had symptoms referable to the right iliac region, and apparently characteristic of recurrent appendicitis. There were pain, slight fever, temperature reaching 102° F., marked local tenderness, and constipation. These attacks had confined him to bed for a period of about a week, after which his condition had slowly returned to the normal, the pain and tenderness entirely disappearing without leaving any trace of tumor behind. In October, 1898, he had had a second similar attack. After this, although the tumor had decreased very markedly, it had not entirely disappeared. There had been no loss of weight. In April, 1899, the induration had increased somewhat in size, and had become more tender. As there had been every reason to believe that he was suffering from chronic appendicitis, an operation to relieve this condition had been performed by Mr. Irving W. Cameron, of the Toronto General Hospital. The abdomen having been opened there had been found a hard mass, involving the cæcum and adherent portion of the small intestine, and making removal impossible without a double resection, for which both the patient and the surgeon had been obviously unprepared. The patient had come to Dr. Coley for examination on May 18, 1899, and, after a careful consideration of his general condition, aided by the accurate description of the condition found by Mr. Cameron, a radical operation had been advised. This operation had been done on May 26th, with the assistance of Dr. William T. Bull. The cæcum and about seven inches of the small intestine had been resected. The divided ends of the small intestine had been united by means of a Murphy button, reinforced by suture. The divided end of the ascending colon had been inverted and closed by means of a continuous suture. The same procedure had been adopted with the corresponding end of the small intestine beyond the ileo-cæcal valve. A lateral anastomosis had then been made by means of a large oblong Murphy button, and had been reinforced by interrupted silk sutures. Gauze drainage had been introduced and left for four days. The patient had suffered scarcely at all from shock, and had made an uninterrupted recovery. Both buttons had been passed on the ninth day, and the patient had returned to his home in Canada on the 21st day. He had remained perfectly well since, and had recovered his normal weight. At the present time, seven and one-half months after operation, careful palpation failed to reveal any evidence of return.

DR. J. A. WYETH, referring to the first case, asked what had been the object of introducing the toxins directly into the substance of the tumor, and was it Dr. Coley's custom to do this?

DR. COLEY replied that this was his practice whenever it was feasible, his experience having been that the results were far more satisfactory and more rapidly obtained when this could be done. He had, however, had good results in several cases in which it had been necessary to make the injection at some distance from the growth.

DR. WYETH asked if the temperature and inflammation had been exaggerated by this direct injection method.

DR. COLEY said that he thought this was apt to be the case, especially if sloughing were present, but such a pyogenic infection could be largely avoided by careful cleansing and disinfection before making the injections.

Sarcoma Cured by Acute Inflammation.—DR. WYETH said that he had asked these questions because his own experience had led him to believe that much of the beneficial results following the injections of the toxins was due to an acute inflammatory process not directly connected with any special virtue of these toxins. This statement was not intended as any criticism on the use of these toxins, because he believed they were directly beneficial. Fifteen years ago he had had a sarcoma of the abdominal wall examined by Dr. W. H. Welch, and proved by him and others to be a spindle-cell sarcoma. After every extensive operation Dr. Wyeth had resorted to injections of arsenious acid. The method had been so painful that after about ten days the patient had begged to have it given up. The speaker said he had been impressed with the marked reaction excited by the injections. The man had returned to his home, and much to Dr. Wyeth's surprise had completely recovered, and was to-day alive and well. This was a clear case of cure of sarcoma by an acute inflammatory process set up by injections of arsenious acid. In another case, one of very large sarcoma of the abdominal wall, he had exposed the tumor to the atmosphere, packing gauze around it, for the purpose of securing infection. This exposure had led to extensive suppuration, and the man had recovered, and had since been entirely well. The tumor had not been examined microscopically, but it had been a very large neoplasm, and to all appearances was a sarcoma.

Dr. Coley said that he had a case now under observation showing that cure was ordinarily not the result of a pyogenic process. The case was one in which the clinical diagnosis of all who had seen it was sarcoma of the fascia. Fluctuation having been noted, an aspiration had been made, and a large quantity of sterile, broken-down material removed. This proved that the destruction of the tissue had gone on as a result of the toxic agent, pure and simple, and not because of any infectious process.

Coley's Method Commended.—Dr. Wyeth said that he considered it essential to secure infection with the erysipelas coccus. He knew that Dr. Coley's treatment had not been very popular with the profession, but personally he was sure that it was both scientific and successful.

The Treatment of Aortic Aneurisms.—Dr. J. M. T. Finney, of Baltimore, read a paper on this subject. It was recognized, he said, that there were three essential conditions for treatment: (1) the aneurism must spring from the front of the vessel; (2) the sac must be perfect; (3) there must be a coagulating property in the blood. Macewen's method of needling the inner lining of the sac offered good chances of a cure, but the process was tedious, and months were required before the necessary coagulation would take place. In abdominal aneurisms only those sacs lying closely in contact with the abdominal parietes could be so treated, and obviously the diagnosis of this condition was impossible.

Gelatin Injections.—Since October, 1898, the French gelatin-injection treatment had been employed at the Johns Hopkins Hospital. In all nine cases of aortic aneurism had been treated by this method. In all these cases the blood-coagulation time had been carefully noted. Not a single patient had been cured, though in one case the size of the aneurism had been decidedly diminished. It seemed quite certain that the injection of the gelatin did not markedly affect the coagulability of the blood. These injections had been painful and sometimes had been followed by chill and an elevation of the body temperature to 103° F. There was, however, apparent merit in the treatment sufficient to warrant giving it a further trial. From a very recent experience he was now inclined to advise a combination of the gelatin injections with the wiring method.

The Wiring Method.—Charles H. Moore, of the Middlesex Hospital, had first undertaken the cure of a thoracic aneurism by the introduction of a foreign body into the aneurism. Although this first attempt had resulted in failure because of faulty technique and consequent sepsis, the originator of this method had felt impressed with the soundness of the theory upon which the treatment was founded. Dr. D. D. Stewart, of Philadelphia, deserved the most credit among American surgeons for the development of the proper technique. The needle should be large enough for easy passage of the wire. A drop of sterile oil would materially facilitate the passage of the wire. The escape of blood was very slight. The needle should be covered from the shoulder to within 1 cm. of the point with some insulating material, so that the electric current would not be dissipated at the point of entrance of the needle into the sac wall. The speaker recommended insulating the needle with the best black French lacquer. The needles so insulated could not be boiled, but they could be sterilized by exposure for one hour in a chamber in which the air was heated to 160° F. The disposition of the wire in the sac was an important factor. A small quantity of fine wire, having a fine springy quality, should be selected. The corrosion of the wire by the electric current made a rough surface, which facilitated the deposit of fibrin; hence, within proper limits, the wire giving the roughest surface was the best. The treatment could be carried out experimentally by using flasks of different capacities. Experiment of this kind had shown that ten feet of fine and highly springy wire would fill a 500 cc. flask. They had found at the Johns Hopkins Hospital that the best wire was one made of seventy-five parts of copper to one thousand of silver, drawn down from No. 8 to No. 27. Such a wire gave a closer coil than steel wire. Experiments had been made also regarding the comparative value of steel and silver as electrical conductors for this work. The experiments had been made at an abattoir in a jar of freshly drawn hog's blood. After a current of 100 milliamperes had been passed for an hour both wires had been examined, and it had been found that the silver wire had been more disintegrated. Experiments made on dogs had shown that a current of 20 milliamperes was effective and better than one of 100 milliamperes. Such treatment was particularly suitable for cases of thoracic aneurism because it could be done under cocaine anæsthesia. If after passing in a small portion of the wire a kink should occur, more wire should be inserted through another needle, and then both portions of wire connected with the same pole of the battery.

Dangers.—Of course, sepsis was an omnipresent danger. One of the greatest dangers, particularly in multilocular aneurisms, was rupture of a secondary sac, due to the rapid filling of the main sac with coagulum and the shunting of the blood against a portion that had hitherto not received such a strain. General arteriosclerosis would, in general, weigh against this operation. While clinical experience had shown that wire without galvanism would collect fibrin in the lesser sac, it probably would not do so when exposed to the full force of the aortic current. The size of the sac opening could not be diagnosed from the character of the bruit. Another danger was that of emboli breaking from the sac wall during the introduction of the wire. There was a possible danger of puncture of the sac wall by the wire, especially if the wire was made of steel, but this danger was rather theoretical than real.

Results.—In all of the cases upon which autopsies had been held, the effect of the wire in whipping out fibrin from the blood had been marked. Thirty-five per cent. of the reported cases attested the value of the operation by the palpable improvement and the prolongation of life. In one of the cases that had come under his own observation the wiring had been done three times, and after each operation there had been comparative comfort for a number of months. Of the two thoracic aneurisms reported in the paper, one had been wired last August, and was now considered by

Dr. Osler to be cured. Of nine other cases, death had been apparently hastened in six; however, none of these patients could have lived long. Clinical and post-mortem evidence certainly pointed to the efficacy of the method; its great drawback was the lack of accuracy in diagnosis. His first case had been one of abdominal aneurism occurring in a man who had been admitted to Dr. Osler's service on July 19, 1898. Wiring had been done on August 18th. Considerable difficulty had been experienced in exposing the sac. Only five feet of the silver alloy wire had been used, and a current of from 30 to 70 milliamperes had been kept up for one hour. The sac had been made immediately smaller and firmer. The patient had experienced more pain, however, immediately after the operation. He had died on the twentieth day, and the autopsy had revealed no actual rupture, but there had been a very rapid oozing of blood. His second case had been admitted on April 24, 1899. Seventeen injections of one-per-cent. gelatin had been previously given on the medical side of the hospital without any appreciable benefit save some relief to the pain. On August 11th wiring had been done, ten feet of the silver alloy having been used with a current varying from 10 to 20 milliamperes. Following this there had been an improvement in the symptoms for about one week, and then there had been a sudden increase in the size of the chest, but the patient would not consent to another wiring. Fifteen more injections of gelatin had been given. This was the case in which Dr. Osler now thought a cure had been effected, although so far it had been classed only as a case showing improvement from the treatment.

Conservatism Advised.—Dr. J. A. Wyeth said that these desperate cases certainly justified desperate measures. The treatment so well outlined in the paper was certainly desperate, yet the results fully justified the means. Many years ago he had had occasion to look up every case reported in which operation had been done. As a result of this study he had been led to feel that distal deligation was not contraindicated in cases of aneurism of the ascending and transverse segments of the aortic arch, complicated or not complicated by orifices of the large vessels. The results obtained in this way were probably as good as any others that could be shown. Dr. Wyeth then cited an interesting case—that of a man of twenty-six years, a syphilitic, with an aneurism almost at the point of rupture when first seen. Under aseptic precautions he had inserted twenty-four hare-lip pins into the aneurism, just like the pins in a pin-cushion. Eighteen hours later he had removed the pins. There had evidently been coagulation of the blood on the walls of the aneurism, because the pulsation was distinctly less. The operation had been repeated four days afterward, and the pins had been left in for twelve hours. The patient had been put upon increasing doses of iodide of potassium, and he had rapidly improved. He had left in two months with evident solidification of the aneurism. He had returned to his work as a carriage painter, and two years afterward had fallen dead, apparently as a result of a cerebral embolism. In one of the cases upon which he had operated he had been surprised to find that the aneurism had already solidified. Personally he would prefer to give the rest and iodide treatment a very thorough trial before subjecting the patient to deligation or to wiring. He was of the opinion that if the profession at large understood better the proper treatment of syphilis there would be fewer cases of aneurism to be treated.

Dr. P. Bolton spoke of the experience at the Hudson Street Hospital with the gelatin injections. Four cases had been treated at that hospital with these injections during the past year. The method had been found to have many disadvantages, and none of the cases had resulted in a cure. The injections were followed in every instance by severe pain, and sometimes by chill and fever.

Dr. Finney said that he agreed with Dr. Wyeth regarding the advisability of attempting the rest and iodine treatment before resorting to the other methods. It had been tried in one of his cases without avail; another patient had been so unruly that it could not be continued, and in a third it could not be employed because the patient had been unable to lie down.

Therapeutic Hints.

Endermic Application of Salicylic Acid.—Sigalas and Combemalle have called attention to the fact that salicylic acid is absorbed through the epidermis. In an oily vehicle, when rubbed on the skin the acid may be detected in the urine after five minutes. If, after rubbing, the area is covered with oiled silk and enveloped in flannel, the effect is enhanced. Oil of wintergreen may be employed. A favorite formula is:

℞ Acidi salicylici	10
Alcohol	50
Ol. ricini	100

—*Merck's Archives.*

Hæmatemesis.—Rest in bed, absolute immobility, a hypodermatic injection of ergotin over the epigastrium, and ice locally over the same region. Internally one or two grains of opium, and every two hours a teaspoonful of the following mixture:

℞ Ergotin	ʒ i.
Acidi gallici	gr. x.
Extr. opii	gr. ij.
Syr. terebinthinæ	℥ i.
Aquæ	℥ iv.

In case of syncope employ horizontal decubitus, injections of ether, flagellations, mustard leaves to the legs, etc. Upon the development of signs of peritonitis indicating perforation of the stomach give morphine hypodermatically.

Scarlet Fever.—All children ill with scarlet fever should be kept in bed during the rash, no matter how mild it may be; and furthermore, such children should be confined to warm rooms, or, better still, to bed, for four or five weeks from the appearance of the initial symptoms. At least twice a week during this time the urine should be examined, and upon the appearance of the slightest unfavorable symptom the child should be sent back to bed again if he has already been allowed to be about the room. If scanty, albuminous urine and dropsical effusion appear the physician must direct the most energetic efforts toward making the skin or intestines temporarily assume, as far as possible, the functions of the kidneys, throwing on the latter, at the same time, as little work as possible in the way of excretion of nitrogenous refuse. The copious use of water, if tolerated by the stomach, will act as one of the very best of diuretics. Should the urine still remain scanty, then diaphoresis must be induced in order to increase the action of the skin —first, by means of baths, and then, if necessary, by drugs. The warm bath (98°–100° F.) every fifteen to twenty minutes is often grateful to the child, and if supplemented by a flannel pack is very efficacious. Any of these methods will be assisted by the internal use of diaphoretics, chief of which are the preparations of jaborandi. Sips of the hot infusion of the leaves (ʒ i. to Oi.) act both as a powerful diaphoretic and sialagogue. To avoid the latter action Smith prefers the alkaloid pilocarpine, gr. $\frac{1}{40}$ to $\frac{1}{20}$, conjoined with an alcoholic stimulant, every four to six hours.

Should this fail, the same writer speaks highly of the following:

℞ Potassii acetatis,
Potassii bicarbonatis,
Potassii citratis........................āā ʒ ij.
Inf. tritici repentis .... ℥ viij.
M. S. A teaspoonful every three or four hours to a child of five years.

Most palatable and efficacious is the following:

℞ Liq. ammonii acetatis,
Syr. acidi citrici..........................āā ℥ ij.
M. S. Teaspoonful every hour in hot lemonade.

—Marcus P. Hatfield: "American Text-book of the Diseases of Children."

Cystitis.—

℞ Extr. hyoscyami,
Extr. cannab. indic........................āā 0.4
Sacch. alb 5.0
M. ft. pulv. No. xii. Sig. One powder t.i.d.

—Ultzmann.

Chronic Laryngitis.—

℞ Alum. crud.,
Sacch. alb...............................āā 5.0
Morphinæ hydrochl........................ 0.5
M. S. Use as insufflation.

—Von Schrötter.

Malaria.—Dr. Nelson W. Wilson, in the *Buffalo Medical Journal* for November, in an article on "Pen Pictures of Malaria," says that the severe chills were broken up by the administration of what the soldiers called "knock-out drops." This was made up as follows:

℞ Spir. chloroformi,
Tinct. opii..............................āā 1.33
Spir. frumenti 60.0
M.

As an Adjuvant in Epilepsy.—

℞ Zinci oxidi.......................... 0.10 cgm.
Pulv. valerian........................ 0.10 "
Pulv. bellad .... 0.01 "
Saponis med.......................... q.s.
For one pill. Give four daily.

—Jules Voisin.

To Apply Locally in Pertussis.—

℞ Acidi phenici cryst 1.50
Glycerini puri.............................. 10.00
Syr. tolutan 5.00
M.

Apply to the throat in children below one year of age. After the age of three years substitute a two-per-cent. solution of cocaine for the tolu, and for extensive applications decrease the strength of carbolic acid.—Guida.

Internally:

℞ Coccionell. subt. pulv.................... 0.05–0.2
Ammon. carb........................ 1.00–2.0
Syrup aurantii.......................... 20.0
Aquæ destil.................... q.s ad 100.0
M. S. Shake and give a teaspoonful every two hours.

—Naegeli-Akerblom.

Odontalgia.—

℞ Orthoformis,
Ac. carbol..............................āā 10.0
Camphoræ,
Chloral hydrat..........................āā 4.0
M. S. Apply with absorbent cotton to the previously dried tooth cavity.

—Danchez.

Burns.—Apply ichthyol, dust with talc, and bandage. In more severe forms ichthyol vasogen should be applied on compresses.—Mueller.

Urotropin decomposed by acid urine into ammonia and formaldehyde destroys bacteria in the urine in one or two days.—Blech.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

PRINCE OF WALES' HOSPITAL FUND—SUNDAY FUND—SURGICAL TREATMENT OF CIRRHOTIC ASCITES—PERFORATING GASTRIC ULCER—CONCLUSION OF THE DEBATE ON TABES AND GENERAL PARALYSIS OF THE INSANE—DEATHS OF SIR R. THORNE THORNE AND CAPTAIN HUGHES.

London, December 22, 1899.

Yesterday the Prince of Wales presided over a meeting to consider the distribution of his hospital fund for the year. The total receipts for the year have been £47,806, or about £9,000 more than last year. The expenditure has also diminished by more than £1,500. This is certainly an encouraging statement for a treasurer to have to make. It had been intended to make a special effort to secure £50,000 for distribution, but considering the appeals made to the public through the outbreak of war this project was wisely abandoned. The committee was able to distribute £42,000 among hospitals and convalescent institutions. Last year only £32,500 was the amount. The amount allotted will cause two hundred and eighty-seven closed beds to be reopened—but there are still four hundred beds unoccupied for want of funds.

The Sunday fund meeting was held last week, when it appeared the total sum collected was £53,504, 11*s.* 1*d.* The grand total for the twenty-seven years in which the fund has been at work has now passed the million sterling, on which the council congratulated Sir S. Waterlow, who has all along taken a leading part in the management, and who is understood to have desired to see this sum collected. I regret that I cannot congratulate him on some points in his management. He is too prejudiced, and allows his prejudices to carry away his judgment. Then he suffers the secretary to imitate him and exceed him, as most subordinates are apt to do.

It is satisfactory to find that the Prince of Wales fund has not caused any injury to either the Sunday or Saturday organizations. By tapping a different stratum it has brought fresh sums to the hospitals, and would seem to have stimulated charity generally, so that an increase has taken place all around. The Lord Mayor remarked that the meeting lasted little more than half an hour, and considered that that showed the business-like methods of the fund. I cannot indorse his view; it seems rather to indicate that the meeting merely accepted the statement of the officials and left Sir S. Waterlow and the secretary to carry on their policy by boycotting some institutions and irritating the managers by injurious favoritism.

Dr. Rolleston and Mr. Turner related at the last meeting of the Medical Society two cases of surgical operation for the production of peritoneal adhesions in cirrhotic ascites according to the plan introduced by Dr. Drummond and Mr. Morison. They have thus added two to the ten cases recorded, and that others have been operated on but not recorded is more than probable, for they remarked they knew of one such unsuccessful case. As to their own cases, one patient improved—lost his ascites, but has an enlarged spleen; in the other the fluid accumulated again and again, and they claim at the most only a slight amelioration. In both the cases brought forward the liver and omentum were stitched to the cut abdominal parietes, and this was urged as necessary to secure good adhesion. Early operation was recommended. On referring to the records of previous cases (Medical Record, February 4, 1899), it would appear that four out of the ten patients recovered, while three of the remainder died from the operation. If the other three improved, the figures are not specially encouraging, and with the one death mentioned and the two new cases somewhat better, the proceeding is evidently a grave one. But as to its value I may mention some of the remarks made by the speakers present. Dr. P. Weber referred to a case in which the patient recovered after tapping, and said that when the specific gravity was over 1.020 there was probably inflammation, and one or two tappings might result in cure.

Dr. F. J. Smith objected to the old method of tapping, and thought a scientific laparotomy might be better. He thought that when ascites appeared in cirrhosis, the end was near, and so a simple operation was preferable. Dr. Middleton had published a case of hemorrhagic ascites which resulted in recovery after tapping. If done with a fine trocar, it was not a serious affair. Mr. Wallis mentioned another case of recovery after four tappings. Dr. Ewart mentioned a patient who had undergone fifty tappings. Mr. Turner tapped as before, proceeding with his incision, as it saved time and he had never seen any ill effect. Dr. Roberts (president) could not agree that ascites rendered the prognosis as bad as had been stated. He had seen many cases of undoubted cirrhosis end in recovery after simple tapping. Dr. Rolleston admitted that some patients did so recover, but not as a rule. He attributed the hemorrhage into the fluid to previous tappings.

Perforating gastric ulcer was discussed at the last meeting of the Clinical Society. Mr. A. Barker gave a review of twelve consecutive cases on which he had operated of late years, all treated on similar conditions. Five patients out of the twelve recovered. In two of the fatal cases the patients survived fifteen and fourteen days respectively, one dying of subphrenic abscess, causing pleuro-pneumonia, the other from bleeding of the ulcer into the stomach. In all twelve cases mopping out the abdomen was done instead of flushing, which he used in former cases but gradually discarded. Of the five successful cases, all the patients were well for considerable periods, some for years, after the operation.

On the question of flushing or mopping, considerable divergence of opinion was expressed by the surgeons present—some agreeing with Mr. Barker, others holding flushing to be better, and others again thinking that mopping was equal to some cases but flushing was required in some. One held that flushing should be carried out thoroughly, the intestines being allowed to float out of the body. All agreed that the earlier the operation the more hopeful was the case. Mr. Bidwell had collected fifty-five cases, in thirty-three of which the time before operation was mentioned, and found that one-third of the recoveries had been operated on within six hours and five others within twelve hours. All within twelve hours were successful, and half of those between twelve and twenty-four hours.

With regard to symptoms it seemed generally agreed that liver dulness, so often spoken about, gave no indication. It was admitted, too, that pain is very uncertain, Mr. Bowlby saying cases are overlooked because almost every one expected pain. When present, pain is not located as might be expected—it was said by one surgeon it "might be almost anywhere or indeed absent." Another had found it all in the pubes or in the lumbar region. In a number of cases it seems limited to the lower part of the abdomen. This question of pain is one of great importance when the patient is first seen.

The pathological debate was concluded on Tuesday. Dr. Beevor thought it was exceptional for tabes to end as general paralysis. He dwelt on the slowness of tabes compared with general paralysis. In thirty-nine cases of tabes he traced syphilis in eleven, chancre without secondaries in seven, gonorrhœa without chancre in ten, doubtful gonorrhœa without sore in five, and no history of venereal in six. Until changes in the cortex were found, in the majority of cases he would hardly like to pronounce the two diseases identical.

Dr. Henry Head said he had been at work on the course of the sensory fibres in tabes, and gave some account of his research, which has yet to be published. He came to the conclusion that the two diseases are due to an identical process affecting different portions of the nervous system.

Dr. P. Stewart said there must be an additional factor besides syphilis, and this he thought was overstrain, bodily in tabes and mentally in general paralsis. He referred to Edinger and Heber's experiments on rats as agreeing with this view, which was supported by many clinical facts.

Dr. Robert Jones admitted syphilis to be the most important factor, but could not go so far as to assert there would be neither of these two diseases without it. Out of five hundred and twenty autopsies on general paralytics, the proportion of tabetic cases did not exceed two per cent. In twenty thousand cases of syphilis collected by Lewin, one per cent. of the patients became insane but not one a general paralytic. He thought that syphilis injured the constitution and prepared the ground for other factors—overstrain, alcohol, and excitement or excesses—singly or combined.

Dr. B. Abrahams said that to apply the meta- or parasyphilitic doctrine to every case, as Hirschl did, was going too far. No doubt it was the most important factor in the production of degeneration of neurons, but not the only one. Strain was to be reckoned with, and arterial degeneration played no slight part in determining the localization of syphilitic sequelæ. Dr. Mott had proved that both diseases were primarily neuronic degenerations—not interstitial outgrowths. Probably the neurons were affected at the time of the syphilis, but not in a way that we could detect by the microscope, though the injury resulted in lessened vitality and death years after the prime cause.

Dr. Beach had found thirty-six cases of juvenile general paralysis in literature, and could add two which he had met with. He found evidence of syphilis in twenty out of twenty-five cases in which the history was given. He held that it was commonly, though perhaps not always, due to congenital syphilis.

Dr. Mott replied to various points mentioned in the very notable debate elicited by his paper. He was naturally satisfied to find the preponderating views agreed with those he had put forward. He admitted the influence of strain, both mental and physical, but syphilis was the primary injury and produced loss of durability of certain neurons. The two diseases were thus due to the same morbid process, but he did not say they were clinically identical. The prevention and treatment, however, would be the same.

Sanitary science has lost an enlightened leader in Sir Richard Thorne Thorne, M.D., K.C.B., F.R.S., principal medical officer to the Local Government Board, and as such the head of the sanitary department of the country, who died on Monday last, the 17th, aged fifty-seven years. He was a crown member of the General Medical Council, and took an active part in its recent session. On the last day, the 5th inst., he carried resolutions on preliminary education and on public health diplomas. His many masterly reports, his work at international conferences, his measures to meet the possible invasion of plague and cholera, and other scientific and sanitary labors are known everywhere. We who knew him as a man feel we have lost one pre-eminently qualified for the great position he held, and one with whom it was a privilege to meet and confer.

Captain Hughes, R.A.M.C., who was killed in the fight at the Tugela River, was also a notable sanitarian. He was one of the sanitary officers at Aldershot when Sir R. Buller selected him to be adviser on his staff. His death is a decided loss to the army medical service.

THE STATIC INDUCED CURRENT.

To the Editor of the Medical Record.

Sir: In his reply to my letter Dr. Morton diverts attention from the main points of contention: First, that he makes extravagant and utterly unjustifiable therapeutic claims; second, that he has persistently exploited his own originality at the expense of the originality of others. It is not a question whether Mauduyt and other authors now almost forgotten ever used the term "static induced," or whether in connection with it physiological tetanus was described previous to 1881, but whether Dr. Morton was the originator of the principle upon which the whole subject is based. Most assuredly he was not. It needs but a glance at these old illustrations to make it evident that the more recent ones of Dr. Morton are in their essential characteristics absolutely the same, and that from the arrangements represented by these illustrations the spark-gap could be so adjusted as to produce the so-called static induced current with the power to induce continuous muscular contractions.

A. D. Rockwell, M.D.

January 6, 1900.

THE NOMENCLATURE OF APPENDICITIS.

To the Editor of the Medical Record.

Sir: Will you allow me to add a few words to what Drs. Carstens and Edebohls have said, in your issue of December 30th, in regard to the nomenclature of "appendicitis." First of all, this term well illustrates that a private individual, especially one who knows little or nothing about etymology, has no more right to coin a word than to coin money. All new medical words should be submitted to some national body for approval or disapproval before passing current. Perhaps a committee of the A. M. A., perhaps a committee of medical editors, perhaps the American Academy of Medicine, could be agreed upon. Meantime editors should unite to keep out of print some of the more recent abuses of language.

It is a plain, common-sense rule that a Greek ending, such as itis, should be attached only to a Greek stem. In other words, a Greek translation of "processus vermiformis" must first be made. Of the various words suggested—epityphilitis, scolecoiditis, scolecitis, ecphyaditis, helminthitis, etc.—it seems to me that scolecitis is the most euphonious. Scolecoiditis —inflammation of the worm-like—is unnecessarily accurate. We do not say salpingoiditis, staphyloiditis, amygdaloiditis, etc., but simply name the organ after the object which it resembles. Epityphlitis is satisfactory enough, except that we often want to qualify with other prepositions, and peri-epityphlitis or para-epityphlitis is awkward.

A. L. Benedict, M.D.

Buffalo, N. Y., January 2, 1900.

To the Editor of the Medical Record.

Sir: In Dr. Carstens' letter to you, published in the Medical Record December 30, 1899, I read with great satisfaction that Dr. Henry Draper, in 1871, had apologized for using the hybrid term appendicitis. The time of which Dr. Carstens speaks as having brought forward the monstrosity in question was the time of the "per orem" man.

Napoleon, on December 26, 1805, without further preliminaries, pronounced and proclaimed through the *Moniteur*, "The dynasty of Naples has ceased to reign." Dr. Edebohls surpasses the great man in so far as he wipes out altogether a fact established in literature as if it had never existed. Perityphlitis is indeed a synonym for appendicitis, as shown in my paper, "On the Term Appendicitis," in the *New York Medical Journal*, May 20, 1899, and with this fact we have to reckon. Dr. Edebohls' history and bibliography of appendicitis are rather incomplete, since he leaves out publications in which the disease has been called by the name "perityphlitis." Two such papers, and most important ones they are, by Ludwig Herzog, Dr. Edebohls could have seen mentioned in my article just spoken of. Cardialgia is a synonym for gastralgia, although calling gastric pain cardialgia is as nonsensical as speaking of headache in the feet. Technique means technical; nevertheless it is a synonym for the good English (Webster's Dictionary) word technics. True, all this is to be regretted, but the fact remains.

A. Rose, M.D.

NEEDED REFORMS IN THE AMBULANCE SYSTEM.

To the Editor of the Medical Record.

Sir: An article from your pen in the issue of January 6, 1900, gives me quite a surprise. The article on "Needed Reforms in Our Ambulance System," while putting certain features of the ambulance service as it is conducted in a very proper light, supplies but a very poor remedy.

The very reprehensible habits of refusing to receive patients apparently about to die, and of transferring patients under similar conditions, are old ones. Now for the first time this matter can be brought under direct control, and a positive and prompt halt can be, and I doubt not will be, called. The comptroller can cause all hospitals to report to him under the present law, and hospitals can thus be made to report all cases received in a condition in which any one can see that the patient is about to die and from whence the dying patient comes. This will prove an effectual check at once. The comptroller has this matter under consideration, and this method of checking the abuse has been called to his attention. Only a few days ago a woman died from want of prompt attention. Nearly two hours elapsed before help arrived, and then it was too late, because all ambulances were busy—all this when there were fifteen doctors' offices within four hundred feet of the woman who was so much in need of immediate medical services, with no call upon these doctors.

Can we not see that to have ambulances take all cases without question is not right? Or, in the words of your editorial, "there should be no such thing as questioning the fact whether a given patient. . . . Every institution should take every case presenting itself."

There surely are many cases in which the people prefer to go to their homes when injured in the street, and are able to procure without public aid every attention they require, and surely when they are in their homes, as in the case mentioned in this newspaper report, with physicians all about, some of them would undoubtedly be willing to attend even if the person is unable to pay for services, and officers should be instructed not to call ambulances for such as wish carriages to go to their homes; and when persons require immediate attention frequently the neighborhood doctors can supply it for those who prefer it quicker than an ambulance could reach the sufferer; and police should call such physicians when the sufferer so desires. Nor should the ambulance surgeon, even when he has reached a case, and possibly dressed a slight wound, compel the person to go to the hospital, especially if the injured one is quite competent in every way to decide for himself and prefers to go home.

To return to the hospital without the injured person should not be considered anything against the ambulance surgeon, as it seems to be now.

As the matter now stands, it is a grab game, and only when there are an extra number of ambulance calls all at once is there any lack of opportunity for any one, rich or poor, to go to a hospital.

W. Washburn.

January 6, 1900.

LIGATION OF THE STUMP IN APPENDICITIS.

To the Editor of the Medical Record.

Sir: Apropos of the question of ligation of the stump in appendectomy, so illustratively discussed by Dr. John A. Wyeth in your last issue, I beg to call attention to the modus operandi advised in my publication, "Is Appendicitis a Surgical Disease?" in the *New York Medical Journal*, December 10, 1898, from which I quote the following:

"After squeezing the contents of the appendix into the cæcum, the fundus of the appendix is tied with a formalin catgut ligature. The same procedure is repeated about half a centimetre below. Then with one stroke of the scissors the appendix is severed closely above the lower ligature. By previously having squeezed out the contents of the appendix and by tying doubly afterward, the exit of any fecal matter is prevented. The protruding mucous membrane of the appendix, after being disinfected with a strong solution of bichloride of mercury, is then seized with an artery forceps and pulled out as far as possible. Now it is cleanly cut off with the scissors. There is then left a muscular-serous flap, which can easily be united by three Lembert sutures. After the removal of the mucous membrane some iodoform powder is dusted over the remainder of the mucous membrane in the depth; but dusting the little wound margins, which are to be united, is to be carefully avoided. All these manipulations take place after the neighboring intestines, particularly the area situated directly below the appendix, are protected extensively with sterile compresses."

If no perforation has taken place, it is evident that the only possible source of infection during appendectomy could come from the interior of the appendix; that is, mainly from its mucosa and submucosa. The removal of such area is certainly the safest way of eliminating its infectious property.

Carl Beck, M.D.

New York.

Immunity against Malignant Œdema.—Malignant œdema was one of the first diseases against which immunity was produced by infection toxins. The filtered cultures of the bacillus in sufficient doses produced death with the same symptoms as those caused by the living organisms, but a relatively large quantity is necessary. Chamberland and Roux (1887) found that if guinea-pigs were infected with several non-fatal doses of cultures, sterilized by heat, or freed from the bacilli by filtration, immunity against the living organism could be developed in a comparatively short time. They found that the filtered serum of animals dead of the disease is more highly toxic and also gives immunity when injected in small doses. These experiments have been confirmed by Sanfelice, Muir, and Ritchie.—*Manual of Bacteriology.*

Medical Items.

An Alpine Ambulance Association.—Among the increasing number of Alpine accidents many are of a kind which no prudence could prevent nor medical aid benefit. Many cases, however, occur in which some knowledge of the principles of "first aid" might diminish the severity of the results or even save lives. A movement has recently been inaugurated, somewhat analogous to that of St. John's Ambulance Association, for the practical instruction of Alpine guides in the treatment of wounds, fractures, frost bites, etc. Dr. O. Bernhard of the Engadine has published in a book form a course of lectures on mountain accidents, which has recently been translated into Italian and which has gained for its author the decoration of the cross of a Knight of the Crown of Italy.—*Medical Magazine.*

Practical Patriotism.—At a meeting of the West London Medico-Chirurgical Society on December 1st, it was unanimously resolved to organize a scheme for affording gratuitous medical attendance in their own homes to distressed wives and families of soldiers serving with the colors. A committee was appointed to carry out a scheme similar to that which the Chelsea Clinical Society had organized in certain districts in connection with the Soldiers and Sailors' Families Association. As the West London Medico-Chirurgical Society has over five hundred members, its action in this matter will assure free medical attendance to distressed families of soldiers through a very wide district.—*The Lancet.*

Sarcoma of the Stomach in a Child Three and One-Half Years Old.—Finlayson (*British Medical Journal*, December 2, 1899, p. 1535) reports the case of a boy, three and a half years old, who presented an aspect of feebleness, with great pallor or anæmia, and with slight indications of rickets, especially in the lower extremities. The pallor was extreme, and did not seem to be accounted for by anything in the previous history, which was one of failing health for three months following an attack of vomiting of short duration. This vomiting was not associated with the appearance of blood. It was followed by disturbed action of the bowels, at first constipation, but subsequently intercurrent diarrhœa. A vague account of some tarry stools was obtained, but no blood was observed during the three and a half months the child was under observation. On one occasion only some brownish fluid like altered blood was brought up from the stomach, and even this might have been due to the use of raw meat juice. There seemed to be no pain anywhere and no tenderness in the abdomen, which was slightly distended, as might be expected in a rachitic subject. No tumor could be felt, but after a time, on careful search, the spleen, as supposed, was felt high up under the left ribs, in the lax abdomen. Such enlargement as was thought to be present was attributed to rickets. The aspect of the child throughout was one of extreme apathy. He lay listlessly nearly all day, often curled up, with the head bent forward. During the periods of slight improvement that occurred several times, he would brighten up for a few hours, and amuse himself with toys, but this was of short duration. Even when dullest, however, he could speak and tell his name. An examination of the blood disclosed no excess of white blood-corpuscles. The number of erythrocytes was 3,200,000 per cubic millimetre, without poikilocytosis. In the course of five weeks the number had fallen to 2,560,000, and the hæmoglobin percentage was twenty. After the lapse of another month the number of red cells had declined further to 1,812,500 and the hæmoglobin to fifteen per cent. After an additional interval of three weeks the red cells numbered 1,593,000, and the white were estimated as 1 : 177 red. No alteration in the shape of the corpuscles was found. A few small glands were felt in the neck, and one or two in the axilla. With the gradual diminution in the number of red corpuscles there was progressive pallor, with a sallow tinge almost of a lemon color. There was slight but almost continuous pyrexia, the temperature ranging from 100° to 101.5° or 102° F., occasionally reaching 103° F. Toward the close the temperature continued at 104° F. for a few days, when some pulmonary disorder ended the case. Ophthalmoscopic examination disclosed only a little passive congestion of the veins of the fundi. On physical examination of the thoracic organs wheezing râles were heard at times in the latter part of the course of the case, and a systolic murmur at the apex. Toward the close of the case a little puffiness of the feet and hands, and even of the face, was noticed. During the time the child was under observation the weight declined from twenty-five to twenty-two pounds. The appetite was impaired, the child seeming to prefer milk to anything else, but he was so apathetic as to seem rather indifferent to food. Vomiting was a prominent symptom, at first being only occasional, but subsequently becoming more persistent. It could not be traced to have any special relationship to feeding or to any definite cause, and the vomited matter was not suggestive of anything special except on the single occasion referred to. Death resulted from exhaustion, with a terminal pyrexia associated with pulmonary congestion. Upon post-mortem examination a bulky tumor was found in the posterior wall of the stomach closely impinging on the greater curvature, and rather nearer the cardiac than the pyloric orifice. It projected almost equally externally and internally. On the mucous aspect it measured 2.5 by 2.5 cm., the submucous infiltration being about 3 cm. in length. On the serous aspect it measured 4 by 4.5 cm. and the projection was 1.8 cm. The tail of the pancreas was somewhat closely related to the tumor posteriorly, but dissection showed it to be distinctly separated by a thin veil of connective tissue. On the mucous aspect of the stomach, and immediately distal to the main rounded, projecting mass of the tumor, there was a small circular area with a depressed centre and obviously infiltrated edges. The central portion of this area was the only part conveying the impression of ulceration, and even there the appearances were not conclusive. Many of the glands in the mesentery were slightly enlarged, but on microscopical examination they exhibited no evidence of involvement in the new growth. On microscopical examination the tumor was found to be a highly cellular sarcoma, with both large and small spindle cells.

Disinfection of Railway Carriages in Germany.—Dr. Navarre (*Journal d'Hygiène*) contends that third-class compartments, which have been found in Germany to be four times as rich in bacteria as those of other classes, ought to possess smooth surfaces and rounded angles. The woodwork should be protected by varnish, which may be readily washed and disinfected. The floor should be covered with linoleum, which may also be readily cleansed and changed. The partitions and other woodwork should be carefully washed with water containing soda, to be followed by a 1 : 1,000 sublimate spray. For the second- and first-class carriages Dr. Navarre would do away with stuffed cushions, which become full of dust impossible to displace thoroughly. He would cover the seats with flexible leather and the floor with lineoleum. If movable cushions are retained they should be beaten mechanically at regular periods. Formaldehyde gas should be generated in these carriages, being not only an excellent deodorant, but a reliable disinfectant. The smell of the gas disappears rapidly after a short exposure of the interior of the carriage to the air.—*Public Health.*

Milk for Diabetes.—Dr. R. T. Williamson suggested the following method of preparing for diabetic patients an artificial milk practically free from milk sugar: "To about a pint of water placed in a large drinking-pot or tall vessel, about two or three tablespoonfuls of fresh cream are added and well mixed. The mixture is allowed to stand for twelve or twenty-four hours, when most of the fatty matter of the cream floats to the top; it can be skimmed off with a teaspoon easily, and on examination it will be found practically free from sugar. (The milk remains dissolved in the water.) This fatty matter thus separated is placed in a glass and mixed with water. Then the white of an egg is added and the mixture well stirred. The water and white of the egg are added in sufficient quantities to make a mixture which has the exact color and consistence of ordinary milk. If a little salt and a trace of saccharin be added a palatable drink is obtained, which has almost the same taste as milk and which contains a large amount of fatty material and is practically free from milk sugar. With very little practice the right proportions can be easily guessed, and of course much larger quantities than those mentioned can be prepared.—*Medical Chronicle.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended January 12, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Geogia, Brunswick	December 22d to January 4th	6	
Illinois, Cairo	December 30th to January 6th	17	1
Indiana, Evansville	December 22d to January 6th	8	
Louisiana, New Orleans	December 22d to January 6th	19	1
Massachusetts, Boston	September 3d to December 29	37	4
Nebraska, Omaha	December 26th to January 6th	3	
North Carolina, Charlotte	December 1st to 31st	2	
Ohio, Cincinnati	December 22d to January 6th	3	
Hamilton	December 22d to January 6th	1	
Youngstown	December 22d to January 6th	1	
Oklahoma, Shawnee	December 27th	12	
Oklahoma City	December 27th	14	
Yukon	December 27th	4	
Pennsylvania, Pittsburg	December 28th to January 6th	1	
Salt Lake City	December 22d to January 6th	10	
Virginia, Portsmouth	December 22d to January 6th	4	4
SMALLPOX—FOREIGN.			
Austria, Budapest	December 17th to 24th	1	
Belgium, Antwerp	December 8th to 14th	4	4
Bohemia, Prague	December 8th to 25th.	42	
Brazil, Rio de Janeiro	November 20th to December 1st.	133	94
Egypt, Cairo	November 18th to December 2d.	..	2
England, London	December 8th to 16th	..	1
Greece, Athens	December 8th to 15th	5	1
India, Bombay	November 26th to December 5th.	..	25
Mexico, Chihuahua	December 23d to 30th	..	13
Vera Cruz	December 21st to 28th	..	1
Russia, Moscow	December 2d to 16th	9	1
Odessa	December 18th to 23d	6	2
St. Petersburg	December 8th to 14th	31	3
Warsaw	November 30th to December 4th.	..	2
Spain, Corunna	December 8th to 23d	2	1
Madrid	December 8th to 14th	..	3
Straits Settlements, Singapore	November 4th to 18th	..	4
Turkey, Constantinople	December 18th to 25th.	..	1
Smyrna	December 10th to 17th	2	
YELLOW FEVER.			
Brazil, Rio de Janeiro	November 17th to December 1st.	..	6
Cuba, Havana	December 22d to 30th	18	3
CHOLERA.			
Brazil, Rio de Janeiro	November 17th to December 1st.	..	10
Cuba, Havana	December 22d to 30th	18	3
PLAGUE—UNITED STATES.			
Hawaii, Honolulu	December 22d	3	2
PLAGUE—FOREIGN.			
Brazil, Santos	October 19th to December 9th	37	11
China, Hong Kong	November 16th to 25th	13	13
India, Bombay	November 26th to December 18th	..	105
Kurrachee	November 25th to December 9th.	6	4
Japan, Formosa, Tamsui	October 17th to November 28th	36	6
Kobe	December 7th	..	1
Osaka and Hiogo	November 25th to December 2d.	3	2
Madagascar, Tamatave	November 11th to December 2d.	10	7

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Original Articles.

LEPROSY IN HAWAII.

By E. S. GOODHUE, M.D.,

BALBEC, INDIANA,

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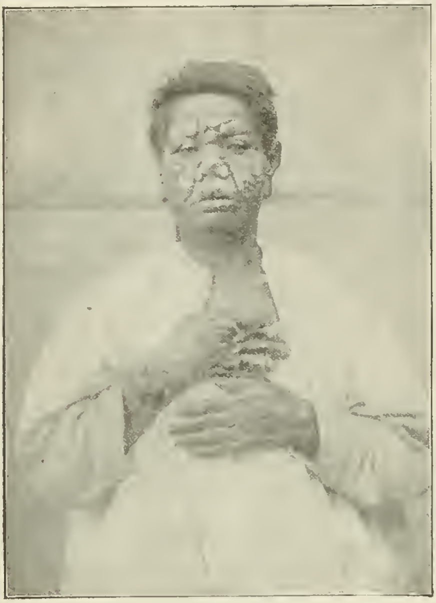
Leprosy is the name of a disease more terrible than it can be pictured even by the most sensational, and is so prevalent in the Sandwich Islands that the government has been forced to provide an island upon which the unfortunate victims could be permanently placed. The subject has been written and lectured about; made the theme for romance; and used by some to frighten timid strangers away from Hawaii. It was lately advanced as a reason why the islands should not be annexed to the United States. Leprosy is one of the most incurable, loathsome, and shocking diseases known to man. A reason why we dread the disease worse than we do other diseases is because its causation is still wrapped in partial obscurity. All unknown things are dreadful. While a specific germ has been discovered, it will not multiply out of the human soil in which it is found. We cannot trace a particular case back to a certain infecting source. We do not know how long the victim stays well after the germs get into him, or how long it always is before he shows the effects of their work in his system, or exactly what the earlier manifestations of the disease are. We are not able to cure the man. We doubt if he can be cured. One section of the medical world says that the disease is not contagious, and that segregation is therefore useless and cruel; the other, and we believe the more scientific party, says that leprosy is contagious, and that there is unassailable basis for the position. Granted that the disease is communicated by one person to another—how is it communicated? Do the germs fly, walk, swim, or smuggle themselves down our throats in food? Do they require special soils for growth? Must these be moist or dry; mucous membrane or blood? If the germs fly, they come in the dust from the street and carpet, circulate in the breeze, and leave us no escape. If they swim, they seek our milk and water, and so get into all foods. Do the mosquitoes, flies, fleas, and bedbugs bring the bacilli? We do not know; we only suppose. So the gnome of uncertainty glorifies itself, and we are ready to be alarmed. The disease has existed since the very earliest period of the world's history. Although Biblical writers gave the name of leprosy to several different diseases, some of them not specially severe, there were certain external changes in the skin and nutrition which made the disease resemble leprosy, at least to an untrained observer. The observers, not being specialists, took much for granted. Manetho, an Egyptian historian, who lived two hundred and sixty years B.C., says that ninety thousand Jewish lepers were expelled from his country. The Hebrew name for the disease meant a stroke or blow, and the description of Job's affliction is a fair picture of one form of leprosy. This places it some five hundred years further back, while certain papyri refer the malady to 4166 B.C. It prevailed in China, India, Africa, Phœnicia, Egypt, Arabia, Syria, Italy, and Greece in very ancient times, and from the second to the seventh centuries it was the common disease in Europe. Many persons used to cast their horoscope to see whether or not they were to be afflicted with leprosy. In 630 A.D. Italian law declared that lepers were civilly dead. Tamerlane caused them to be burned. Religious fervor had much to do with the spread of leprosy in Asia Minor, as in those days pilgrimages were made from one place to another. It is claimed that the Saxon pilgrimages spread the disease greatly. Lombardy was a leprous hot-bed. Leper hospitals began to be established in Great Britain and the Continent. In 1200 there were three leper hospitals in England, containing ninety-one inmates. Robert Bruce, of Scotland, died of the disease in 1329. Between the years 1100 and 1472 A.D. in Great Britain alone, there were established one hundred and eight lazarettos. It was even worse on the continent, where laws were passed for and against it, and one king "ordered lepers to be burned that their bodies and souls might be purified together." France built leper asylums in nearly every village, and in 1226 had segregated two thousand lepers. So numerous were the victims that the special religious order of St. Lazarus was organized in Palestine in 336 A.D. to care for them. Some of the leper institutes became very wealthy and influential. Norway, Sweden, Denmark, Germany, Russia, and Iceland suffered from the ravages of the advancing scourge, while Spain, Portugal, Madeira, and the Canary Isles were not immune. It is supposed that, until the arrival of negroes from Africa, America remained free from the disease. If the American Indian came from Asia, he had successfully left leprosy behind. In 1300 the disease began to abate in England, then in Scotland, where it limited itself to the isle of Papa, continuing there until 1740. In the sixteenth century hardly any lepers were to be found in France or Italy, the few cases there being in the Pyrenees. Leper houses were abolished in Denmark during the same century, but remained in Sweden until the eighteenth. In Norway the disease is still found. Why, the scientists cannot say. A distinguished leprologist writes:

"Within a few centuries of its first spreading into these countries, it had multiplied to such an extent as to have inspired the whole of Christendom with horror and fear. The disgust and terror which it evoked roused the whole population of these parts to drive the unfortunate lepers from their midst. The genius of Christianity, fortunately, was true to itself, and tempered this act by providing houses for the reception of the unfortunate outcasts. With extraordinary rapidity, considering the nature of the infirmity, it began to disappear simultaneously with the adoption of the strict measures that were put in force, the disappearance being as rapid and complete as the onset of the disease amongst the populations had been swift and intense."

The disease still exists in more countries than the general reader would imagine, being found in all the states of Europe, excepting Great Britain, Holland, and Denmark. Norway has quite a large number of her people segregated by law. But Asia is the great home of leprosy, British India having nearly one hundred and twenty-five thousand cases. There the sick and well mix without regard to care. This indifference and the prevalence of the malady are significant. Many of the English physicians do not "believe in the contagiousness of leprosy," which opinion does not seem to have any bad effect on the microbe. In regard to numbers China ranks next. Dr. Cantlie says: "Leprosy is endemic in every district in China, and the Chinese dread lepers and avoid them systematically, or expel them from their midst." Next follow Africa, Japan, and the islands of the Pacific Ocean. In Japan, the probable aborigines, the Ainos, who do not associate with the Japanese, are free from leprosy, while it is common among the latter. Other places where it is found are the states of South America, Australia, New Zealand, Mexico, Central America, and the West Indies. In New Brunswick there has been an average of about thirty persons confined in the lazarettos. In Louisiana in 1891, seventy-five cases were reported; about one hundred in Minnesota (Norwegians); many in California (Chinese); and sporadic cases occurring in South Carolina, Wisconsin, Michigan, Oregon, Texas, Maryland, Illinois, New York, and Nebraska. Between 1876 and 1886 ten persons died of leprosy in Minnesota. In all the States, excepting California, Louisiana, South Carolina, and Maryland, the disease was brought mainly by Norwegians, and is largely confined to them; while in California, of the fifty-two patients received into the hospital during ten years, all save one were Chinamen. In the Southern States the persons affected are negroes and Acady French.

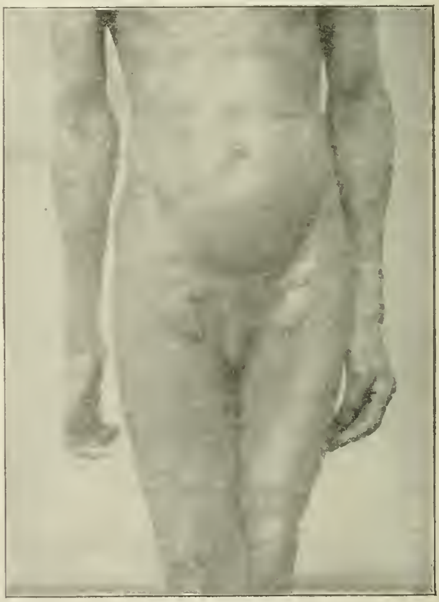


Man with Tubercular Mutilation.

This is not a place for a description of the symptoms of the disease. It is enough to say that its earliest manifestations are insidious, and largely unrecognizable at present; that it is progressive, persistent, and fatal. The one disease has two phases, nervous and tubercular, according as the germs find their home in the nerves or in the skin, with paralyses, contractures, and anæsthesia in the one case, and tubercular swellings and ulcerations in the other; with final mutilation in both.

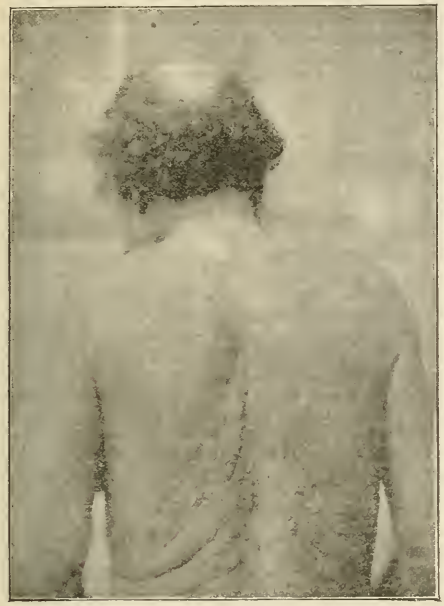
The two forms of the disease may exist in the same individual at the same time, and often do. It is most common in men, from the ages of fifteen to thirty years, but it attacks all classes at all ages. It may terminate fatally in one year, or run a course of thirty years, but its average lease is about thirteen years. The best authorities are agreed that the disease is contagious; that is, transmissible from one person to another.

The history of the disease in all countries, and among every class of people, points to the certainty of contagion. It has been traced to sources. Its course has been progressive when segregation has not been enforced, and retrogressive when it has. In proportion to the failure to carry out segregation, the disease has advanced. Families which in England are and have been free from the taint of leprosy, go to India, China, or elsewhere where leprosy prevails, and become leprous. Dressers, nurses, and physicians in leper hospitals contract the disease quite frequently. To Louisiana the disease came with some French settlers; to New Brunswick with Frenchmen; to Minnesota with Norwegians, and so on. In each location where the disease developed, carriers had come from leper-infected places. It can be traced back as certainly as we trace our individual characteristics. For this reason it was supposed to be hereditary and congenital. As in tuberculous disease of the lungs, there is no doubt a tendency transmitted, a peculiar make-up furnished, which is more susceptible to certain specific inoculations. I think that this is evident in the Polynesian. Its members readily acquire leprosy, and the tendency is increased by their habits of life.



Case Showing Swollen Glands.

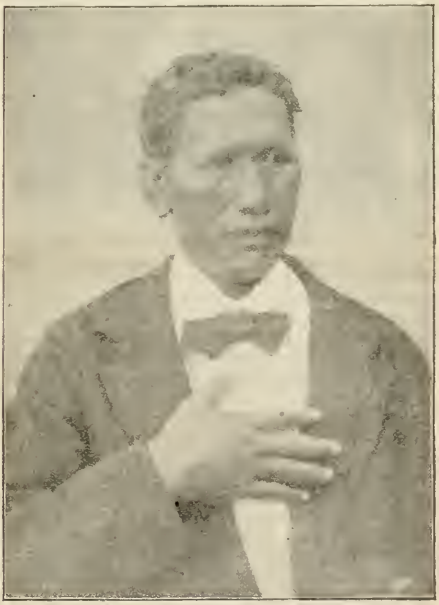
The causes of leprosy have been variously stated. Some have said that eating fish, fresh or salt, was a cause, citing Norway and other sea-washed countries where leprosy abides. It requires a long, tedious, painstaking series of observations and experiments, a peculiar mental attitude, and much particular knowledge to be able to trace accurately the relations of cause and effect. Without this necessary equipment, the most honest inquirer is very apt to fall into grave error and draw false conclusions. So leprosy has been attributed to the eating of pork, maize, spoiled rice, salt, olive oil, cheese, intoxicating liquors, awa drinking, and "moral emotion." The differentiation of the germ peculiar to leprosy, the bacillus lepræ, has set at rest much discussion, but as yet the microorganism will not show us how it works outside of the human body. Dr. Arning, who came from Germany to Hawaii at the request of this government, very carefully and conscientiously carried on some experiments, and was successful in inoculating a convict with the bacillus. The patient afterward died of leprosy. But, as he was a native, he may have had the disease in an incipient stage. Dr. Arning, with commendable conservatism, considered his experiment inconclusive. Dr. Fitch, an American quack who came there during the reign of Walter M. Gibson, took the kingdom by storm with his brilliant methods of treating disease. He had gone to an Eastern medical school, the University of Pennsylvania, where he was seen at lectures for two years, leaving before the examinations of the second year, on account of his aunt's advanced age and feebleness, entering the last year of a Western school. Here he got through by the skin of his teeth. But he always liked to talk about the University of Pennsylvania, the colors of which he wore. He began in Hawaii as physician to the Honolulu dispensary, where he had three large bottles labelled only with a number. From these jars the doctor supplied the natives with whatever they wanted in the line of treatment. If a patient came in, Dr. Fitch took a look at him, and called out to his assistant to fetch a ladleful of Number 335, which he administered to the dazzled native. Crowds began to pour into the office. Crutches were hung outside of the door; the poor, the halt, the blind, the deaf, thronged the portals, and twice a day the glass jars had to be replenished. Dr. Fitch was one of those men who, suddenly coming across an idea, catch it up in a hurry, run off with it, and never wait to see whom it belongs to, where it fits, or how it can best be used. Its antecedents were nothing to him. Correlation be damned! He took up his idea and began to blow it up, until—it collapsed. He read very little medical literature. He had a horror of theoretical men, laying great stress on practical work; forgetting entirely that an ignoramus and a fact are incompatibles. He used medicines, like a great many others of his tribe, not because they were indicated in a particular case, but because they had helped such and such a case. This he called his "experience," which he set up against the theory of all the text-books. Unfortunately for America, there are several such men around loose; men who ought to be chopping wood. Well, in that strange age, when the wisdom and honesty ledges had all panned out, King Kalakaua saw the diamond-cut-diamond he had in Dr. Fitch, and made him superintendent of the leper branch station, because the doctor said, just as positively as he said other things he didn't know, "Leprosy is only the fourth stage of syphilis." But he didn't deceive Drs. Emerson and Arning, and others who had been in Hawaii over two years. The following reports of cases are taken from some clinical data Dr. Fitch took the pains to secure:



Appearance of Back in an Advanced Stage of the Disease.

"Kine. Female, aged eighteen; sick four years. Is the last born of seventeen children, all dead, by a strong, fat, short mother and a tall, slim father, both living.

"Kahoe. Female, aged twenty-three; sick eighteen months. Had lived, ate, and slept together with her mother-in-law, who was a leper."

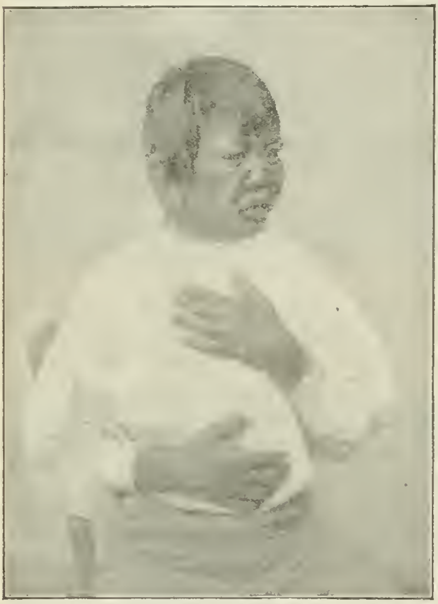


Showing Characteristic Swellings on Cheek and Hand.

Vaccination has been blamed for the spread of leprosy, but without good reason. It would be as impossible to prove that vaccination produced a particular case of leprosy, as to prove that it was Dr.

Arning's inoculation which caused the leprosy that followed. Either might cause the disease; and so might a mosquito bite. The predisposing causes are clearer: Filth, promiscuous tenantry, want of air in sleeping-apartment, scurvy, diet, and alcoholic beverages, anything which lowers the normal standard of health.

The first leprous man in Hawaii who came to the notice of the general public was a native named Kaea, who died in 1852, after being a leper for about ten years. His case was reported by Dr. D. D. Baldwin, of Lahaina, who in 1863 discovered that there were fifty leper communicants in his church. He was a physician as well as a minister. The same year Dr. Hillebrand, surgeon to the Queen's Hospital, wrote: "I wish to bring to the public's notice a subject of great importance. It is genuine, Oriental leprosy. Repeated investigations leave but little doubt in my mind about the contagious character of the disease, as I have followed its gradual spreading from a single person to many people in the same village. It will be the duty of the next legislature to devise and carry out some efficient, and at the same time humane, measure by which the isolation of those affected with the disease can be accomplished."



The Face and Hands in a Marked Case.

The disease was called "Mai pake" by the natives, and this meant Chinese sickness. In April, 1864, the board of health appointed Mr. Jourdan to take a leper census, and report the same. It was found that a surprising number were about the country, and that the contagion was being rapidly disseminated. The matter was discussed, and in January, 1865, the king signed an act providing that certain lands "be set apart," for the "isolation and seclusion of lepers"; that the board of health or its agents "be authorized and empowered to cause to be confined all leper patients who shall be deemed capable of spreading the disease of leprosy." Arrangements were then made for the "establishment of a hospital where leprous patients in the incipient stage may be treated." Dr. Baldwin sent his note of alarm from Lahaina: "We are beginning to have a crop of leprous young children."

One thousand dollars was now appropriated by the board of health toward defraying the expenses of Dr. Hillebrand, who went to China and the East Indies to investigate the subject of leprosy, while $30,000 was allowed for general expenses at home. In October of this same year, a "receiving station" was established at Kalihi, with Dr. Hoffman as resident physician. Dr. Hutchinson then selected and purchased the land upon which the present leper settlement is located. It is a portion of the northern part of Molokai, as effectually separated from the mainland as if it were separate island. It includes some five thousand acres, and a very fertile valley called Waikolu. The ocean washes three sides, while the south side, or base, is separated from the body of the island by a steep precipice, in some places nearly three thousand feet high. On each side of this peninsula, east and west, is a little village forming the unfortunate colonies.

The assessors of the islands were required to gather not only taxes but the sick, and send them from the various islands to Honolulu. One hundred and forty lepers were sent to Molokai in 1866, and during the three years following over $81,000 was spent by the board of health in carrying out the law of segregation. In 1873 more active measures were taken to segregate. Bill Ragsdale, a bright but dissipated half-caste, to whom reference is made in Mark Twain's book, voluntarily surrendered himself, and went to Molokai as superintendent of the settlement, where he did satisfactory work for the board. A boat was secured to carry provisions to the settlement. New taro patches began to be cultivated by the lepers, making it much more satisfactory both for the government and for the colony. During this year the Evangelical Association adopted resolutions advocating "more effective measures, or our Hawaiian people will become a nation of lepers." Between 1881 and 1882 the estimated number of lepers in Hawaii was four thousand. Of one hundred and fifty-seven lepers in 1866 two were Germans, two Americans, twelve Chinamen, and one was English. Dr. Arning said in 1866: "Among the white population, numbering 17,935, I know of thirty-five leprosy cases."

There are at present seven hundred and sixteen buildings in the settlement on Molokai, six hundred and nine being hospital, offices, schoolhouses, residences of officers, churches, a Young Men's Christian Association building, and bath houses. The Baldwin Home comprises a group of fifty-one buildings, and the Bishop Home ninety-eight buildings. There are Protestant and Catholic missions, while the Franciscan Brothers and Sisters have the "homes" in charge. The board owns cattle, horses, mules, and asses to the number of some seven hundred. There are now living in the colony 1,100 lepers, 625 males and 448 females. Of these 984 are Hawaiians; 62 half-castes; 37 Chinese; 5 American; 4 British; 4 Germans; 6 Portuguese; 2 South Sea Islanders, and 1 Russian.

During the past two years fifty-four children were born to leper parents. Kapiolani Home, a place for the care of girls of leprous parents, managed by the Sisters, adjoins the receiving station. The dedication of this institution was the occasion for a speech by his excellency W. M. Gibson, which was afterward embodied in a special report. A long array of highnesses and excellencies were present. Mr. Gibson was a spouter. "It may be mentioned in this place that as a delicate compliment to the Kapiolani Home, which was to be opened formally by her majesty, the king and queen, his excellency W. M. Gibson and Colonel Judd, the king's chamberlain, wore the star of the Order of Kapiolani. His excellency Mr. Gibson also wore the star and the ribbon of Pius the Ninth." Never was it worn by a more pious fraud. All this majesty, excellency, and Potiphar-chamberlain-butler business was in a little dark-skinned kingdom, with Americans at court. Think of it! Mr. Gibson then began to speak in his effervescing way:

"Your Majesties, Your Royal Highnesses, My Lord Bishop, ladies and gentlemen" [thus the minister of the interior, chairman of the sanitary committee, president of the board of health, began], "the memorable occasion which unites us to-day marks another day's advance in the onward march of the Hawaiian kingdom on the highway of humanity and civilization." [The Highnesses were smiling with pleased appreciation.] . . ."My task is ended, but let me add a few words. Hawaii has taken her stand among the nations" [since the Premier arrived] "and the nations of the earth honor our king and this kingdom for the attitude we take."

Then the official report goes on: "His excellency Mr. Gibson then stepped forward and presented the keys of the Home, attached to a gold chain and ring, on a crimson velvet cushion," while the highnesses, excellencies, chamberlains, and other people made obeisance. With all his talk Mr. Gibson delayed the good work of segregation, and during the time that he was president of the board of health very little effective work was done. When, later on, Dr. Emerson and others took up the health matters of the country, it was with added difficulty. It is said that only by great presence of mind, on one occasion, was the doctor able to save himself from the assassin's bullet. Some natives had come to kill him for carrying out the obnoxious law. It was the sad fate of Dr. J. K. Smith to die by the hand of a man whose wife the doctor had ordered to Molokai. Dr. Smith was a man of quick sympathies and warm impulse. He appreciated the pathos of these separations, even between natives, who, probably, are not so deeply sensitive to such events as we would be; and, I am sure, made the way as easy as he could for the poor mother who is torn from her babe, or the fond father who must let his only child go from him forever. Every one is familiar with the graphic picture in "Ben Hur," of the leper mother and sister; that story cannot be more pathetic than many of the incidents which are brought to a government physician's notice.

It will be seen, from what has been stated so far, that there is almost less danger to the average reputable foreign resident here, so far as leprosy is concerned, than there would be in other parts of the United States. To begin with, he expects to see lepers, and therefore knows how to avoid them. If he should not be able to recognize the disease, which is improbable, others will do so for him. As soon as a leper becomes known, he is isolated. If a man with a contracted finger or a suspicious face is seen, he is avoided. Examinations are made in schools and elsewhere, by physicians, and servants and nurses are usually selected with care. I never let a servant enter my house unless he or she be free from any taint of syphilis, leprosy, or other contagious disease. Food sources are looked into; water is boiled and filtered, and, in our home, the milk is all boiled as well. Everybody is on the *qui vive*, as it were; not fearful, but careful. These same precautions ought to be taken on the mainland east of us, against both leprosy and pulmonary consumption. Here physicians all recognize leprosy. In most of the States it is very different. Although there are a great many cases distributed throughout the States, there is no law to prevent its spread. A white leper may go from here and travel in any American city unmolested. He not only can, but does. Physicians there, looking upon it as a rare disease, do not recognize it except in its grosser forms. They do not expect to see it, and the laity have not the faintest idea what a leper looks like. I remember we had a leper in quite an advanced stage of the disease, at our clinic in Chicago. He had wandered about the country for four or five years, staying wherever he had money to pay his way, and no doctor had been able to tell him what his trouble was, until he reached Chicago. There are lepers in the North, from Oregon to New Brunswick, and in the South, from Central America to South Carolina, travelling criss-cross, with no one to say them nay. The thought is startling when we consider that these unfortunates can travel without being recognized as lepers. I once saw a man in a New York hotel, where he was a regular guest. I didn't know it then, but I know now that he was a leper; and I feel certain that none of the other guests knew what ailed the man. A specialist in the West speaks of having under his treatment in Nebraska a father and daughter who are lepers; while one of the ablest authorities upon diseases of the skin says: "It is not generally known, but it is a fact, that one of the most distinguished clergymen in the United States has been a leper for years."

Dr. Hyde of Rush Medical College says: "In its prodromic periods, no suspicions of its existence would be awakened in countries where the disease is not endemic. In this country, where leprosy, in consequence of its comparative rarity, has not yet awakened the attention of legislators beyond the point of forbidding the importation of infected persons, the proper care of lepers in a community only too ready to take alarm at even the name of the disease is a serious matter." I desire to call the attention of our legislators to this fact. It is high time that some steps be taken toward segregating all the lepers now on the mainland, and providing them with the comforts and medical care they need.

The proposal of the San Francisco authorities to place California lepers in the Hawaiian settlement should be considered, now that Hawaii has become an American possession. While Hawaii was an independent republic, its government very justly resented such a proposal, but now the removal of all our home lepers to Molokai would be the safest and most humane action that our government could take. It would work no injury to any one, reduce the danger of contagion to a circumscribed area, and cost little more than the maintenance of the Hawaiian colony. Besides, the territorial government of Hawaii is the only administration capable of caring for the lepers. It has capable, honest, sympathetic officials, who have learned by long experience just what to do for the settlement, and it has able physicians and experimenters who are carefully watching all the phases of the disease. To a normal person of intelligence and moral and social discrimination, I should consider, so far as the danger of acquiring leprosy is concerned, that Hawaii, or any other country practising segregation, offers substantial advantages.

Dionin (Ethyl-Hydrochlorate of Morphine).—Heim, who has studied the effects of this new drug upon a large series of patients, concludes that dionin is quite a useful preparation, whose action as an anodyne, hypnotic, and sedative places it between morphine and codeine and entitles it to a more general use. A habitus is only exceptionally acquired. Excepting in diseases of the heart muscles, disagreeable effects are usually absent. Administered per rectum, its action is as prompt as when given per os.—*Cf.* original article in *Klinisch-therap. Wochenschr.*, 1899, No. 46.

SANATORIUM TREATMENT AT HOME FOR PATIENTS SUFFERING FROM TUBERCULOSIS.[1]

By S. A. KNOPF, M.D.
NEW YORK.

THIS title in itself will tell you that I have no new antituberculous remedy to offer. Even the system of treatment, to which I have to refer frequently, is not new. Many,[2] and myself among them,[3] have described the typical sanatorium treatment for consumptives before. The only excuse I have for appearing before you is my hope that what I have to say of the system as applicable by the general practitioner in the house of the patient may arouse an interesting discussion from which we all cannot fail to profit, and through which the cause of modern phthisio-therapy will certainly gain.

Years of study of the treatment of consumptives in special institutions have made me an enthusiastic advocate of this therapeutic system. The insufficient number of sanatoria in proportion to the number of consumptives has led me to treat many a patient as best I could by imitating the sanatorium treatment at home. But before detailing what might be done under such circumstances, let me rapidly enumerate the essential factors of the typical sanatorium treatment.

There is, first, a so-called general hygiene; second, a special hygiene; third, an excellent table; fourth, an arrangement for the open-air treatment; fifth, a hydrotherapeutic establishment; and last, but not least, the constant medical supervision of the patient.

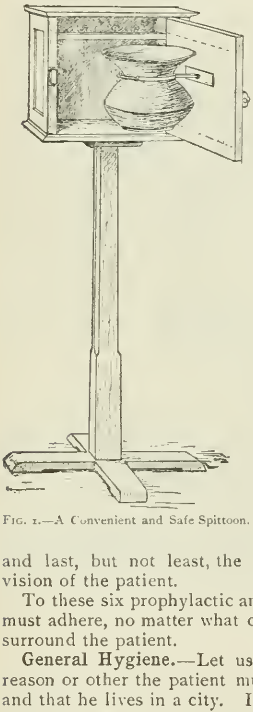


FIG. 1.—A Convenient and Safe Spittoon.

To these six prophylactic and therapeutic factors we must adhere, no matter what climatic conditions may surround the patient.

General Hygiene.—Let us presume that for some reason or other the patient must be treated at home, and that he lives in a city. If he has not a home of his own he will probably consult his physician as to the best place for a residence. I would tell him to try to live in the highest portion of the city; to seek as quiet a neighborhood as can be found, where there is relatively little traffic. If the patient can reside in the outskirts of the city on high, non-malarial ground, so much the better. The largest, sunniest, quietest, and best-ventilated rooms, preferably on the second floor, so as to avoid the fatigue of climbing stairs, should be selected for the patient. If the dwelling is a modern apartment house with elevator, the top floor, of course, would be the best of all for our purpose.

In the room mainly occupied by the invalid velvet or plush covered furniture should be replaced by such as will not accumulate dust. Raising dust by sweeping with a broom should never be allowed in any sick-room, but particularly not in one occupied by a pulmonary invalid. A moist mop should be used to remove the dust from the floor, and the furniture should be wiped carefully. The carpet, heavy curtains, and superfluous furniture should be removed, without, however, leaving the room cheerless. Small rugs and curtains that can be washed may be retained.

A tuberculous patient should always sleep alone and in a bed which should be freely aired during the daytime. A very weak patient who does not leave the bed should, whenever it is possible, have a second bed placed in his room so as to be able to change. A brass or iron bed, with wire mattress, is preferable. Feather beds should not be used. The bed should be placed with the head against an inside wall. Drafts should be avoided as far as possible, but this precaution must not be carried to extremes so as to make the patient afraid of a breath of fresh air. If the bedroom is too small to make it possible to place the bed so as to avoid the direct draft from the open window, a substantial screen should be used as a protection.

Under the heading of general hygiene is comprised, of course, sanitary plumbing, a sufficient supply of pure cold and hot water, and for heating purposes an open fireplace whenever practical. The patient should be guarded against the unwholesome influence of the very dry heat which comes from the furnace in the average American home. Some humidifying arrangement (evaporating pan, Barnes humidifier, etc.), whereby the air may be kept moderately moist, should be used.

Special Hygiene.—The special hygiene deals with the careful disposal of the sputum and other secretions which may contain the bacilli; the care of the patient's linen, and finally his clothing and manner of dress.

To an audience of physicians and sanitarians there is no longer need to speak of the importance of the precautions to be taken with the tuberculous sputum, and I shall confine myself simply to the description of a few utensils which I think indispensable in a private home, hospital, or even dispensary for consumptive patients. They are to my mind the best means to stop the propagation of tuberculosis through carelessly deposited tuberculous expectorations.

Here is an ordinary enamelled iron spittoon. To make sure that the patient always hits it, I recommend this simple stand which is elevated three feet from the ground (Fig. 1). The cuspidor is supported by a metal ring attached to the door of the cupboard. The patient desiring to expectorate opens the little door, thus bringing the spittoon within his reach, and closes it again when he gets through. An automatically closing extra cover makes it impossible for flies and other insects to sojourn in the interior. With this arrangement there is no excuse for not being able to hit the spittoon and thus soiling the brim. The unpleasant appearance of numerous spittoons placed on the floor, in places where much expectoration is going on, makes the elevated spittoon preferable from an æsthetic as well as from a hygienic point of view. The cuspidor of metal, elevated and covered, has additional advantages over the usual uncovered vessel of porcelain or earthenware. Animals, such as dogs, cats, etc., will not be able to reach the contents of the cuspidor; and there is less danger of its bursting when placed outdoors at freezing temperature if covered and enclosed in a box. Again, I prefer metal spittoons to glass or porcelain, because the persons entrusted with cleaning them are not exposed to the possible danger of inoculation by breakage.

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[1] Read before the New York State Medical Association at its sixteenth annual meeting, held at New York, October 24–26, 1899.

[2] Dettweiler, P.: "Die Behandlung der Lungenschwindsucht in geschlossenen Heilanstalten." Berlin, Reimer, 1884.—Brehmer, H.: "Die Therapie der chronischen Lungenschwindsucht." Wiesbaden, Bergmann, 1887.—Moeller: "Les Sanatoria pour le Traitement de la Phtisie." Brussels, 1894.—Petit, L. H.: "Hygiène des Sanatoria." Revue de la Tuberculose, December, 1894.—Otis, E. O.: "The Sanatorium or Closed Treatment of Phthisis." New York Medical Journal, June 13, 1896.—Trudeau, E. L.: "Sanatoria for the Treatment of Incipient Tuberculosis." MEDICAL RECORD, February 13, 1897.—Walters, E. R.: "Sanatoria for Consumptives." London, Sonnenschein & Co., 1899.—Bowditch: "Sanatoria in the Treatment of Tuberculosis." Medical News, October 14, 1899.

[3] Knopf, S. A.: "Les Sanatoria, Traitement et Prophylaxie de la Phtisie Pulmonaire." Paris, Carré et Naud, 1895. 2me édition, 1900.—"Sanatoria for the Treatment and Prophylaxis of Pulmonary Phthisis." New York Medical Journal, October 5 and 12, 1895. Alvarenga Prize Essay, Phila., 1898.

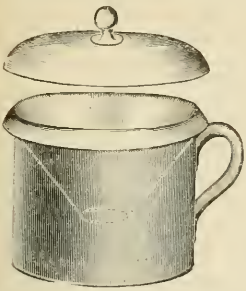


Fig. 2.—Aluminum Spit-Cup for use at the Bedside.

For a patient confined permanently to his bed I think this plain aluminum cup with cover answers all practical purposes. It is light and easily cleaned (Fig. 2). It has the additional advantage of not having the typical aspect of a spittoon. This as well as all other stationary cuspidors should be filled to about one-third with some antiseptic solution, preferably wood vinegar. For those who can conveniently destroy the sputum by fire, Seabury & Johnson's well-known paper spitting cup is a handy and useful utensil. I take pleasure in showing it to you in its new form with an aluminum frame and cover (Figs. 3, 4). Patients who are too weak even to make use of this light aluminum cup should have at their bedside a number of moist rags, which should be burned immediately after use, or at least before they have had a chance to dry. For the patients who are up and around and who go outdoors the pocket flask is the only rational utensil to receive the expectoration. There exist a number of them. I have described the celebrated Dettweiler pocket flask (Fig. 5) and also my own (Fig. 6) on several occasions before this. I have given detailed descriptions and illustrations of these and others in my recent book on tuberculosis,[1] and I fear to trespass on your time to say any more about them. I show these two to you, and confess frankly I consider neither of them perfect. I hope some day to be able to present you an ideal pocket flask, but I think that either of these will answer the purpose in the mean time.

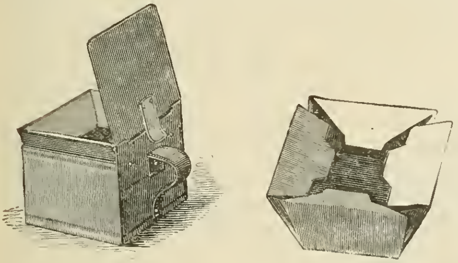


Fig. 3.—Frame. Fig. 4.—Folded Cardboard.

Seabury & Johnson's Spitting-Cup.

To encourage the use of the pocket flask one must make its manipulation and the process of cleaning it as simple as possible. I direct my patients to empty the flask into the water-closet or to fold a newspaper into several layers, pour the contents on to this, and throw the whole at once into the fire, being careful not to spill any. One should, however, not forget to insist that the patient washes his hands carefully afterward.

Larger quantities of tuberculous sputum, collected from the spittoons, should be gathered in a separate pot partially filled with water and the whole be boiled for half an hour. To increase the boiling-point a few degrees, a teaspoonful of soda might be advantageously added for each quart of liquid.

Some consumptive individuals will not use the pocket flask in spite of all persuasion, for the simple reason that they do not wish to attract attention to their malady. For these there is but one thing to do—to tell them to use squares of muslin or Japanese paper handkerchiefs specially manufactured for that purpose, which can be burned after use. But I should insist that they place in their pockets a removable lining of rubber or other impermeable substance which can be thoroughly cleaned. This additional pocket could be fastened to the inside of the ordinary pocket by clamps, and thus be of no inconvenience to the patient. Of course, all individuals using handkerchiefs as receptacles for sputum take their chances of infection through contact with the expectoration, and they should be particularly enjoined never to touch any food without having thoroughly washed their hands.

The soiled linen of consumptive patients should be placed in water immediately after removal from bed or body, and be handled as little as possible before that. The handkerchiefs especially, even if they have not been used to receive expectoration, should be washed separately or at least boiled before being given to the general laundry.

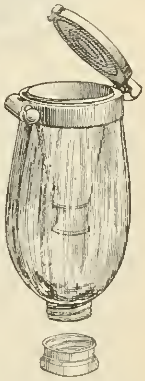
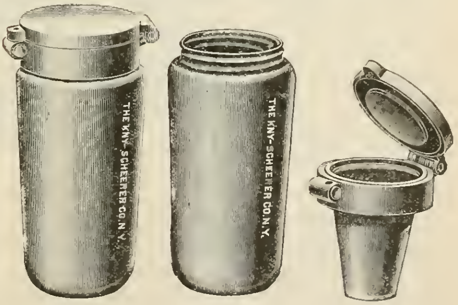


Fig. 5.—Dr. Dettweiler's Hustenflaschchen.

In the private home, with loving friends and relatives about the patient, everybody should be told that kissing on the mouth is unhygienic. The saliva of tuberculous invalids is certainly not free from bacilli. If the patient cannot have his own table utensils, as forks, spoons, glasses, etc., it is well for the physician to insist that all these utensils shall be placed in boiling water for a few minutes each time after use. In view of the undeniable fact that during the dry cough, or while speaking loudly, small particles of tuberculous sputum or saliva can be expelled, the patient should be taught to place a handkerchief before his mouth during the dry cough. The danger of infection from these small particles of saliva expelled while talking is, however, relatively small, since the number of bacilli found in the minute drops of saliva are few, and the little masses are never expelled beyond three feet from the mouth of the patient.


THE KNY-SCHEERER CO. N.Y.
THE KNY-SCHEERER CO. N.Y.
Fig. 6.—Closed. Fig. 7.—Taken apart for Cleaning.

Dr. Knopf's Pocket Sputum Flask.

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[1] Knopf, S. A.: "Pulmonary Tuberculosis, Its Modern Prophylaxis and the Treatment in Special Institutions and at Home." Philadelphia: P. Blakiston's Son & Co., 1899.

In hospitals where many advanced consumptives congregate, the precaution to have the patient wear Professor Fraenkel's mouth mask is doubtless of utility and constitutes justly one of the modern measures to prevent the spread of tuberculosis. I take pleasure in showing you here such a mask, the mechanism of which is easily understood. At the Charity Hospital in Berlin all tuberculous patients are obliged to wear such masks when in the common room, and only remove them while eating or expectorating. The patients soon become accustomed to the mask, as by impregnating the gauze, which is held in place by the metallic frame, with some medicinal substance they suppose it is to be worn exclusively for their own personal benefit. Bacilli are not infrequently found in the gauze. It is, of course, self-understood that the gauze, lint, or cotton removed from these respiratory masks should be burned immediately, and the masks disinfected at regular intervals.

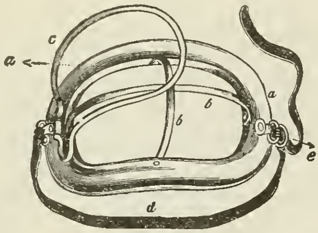

Fig. 8.—Professor Fraenkel's Mouth-Mask.

I hardly think that in ordinary private cases the wearing of such a mask is practical or absolutely necessary; but I would instruct nurses, relatives, and friends who are much with the patient not to approach him unnecessarily close while he is speaking or coughing, or for any length of time.

As far as dress for the tuberculous invalid is concerned, we might summarize the whole subject by saying that he should dress sensibly, comfortably, and according to the season. He should avoid heaping successive layers of underclothing upon himself, especially in the line of chest-protectors. As underwear, Jaeger's or other similar sanitary wool suits of the lighter or heavier grade, according to the season, are to be recommended. In cold weather the outer garment should be warm, but not so heavy as to hamper free movements. For ladies I recommend the Lady Habberton or Jenness Miller system of dress reform, which does away with the corset and the numerous skirts fastened tightly around the waist, and, last but not least, the unclean and unhygienic mode of long trailing dresses. The footwear of all phthisical patients should be warm, but never tight, and in wet weather, of course, they should wear rubbers. As a matter of personal hygiene I might suggest that long beards or thick untrimmed mustaches are often retainers of particles of sputum and thus may constitute a source of infection. Whether we may allow our patient occasionally a cigar will depend upon the individual case. I never permit the smoking of cigarettes, and, of course, it is out of question to allow smoking in the sick-room.

Dietetic Treatment.—We now come to the patient's diet. My distinguished teacher in modern phthisiotherapeutics, Herr Geheimrath Dettweiler, is in the habit of saying, "La cuisine est ma pharmacie." This maxim is as appropriate for the private practitioners who treat consumptives as it is for the sanatorium physician. When we have to treat our patient at his own home we must not only have a good table for him, but our cooking-recipes and directions concerning his diet must be carried out as faithfully as if we had prescribed a medicinal mixture. A fair understanding of how to prepare good nutritious and easily assimilated food for invalids is indispensable to every physician, but especially so to the phthisio-therapeutist. I hope the time is not far distant when instructions in the principles of cooking for the sick will be included in the curriculum of our medical schools. We all know the importance of dietetic treatment in pulmonary tuberculosis, but we are not always aware of the difficulties which we encounter when the patient is in his own home and has something to say about the daily menu. His aversion to fats, his not infrequent dislike to take larger quantities of milk, or other caprices regarding the preparation of food or the time of taking his meals, are matters which must be overcome; otherwise the successful treatment of a consumptive at home is an illusion. Certain conditions of anorexia will often yield more rapidly through the aid of the culinary art than through the administration of pharmaceutical preparations. While we may consider the patient's idiosyncrasies for certain dishes as well as for certain medicines, we must know how to distinguish idiosyncrasies from caprices. One important truth that he should be made to understand is, that his digestive powers are far greater than his appetite indicates.

I will give here briefly what I consider an average régime for a consumptive accustomed to our American way of living. As soon as the patient awakes in the morning, while yet in bed, a glass of hot milk, half milk and tea, or half coffee and milk, with a slice of milk-toast, should be given him. After a little while he will rise to prepare for his douche, friction, or massage, whatever the physician's prescription may call for. After this it will probably be nine o'clock, and the patient may take his ordinary breakfast. He should have eggs, and may have his choice as to the way they may be cooked—soft-boiled, poached, raw, etc., or in form of eggnog, with sherry or one or two teaspoonfuls of whiskey. If he is accustomed to a meat breakfast, he should have broiled steak, chops, poultry, sweetbreads, etc., or raw chopped beef. Bread a day old—preferably whole-wheat bread or French rolls, but not hot—with plenty of butter or honey, either milk, cacao, coffee with milk, but not too strong, or a cup of bouillon, should also form part of the meal. Whether the patient likes to have his mush (cereals) for breakfast or supper may be left to his choice; some fruit should always precede his eggs or meat in the morning. If fish is served in the morning it should be either broiled, or boiled, or baked.

The patient should take the heartiest meal between the hours of twelve and two o'clock (four hours after breakfast). Broths or soups should be the first course. Oysters and clams are most easily digested raw. Any kind of fresh fish may be served again at dinner, and in any form except fried; and there will be, of course, roast meat of some kind, rare roast beef, mutton, poultry, etc. Of vegetables, spinach is particularly to be recommended on account of the large proportion of digestible and assimilable iron. Next to this in nutritive power come lentils, peas, beans, cauliflower, potatoes. Fresh vegetables should be given whenever it is possible to have them. Lettuce and other salads preferably prepared with lemon-juice instead of with vinegar, are permitted. Light puddings, fruits, and nuts may constitute the dessert.

At about four or five o'clock some milk with toast may be taken, or, if the patient cares for it, he should have a cheese or meat sandwich. At this time the milk may be replaced by bouillon or chocolate.

The supper should not be quite so voluminous as the dinner: cold or warm meats, rice with milk or gruel, jellies, fruits, etc. At bed-time again a glass of milk or some milk-toast.

It is, of course, impossible to lay down an absolute rule of what to allow and what not to allow. At times the patient may be permitted to indulge in such things as ham, smoked tongue, and even pickled or salt herring, sardines, or sardelles, as these articles seem to stimulate the appetite without producing any bad results. All bouillons and soups taken regularly at the principal meals aid the digestion by increasing the flow of the gastric secretions. Raw scraped beef is a most valuable adjuvant in the feeding of tuberculous invalids. It is always indicated, but especially when meats prepared in the ordinary way do not seem to be digested very easily. The supply of meat-pulp for the day may be made in the morning, but it must be kept in a cold place, as it taints easily. It is better, when possible, however, to make it fresh just before it is to be eaten. The patient may take the pulp in any way he pleases. It can be eaten plain with pepper and salt, mixed with milk, with warm bouillon, with mashed vegetables, or with sweets. The latter method will make it tempting for children. It can be rolled into balls easy to swallow, or made into sandwiches with a few anchovies or a little anchovy paste, pickled herring, or some other relish, according to the patient's taste. The yolk of a raw egg added increases the nutritive quality of the meat-pulp. Thus it will be seen that the ways in which the raw meat may be taken are so numerous that it can be made palatable to almost any patient.

To eat a great deal of butter and cream is especially to be recommended to pulmonary invalids, and milk should be allowed at any time without restriction. However, some patients, in their eagerness to get fat, overdo in this respect. When drinking numerous glasses of milk between meals interferes with the proper appetite at meal-times, the number of glasses should be reduced accordingly. Again, neither milk nor cream agrees well with some consumptives. To make the former more digestible, one may add to each wineglassful one-half or one teaspoonful of cognac, kirsch, or rum, with or without hot water. Milk may also be rendered more digestible by adding to each tumblerful about six grains of bicarbonate of sodium and five grains of common salt, dissolved in two tablespoonfuls of hot water. It should always be taken slowly and in small swallows.

Patients should be taught to eat regularly, slowly, chew their food well, and keep their teeth in good condition. When the weather permits, let them take their meals outdoors. A patient who has fever should eat when his temperature is lowest, and only the most easily digested substances. Alcohol is indispensable in some cases, but it should always be dealt out carefully and preferably in the diluted form of eggnog, wine, or beer.

Open-Air Treatment.—The open-air treatment, that is to say, remaining in the open air during most of the day, is essential if we wish to make our hygienic and dietetic treatment at the home of the patient a success. The patient's bedroom is, of course, always airy, and day and night one or more windows, according to the season, should remain open. Deep breathing is done as often as the patient thinks of it; regular respiratory exercises every half-hour or hour; these exercises should be taught gradually, and as often as it is possible they should be superintended by the physician. A good rule is to tell the patients never to take their exercises when they feel tired, nor to the extent of becoming tired.

The rest cure (or "Liegekur") on the reclining-chair is the most important feature of the open-air treatment. For that purpose the patient may install himself in the garden near the house, on the porch, on the balcony, roof, or fire-escape, or near the open window. For those who have the advantage of a garden, an installation, of which I show you here a picture taken from my book, might make an ideal rest-cure arrangement. A large beach-chair of wicker-work, such as is seen in seaside resorts, is procured. After the seat has been removed the inner walls are lined with padding. A reclining-chair is placed with its back in the interior, and the whole arranged so that the patient is protected from the wind and sun. There the patient installs himself for the day, with his books or writing materials at his side, placed on a little table, on which his meals may also be served. Being light, the whole can be shifted whenever the wind changes and according to the position of the sun, so that the invalid's body may be bathed by the rays of the sun, while the head remains in the shade. However, a plain steamer-chair, padded with a quilt or blanket, and a large umbrella will answer the purpose where such an installation cannot be arranged.

The length of time to remain on the reclining-chair outdoors must be regulated by the physician according to the weather and the condition of the patient. But the endurance at which the patient can arrive in this respect by gradual training is simply wonderful, and cold weather, when the patients are warmly wrapped up, should certainly not be a hindrance to a prolonged rest cure.

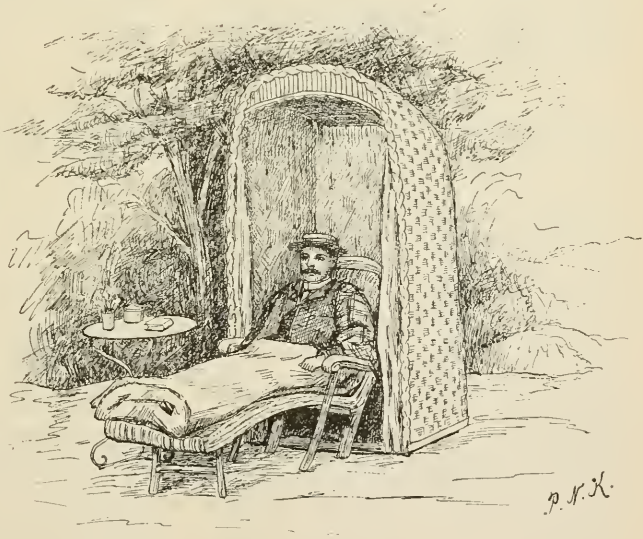

Fig. 9.

On the question as to whether or not we should allow our phthisical patients walking-exercises, even if they have fever, all phthisio-therapeutists do not agree. Let me state here briefly the position I take in this matter, which I have published before, and to which I still adhere. Rest cure should alternate with walking-exercises. The duration of a promenade for a phthisical patient should be regulated with the utmost care. One should commence with a walk of a few minutes until a walk of an hour or an hour and a half can be taken without producing fatigue. Whenever it is practicable these excursions should begin uphill, so that the return is easy. After his promenade the patient's temperature should be taken. If it exceeds the normal it is an indication that the patient has overtaxed his powers. Whether complete rest or simply shorter walks are then indicated will be decided by the variation of the temperature before and after exercise. When the temperature of the patient rises only slightly in the evening (99-99.5° F.), short walks in the morning, while in the apyretic state, may be permitted. A lasting temperature of 100° F. or over is an absolute contraindication to exercise. Tachycardia should also be considered as such. If there is, however, a chronic tachycardic condition, absolute rest might not be the best policy. But these patients, more than any others, should be warned against the slightest over-exertion. When the patient is ambulant, and you have a pneumatic cabinet in your office, a daily séance of from five to eight minutes will be a considerable aid in your efforts to make a partially solidified lung do its normal work again, for there is no doubt about the therapeutic value of this useful instrument. It has rendered me excellent services with the patients who could come to my office. My time will not permit me to speak here at length of the virtue of the pneumatic cabinet as a diminisher of vascular compression, alveolar and tubular obstruction, and a restorer of oxygenation. Those who are interested in the study of this subject I must refer to the excellent article of Quimby, "The Pneumatic Cabinet in the Treatment of Pulmonary Tuberculosis," which appeared in the *International Medical Magazine* for January, 1893.

Hydrotherapy.—The consumptive patients whom we are to treat at home will probably all have a bathroom where we can arrange to give a general douche as a tonic, a jet over the apices for the purpose of causing a revulsion, or a lateral douche in order to break up old pleuritic adhesions. In case there is no bathroom, or the visit to the douche-room is either inconvenient or not safe, I resort to the following simple method: A wooden chair is placed in a large, circular, English bath-tub, and the patient sits astride the chair, holding the back with his hands and bending his head slightly forward. Then two, four, or more pitchers of cold or tempered water are rapidly poured over the shoulders. In cases in which the reaction is feeble the patient is quickly put back into his warm bed, even if he is not thoroughly dry.

The best time to make the hydrotherapeutic application is in the morning, half an hour or so after a very light breakfast. Patients accustomed to heavy breakfasts should, as I have already mentioned, take such after their douche and morning walk, but should take a glass of milk with a slice of buttered toast before leaving their room. A morning walk should, if possible, always precede the douche. This is for the purpose of creating what French hydrotherapeutists call a preaction.

Every douche or affusion should also be followed by a short walk or return to bed, according to the indication of the case. The cold douche must never last longer than twenty to twenty-five seconds, and one should always begin gradually, not giving more than five seconds at first. The temperature may vary from 60° to 40° F.; only in exceptional cases would one need a more precise graduation of the temperature.

The complicated procedure of the dripping sheet seems to entail too great a strain on the patient, and I do not favor it in phthisio-therapeutics. Wet packs, on the contrary, over the thorax seem to exert a soothing influence whenever there are pleuritic or intercostal pains, or a vague or undetermined feeling of discomfort in the chest.

All hydrotherapeutic applications should be directed by the physician. He must educate the skin and nervous system of his patient to the use of the douche by the gradual application of the water through friction and affusion. He must teach his patient how to take an occasional warm or steam bath to eliminate the toxins without taking cold afterward.

Constant Medical Supervision.—The good results in sanatoria are to be ascribed to the constant medical supervision of the patient by the physician in charge, or his assistants, who direct all the details of the hygienic, dietetic, and symptomatic treatment. We must do the same if we want to institute a sanatorium at home. But there are a few points in the educational treatment of consumptives in which the family physician has the advantage over the sanatorium physician. The former can make his authority felt whenever there is a question of marriage. I admit that the families will not always listen to such advice; still I claim that in many instances marriage between tuberculous individuals could be prevented by an energetic protest on the part of the family physician. Another important issue, which will present itself more frequently to the family physician than to any one else, is the question of prevention of conception when either one of the married partners suffers from pulmonary tuberculosis. I have no hesitation to declare publicly my position in this matter. To cut short a conception in a tuberculous mother is useless; she has a better chance of getting well if left alone, and if a thorough dietetic and hygienic treatment is immediately instituted and prolonged for at least a year after confinement. Of course, it goes without saying that the tuberculous mother is not to nurse the child herself. Thus through a very judicious management two lives have a chance to be spared, while through abortive proceedings mother and child would most likely have succumbed. On the other hand, when it comes to the prevention of conception in a tuberculous woman, or from a tuberculous man, I believe it is the sacred duty of the family physician to teach these people legitimate means that they may not bring into life a being tainted with a predisposition to this disease. Furthermore, there is no doubt that the pregnant state in a tuberculous woman, while it may temporarily arrest the disease, causes in the majority of cases a more rapid decline after confinement. In view of our present knowledge of tuberculosis I do believe that to teach a tuberculous man or woman how to prevent conception is not a sin before either God or man.

The symptomatic treatment of pulmonary tuberculosis must be the same everywhere, and I have nothing new to offer. But I desire to say one more word in regard to the prophylactic treatment, which I admit I have also said on previous occasions, but which I like to repeat again and again.

The treatment of tuberculosis in the private home by the family physician should be prophylactic in the broadest sense of the word. It is the family physician who will see the incipient cases first; it is he who will discover a predisposition to phthisis when a wise and judicious treatment will save the patient. The intimate relation which exists between the family physician and all the members of the family give him here again the superiority over the sanatorium physician. The latter can help only the patient placed under his care, while the family physician can at the same time prevent the breaking out of tuberculosis among the other members of the family.

After all that has been said you will agree with me that the sanatorium treatment is feasible even in the average home, provided the patient's social and financial conditions permit the carrying out of a rigorous hygienic and dietetic regimen under the careful guidance of the family physician. But with the vast majority of tuberculous patients, and this majority constitutes the consumptive poor, to carry out successfully the precepts of modern phthisio-therapy without special institutions supported by the State or municipality, or private philanthropy, is utterly impossible. Thus you will pardon me if I conclude my paper with a fervent plea for a decided action on part of this society in the matter of the creation of public sanatoria —that is to say, institution for that class of sufferers who deserve the greatest sympathy, and through whose hospitalization the public health will gain most and the commonwealth be morally and financially benefited.

It was in our great State of New York, through the efficient and energetic work of my esteemed teacher, Professor Bryant, then health commissioner, and who now graces our presidential chair, that the combat against bovine tuberculosis was first taken up. The work of the New York City board of health, concerning the prophylaxis of tuberculosis in man, inaugurated a few years ago, has won the universal admiration of sanitarians in this country and abroad. But of late we have not kept pace with even our sister States, much less with foreign countries. Pennsylvania and Illinois have a society for the prevention of tuberculosis, with growing funds for the erection of sanatoria. Massachusetts has its State Hospital for Consumptives. New York, the most densely populated and richest State in the Union, with the greatest number of consumptive poor, has neither a society for the prevention of tuberculosis, nor a sanatorium, nor a State hospital. May the New York State Medical Association, in its last meeting in the nineteenth century, not adjourn without taking some active step in this important matter.

15 West Ninety-fifth Street

A CRITICISM UPON A NEW METHOD OF PREPARING THE SKIN FOR VACCINATION BY DENUDATION WITH CAUSTIC POTASH SOLUTION.

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In a paper published April 23, 1898, in the *Journal of the American Medical Association*, Dr. Hutchins, of Georgia, recommended a new method of preparing the skin for vaccination by denudation with caustic potash as a substitute for scarification by the usual methods. The advantages which Hutchins claims for his method are, that it is painless; that it is not terrifying to the child because no instrument is used; that it causes no bleeding, and is for this reason more likely to be successful than when an instrument is used which draws blood.

Hutchins at first used the officinal liquor potassæ (a five-per-cent. solution of KOH in water), soaking a small pledget of absorbent cotton in the solution, letting it lie upon the arm for two or three minutes until the skin was denuded of epidermis, then wiping the surface with another piece of absorbent cotton dampened with water. Later he used the deliquescing stick of KOH, applying it to the surface for a moment only, and immediately wiping off the denuded area as before.

The experiments upon which this paper is based were performed by the writer in October, 1898. The cases vaccinated were all "primaries," *i.e.*, they had never been vaccinated before, and were twenty-two in number. The virus employed was in each instance controlled by using it upon other cases by the ordinary method of needle scarification. Different strengths of KOH solution were used, but none so weak as the officinal liquor potassæ.

These experiments are described in detail as follows:

Experiment 1.—October 4, 1898. Virus No. 510, collected September 20, 1898.

Control, October 4, 1898: One case vaccinated in three spots by needle scarification. Result, six days after vaccination: three good-quality, large, compound vesicles on large papules.

Experiment: Five children vaccinated in one spot each by denudation with KOH, as follows: Deliquesced KOH applied with a very small swab, made by rolling a bit of absorbent cotton around the end of a wooden toothpick. After it was evident that the epidermis was dissolved the denuded surface was wiped off with a swab of absorbent cotton dampened with water.

Appearance after denudation: In each case the denuded spot was slightly depressed and covered with a bluish or bluish-red eschar of a peculiar parchment-like appearance. No blood flowed.

Upon these areas glycerinated vaccine virus was smeared, then thoroughly worked in with the sharp corner of the broad end of an orange-wood toothpick, just as is done after scarification by the usual method.

Results, six days after vaccination: Case 1, good quality and size compound vesicle on papule; large dry scab from eschar. Case 2, small vesicle one-eighth inch in diameter at one edge of dry scab from eschar. Case 3, failed. Case 4, good quality and size compound vesicle on papule; moderate-sized dry scab. Case 5, good quality and size vesico-pustule on papule; moderate-sized dry scab (this case inspected at seven days). We thus obtained from five insertions four vesicles, three good and one very small, and one failure.

Experiment 2.—October 10, 1898. Virus No. 525, collected October 5, 1898.

Control, October 6, 1898: Five children vaccinated in three spots each by needle scarification. Result, five days after vaccination: Fifteen vesicles of good size and quality.

Experiment: Five children, vaccinated in one spot each with deliquesced KOH, as before; the spots then were washed off with dilute acetic acid to neutralize the KOH and stop further destruction of tissue if possible.

Appearance after denudation: Same as in Experiment 1.

Results, five days after vaccination: Case 1, good compound vesicle on papule; moderate dry scab, not depressed. Case 2, good compound vesicle on papule; moderate dry scar, not depressed. Case 3, failed (inspected again eight days after vaccination. No vesicle resulted). Case 4, good compound vesicle on papule; moderate dry depressed scab. Case 5, good compound vesicle on big papule; moderate dry depressed scab. We thus obtained from five insertions four good vesicles and one failure.

Experiment 3.—October 10, 1898. Virus No. 526, collected October 6, 1898.

Control, October 7, 1898: Six cases in three spots each by needle scarification. Result, five days after vaccination: Eighteen vesicles, as follows: nine of good quality and size; six of fairly good quality, fair size; three of good quality, fair size.

Experiment: Two children vaccinated in two spots each, one with needle as usual (A) and one with KOH solution, followed by acetic acid, as in Experiment 2, the KOH solution being somewhat weaker than in Experiment 2 (B).

Appearance after denudation of (B) spots: Same as in Experiments 1 and 2.

Results:

	A (Needle Scarification).		B (KOH Denudation).	
	Five Days after Vaccination.	Eight Days after Vaccination.	Five Days after Vaccination.	Eight Days after Vaccination.
Case 1.	Small compound vesicle on papule.	Fair compound pustule, moderate areola.	Failure . . .	Failure.
Case 2.	Small compound vesicle on papule.	Fair compound pustule, moderate areola.	Failure . . .	Failure.

We thus obtained: A (needle scarification), two fair vesicles; B (KOH denudation), two complete failures.

Experiment 4.—October 22, 1898. Virus No. 529, collected October 20, 1898.

Control, October 20, 1898: Five cases in three spots each by needle scarification. Result, five and six days after vaccination: Fifteen vesicles, fourteen of good quality and size, one of fair quality and size.

Experiment: Five children vaccinated in two spots each (A and B) as in Experiment 3, except that KOH solution was somewhat weaker than in Experiment 3, though still strong.

Appearance after denudation of (B) spots: Same as in Experiments 1, 2, and 3, except that eschars were perhaps not so thick.

Results, five days after vaccination:

	A (Needle Scarification).	B (KOH Denudation).
Case 1.	Fairly good quality and size, compound vesicle on papule.	Failure (seen also at thirteen days, failure).
Case 2.	Good quality, fair size, compound vesicle on papule.	Good quality but only just beginning coalescing, vesicle on papule. Scab larger than on (A), and depressed.
Case 3.	Fine quality, large compound vesicle on papule.	Only fair quality and size, coalescing vesicle on papule. Scab larger than on (A).
Case 4.	Good quality and size, compound vesicle on papule.	Good quality and size, compound vesicle on papule. Scab larger than on (A).
Case 5.	Good quality and size, compound vesicle on papule.	Good quality and size, coalescing vesicle on papule. Scab dry and depressed.

We thus obtained: (A), five vesicles—three good, one fairly good, and one fine large; (B), four vesicles—one small beginning coalescing, one only fair coalescing, one good compound, one good coalescing, and one failure. The virus is evidently not so active in (B) cases as in (A) cases.

Experiment 5.—October 31, 1898. Virus No. 534, collected October 27, 1898.

Control, October 28 and 29, 1898: Five cases vaccinated in three spots each by needle scarification. Result, seven days after vaccination: All the cases "took," but only thirteen vesicles were obtained—six good, six fair, one poor. This was the original test of this virus and showed it to be distinctly below the standard in quality.

Experiment: Five children vaccinated in two spots each (A and B) as in Experiments 3 and 4, except that successively weaker solutions of KOH were used and that after the application of the acetic acid the surface was washed with water and then dried.

Appearance after denudation is noted under each case.

Results, seven days after vaccination:

	A (Needle Scarification).	B (KOH Denudation).
Case 1.	Good quality and size, compound vesicle on papule.	[KOH solution weaker than in Experiments 3 and 4. Surface after denudation same as in former experiments.] Small beginning vesico-pustule around edge of depressed eschar.
Case 2.	Good quality and size, compound vesicle on papule.	[KOH solution weaker than in Case 1 Surface after denudation a little more red around edges.] Good quality and size, compound vesicle on papule. Vesicle is even larger and better quality than in (A).
Case 3.	Good quality and size, compound vesicle on papule.	[KOH solution still weaker than in Case 2. Surface after denudation reddish, also more red in centre.] Rather poor quality, small single vesicle on papule.
Case 4.	Good quality, fair size, compound vesicle on papule.	[KOH solution same strength as in Case 3. Surface after denudation reddish.] Good quality, fair size, compound vesicle on papule.
Case 5.	Good quality and size, compound vesicle on papule.	[KOH solution same strength as in Cases 3 and 4 Surface after denudation bluish and parchment-like, as in experiments with stronger solutions.] Good quality and size, compound vesicle on papule, but not quite so good as (A).

We thus obtained: (A), five vesicles—four good quality and size, one good quality and fair size; (B), five vesicles—one small beginning, two good quality and size, one good quality and fair size, one rather small and poor quality.

Note, made at time of inspection of these cases: "In all this lot, the vesicles seven days after vaccination looked as they usually do six days after vaccination. The less vigorous denudation with a weaker solution of KOH seems to result in vesicles more like those of usual method of scarification with needle. The vesicles are of better quality, with smaller eschars and less depression than when the stronger solutions of KOH are used."

A study of the cases in detail, however, not only in this experiment but in those which preceded it, shows that in almost all the cases in which vaccination by the (A) and (B) methods have both been successful the (A) vesicles were of better quality and size than the (B) vesicles.

Summary of results of all the experiments:

	Number of Insertions	Character of Vesicles Obtained.					Percentage Successful.
		Good.	Fairly Good.	Fair.	Poor.	Total.	
KOH denudations:							
KOH alone	10	7 (70%)	0	0	1 (10%)	8	80.
KOH (on same arm with needle scarification).	12	3 (25%)	2 (16.67%)	1 (8 33%)	3 (25%)	9	75.
Totals............	22	10 (45.45%)	2 (9.1%)	1 (4.54%)	4 (18.18%)	17	77.27
Needle scarifications: (On same arm with KOH denudation).	12	8 (66.67%)	2 (16.67)	2 (16.66%)	0	12	100.

From these results it appears that vaccination performed by denudation with solutions of KOH is less likely to be successful than when performed by needle scarification. This fact the writer believes to be due to the formation of an eschar by the KOH which makes the surface denuded resemble parchment. This coagulation of the albuminous elements of the tissues closes the mouths of vessels and lymphatics, and renders the entrance of the vaccine organism and its absorption difficult. This action of KOH solutions upon the skin was studied, at the writer's request, by Dr. Anna L. Williams, one of the bacteriologists of the New York City health department. After application of the KOH to the skin upon the abdomen of a calf, sections of the skin through the denuded area were cut out and examined microscopically.

A summary of Dr. Williams' report is as follows:

"1. Epidermis completely destroyed, as also some parts of true skin.

"2. The lower parts of the hair bulbs remain; also lower parts of sweat and sebaceous glands.

"3. The remaining portion of the skin is covered with a layer of necrosed tissue, which takes a deep blue stain, and its structure is indistinguishable. This layer is about as thick as the epidermis and penetrates irregularly into the true skin.

"Conclusion: There may be an obstacle to the entrance of the vaccine organism either in the presence of the necrosed tissue or in the alkalinity of it."

The writer's conclusions as the result of these experiments are as follows: It is possible that a person of great skill and experience in the use of this method of KOH denudation would learn to apply the caustic potash in such a way as not to produce an eschar thick enough to prevent success; but the well-known local effect of KOH upon the skin makes it evident that some cauterization cannot be avoided, and that in so far as an eschar results the entrance of the vaccine organism will be interfered with.

The denudation method is slower than scarification, and if acetic acid is used to neutralize the KOH, the method is not less painful, as the acid causes a marked smarting effect. The use of the acid, however, might be omitted, as it did not appear in any of these experiments to diminish the tendency to the formation of an eschar.

Very active virus, such as is issued by the New York City health department, will give vesicles of too large size unless the scarified area be very small, not more than one-eighth of an inch square. It is difficult to denude so small an area with a liquid application.

The KOH method is naturally less terrifying to the child than the use of any sharp instrument. It is less painful if acetic acid is not used, and so far as the drawing of blood is concerned, it also has an advantage over scarification. It is, however, the opinion of the writer, and he believes this will be supported by the opinions of vaccinators of large experience, that no ordinary blood flow interferes with the "taking" of good virus thoroughly rubbed or scratched in. It is, of course, better for cosmetic reasons not to draw blood, and it must be admitted that it is difficult to avoid doing so by the usual methods of scarification, but it is a mistake to think that a little flow of blood will endanger the success of the vaccination.

To summarize these conclusions, then, the advantages of the KOH denudation are: (1) It is less painful and less terrifying; (2) it does not draw blood.

The disadvantages are: (1) It takes more time. (2) It requires more skill. (3) It is difficult by this method to denude an area small enough; the vesicles are likely to be too large if the virus is very active. (4) It is less certain than scarification, no matter how skilfully done, because of the formation of an eschar which interferes with absorption.

Finally, the writer believes that the disadvantages named, together with the fact that a rather elaborate equipment is required, make the KOH method impracticable for use in wholesale vaccinations such as are performed by public vaccinators. As to its value in private practice, if it be deemed important in any particular case, such as that of a very nervous child, to avoid terrifying him, or to spare him the slight pain caused by scarification, this method may very well be tried; but unless the physician is skilled in the use of the method, or unless the virus is so active that it will "take" no matter how it is applied, he must not be surprised if failure is the result.

The Diplobacillary Conjunctivitis of Morax.—Auguste Collomb found the diplobacillus in about three-fifths of the cases of conjunctivitis and blepharoconjunctivitis, whether acute, subacute, or chronic, which he examined, or from six to ten per cent. This was during several months when he was able to make complete and satisfactory examinations. Under other circumstances the cases represented about four per cent. of the patients examined.—*Revue Médicale de la Suisse Romande*, December 20, 1899.

The Semeiological Value of Laughter.—J. M. Raulier analyzes laughter as expressed in pathological and patho-psychiatric conditions and in psychoses.—*Archives Générales de Médecine*, December, 1899.

Eruptions Caused by Picric Acid.—H. Cathelineau gives a description of affections of nails and epidermis due to picric acid used in the arts or medicinally.—*Archives Générales de Médecine*, December, 1899.

Typhoid Fever and Pregnancy.—De Grandmaison reports a case in which the typhoid infection caused an abortion which then reacted upon the fever with a fatal result.—*Archives Générales de Médecine*, December, 1899.

Fatal Hemorrhage during the Course of Chronic Gastritis.—M. Péhu reports a case, and concludes that the hemorrhage of the exulceratio simplex is the result of a vascular lesion independent of small submucous abscesses; that the exulceratio simplex cannot be considered as the first stage of Cruveilhier's simple ulcer, for in the case reported the hemorrhage was apparently the result of a diffuse general gastritis, without ulcer, the process involving the blood-vessels. The patient was an alcoholic who had suffered for ten years from gastric symptoms resembling those of ulcer. —*Archives Générales de Médecine*, December, 1899.

Sensory Aphasia.—Dr. Touche performed autopsies upon nine patients who had suffered from sensory aphasia. In one case the affections interfering with speech were to be attributed to the interruption of communication between the various speech centres rather than to lesions of the centres themselves. In another the speech area was affected only in its inferior portion. In a third a slight subcortical softening near the second temporal convolution produced verbal deafness and jargon aphasia. Lesions of the second parietal and part of the ascending parietal existed in subjects who had apparently been cured of aphasia.—*Archives Générales de Médecine*, December, 1899.

Infectious Diseases.—Jules Renault has pursued a series of researches into the phenomena known as agglutination, or the effect produced upon certain bacteria by the action of immunizing serum. They are rendered immobile and gathered into little groups or agglomerations. This fact is of use in the serum diagnosis of typhoid fever; agglutination has been found in fourteen out of fifteen cases of Asiatic cholera, in the Malta fever of Mediterranean countries, in the latter weeks of Bombay pest, in infections due to the pneumococcus, and in glanders. It is not present in infections due to the coli bacillus, in tetanus, in diphtheria, nor in staphylococcus infections.—*Archives Générales de Médecine*, December, 1899.

Fracture of the Anterior Superior Spine of the Ilium by Muscular Contraction.—Jacques L. Reverdin reports the case of a young muscular Englishman, who slipped on his left running down an incline, just as the right leg was about to be carried forward. To avoid falling on his back, he instinctively bent the trunk over the left thigh. The flexors were strongly contracted, among them the sartorius and the tensor vaginæ femoris, which are attached to the iliac spine, and which pulled it so violently as to cause its fracture.—*Revue Médicale de la Suisse Romande*, December 20, 1899.

Massage is beneficial in ulcers, especially centripetal effleurage at the sides and below the ulcer in proportion to the induration of the edges.—HARTSCHEK.

MEDICAL RECORD:

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THE BACTERIOLOGY OF ENDOCARDITIS.

That endocarditis is of bacterial origin there is little room for doubt, but there is good reason to believe that the etiological factor is not always the same, various observers having found different micro-organisms. While often an associated, or secondary, phenomenon of other infectious diseases, the inflammation of the endocardium may take place as an independent, or primary, disorder, the infecting agents gaining entrance through any one of a number of portals, of which evidence has recently been adduced that the tonsils constitute one. The lesions and the symptoms vary widely in individual cases in accordance with the virulence and the pathogenicity of the micro-organisms concerned, and naturally also with the character of the primary disorder when the endocarditis is secondary.

To the cases of endocarditis already recorded in which bacteria were isolated, MacCallum and Hastings (*Journal of Experimental Medicine*, vol. iv., Nos. 5 and 6, p. 521) report an additional instance in which they found a hitherto undescribed micrococcus. The patient was a man, thirty-seven years old, who presented symptoms of acute endocarditis of the aortic and mitral valves, with infarctions in the spleen and the kidneys. From the blood during life, and from the valvular vegetations, the infarctions and other parts after death, there was demonstrated both microscopically and in pure culture, in large numbers, a small micrococcus, occurring mainly in pairs, sometimes in short chains, staining by Gram's method, growing in small, pale, grayish-white colonies on gelatin and agar, at first clouding bouillon, which then becomes clear with a whitish sediment, not producing gas in glucose media, liquefying gelatin slowly, and to some extent also blood serum, and characterized especially by its behavior in milk, which it acidifies, coagulates, and subsequently liquefies. It produces a milk-curdling ferment, and also a proteolytic ferment, each of which is separable from the bacterial cells. It remains viable for months in old cultures, and it is tolerably resistant to the action of heat and antiseptics. The micrococcus is pathogenic for mice and rabbits, causing either abscesses or general infection. Typical acute vegetative endocarditis was induced experimentally by intravenous inoculation of the organism in a rabbit and a dog, and the cocci were demonstrated in pure culture in the vegetations and other parts of these animals after death. Although the micrococcus described bears some resemblance to the pneumococcus and the streptococcus pyogenes on the one hand, and to the pyogenic staphylococcus on the other hand, it is readily distinguished from each of these species by the cultural features that have been described, and that are so obvious that the differentiation of these species from the micrococcus in question need not be discussed in detail. The organism is, therefore, considered to be a new species, and on account of its fermentative properties the name micrococcus zymogenes has been proposed.

THE CIGARETTE QUESTION.

Few physicians, probably, would recommend the use of the cigar, pipe, or cigarette as an aid to the preservation of good health or as a remedy for disease. Notwithstanding these adverse views, there are yet many medical men who think that the harm said to be effected by the use of tobacco has been somewhat exaggerated. There is, too, another point in connection with smoking concerning which opinions widely differ; that is, in regard to the particular form of the habit calculated to do most injury to the system. It would seem to have become, of late at any rate, in the minds of the general public almost an "article of faith" that for its deleterious effects the palm must be awarded to the cigarette. If one could believe the statements which often appear in certain of our lay journals, the cigarette is as insidious and as far-reaching in its death-dealing operations as is the bubonic plague. In sooth, the term "cigarette fiend" would seem to have taken its place as a permanent addition to our American vocabulary.

The cigarette has been stigmatized as poisonous in all its component parts. The assertion has been made times without number that the tobacco of which it is composed is adulterated with opium and an "unclassified alkaloid," and that the paper is poisoned with arsenic, copper, or chlorine. In 1888 *The Lancet* Analytical Sanitary Commission was appointed to probe into this matter, the result being that the cigarette left the court without a stain on its character, at least so far as the foregoing allegations against it were concerned. The same verdict was brought in for the cigarette under examination in this country. Notwithstanding this acquittal the minds of the American public were by no means set at rest on the point, and in 1891 a veritable crusade against the cigarette was inaugurated, which has been carried on more or less energetically up to the present day. Agitation to the same end has been proceeding, but to a lesser extent, in Great Britain. In consequence of this *The Lancet* procured four brands of cigarettes in New York and six in London, in the majority of instances the brands being the same, and subjected them to careful analysis in its laboratory. The report says that foreign toxic substances were not found in a single instance, and among those looked for, both in the paper wrapper and the tobacco, were morphine, phosphorus, arsenic, mercury, copper, and other heavy metals. The report sums up by declaring that "there is not a single factor in these numerous results upon which can be fairly based any allegation of the presence of a substance producing injury to health."

We hold no brief for the cigarette, and there is no intention on our part to uphold smoking in any form. Attention has been drawn in these columns on several occasions to the fact that cigarette smoking by the young cannot be practised with impunity. Before the age of sixteen years the use of tobacco should be absolutely tabooed. But to assert that cigarette smoking *per se* exerts a more pernicious influence on the health than the seductive cigar or the soothing pipe, is to put forth an argument for which there is no sufficient proof. Probably the following rules, if adhered to, would meet the requirements of most of the case: Don't smoke when young; don't inhale the smoke; and don't smoke to excess.

THE WHOLESALE DESTRUCTION OF FORESTS.

In newly settled countries which are thickly timbered it is a matter of prime necessity for the purposes of agriculture to clear the land. In many regions where population is sparse, timber felling as a means of livelihood is largely followed. This is of course as it should be, although even in such cases a wise discretion should be exercised. Unfortunately, however, the same course is followed in districts where the conditions are different. In Northwest Canada, for instance, there is as yet no fear that any great harm will be done by the lumber operations there carried on, as the virgin forests are so vast in extent that there is seldom necessity for re-logging before the trees have had time to arrive at maturity. But in parts of this country the situation as regards the forests differs greatly, and it is asserted authoritatively that, if the present system is proceeded with, the virgin forests of the South bid fair to be soon destroyed. The same authority, Dr. Schenck, is responsible for the statement that if the forests are lumbered out rapidly as at present, and if the fires are allowed to rage unchecked, the same condition will speedily prevail in the South that now prevails in the Lake States.

To prevent the occurrence of this deplorable consummation the committee on parks and forestry of the Asheville, N. C., board of trade has decided to appeal to the nation. This committee has issued a call for an interstate meeting to be held in Asheville, on November 22d, to form an association to further the project of a National Southern Park, and to induce Congress to appoint a commission to inquire into the feasibility of the project, to investigate its desirability, and to ascertain if it is practicable to secure such a park. It is to be hoped that the project may find favor with the "powers that be." Trees are not only to be desired from the standpoint of beauty, but also play a very important hygienic part in the scheme of the universe. In a treeless, hilly country floods are frequent and destructive. Trees are the chief factor in distributing and regulating the rainfall, and in dry seasons by their action in holding back evaporation preserve the water supply.

THE PLAGUE A MENACE TO BRITISH AND BOER TROOPS IN SOUTH AFRICA.

There have been cases reported of bubonic plague in and about the Transvaal during the past year. In February, 1899, a supposed case of plague was announced at a small town near Pretoria. Another case of a like nature occurred at another town nearer the Portuguese boundary, and it is now definitely known that the disease has broken out in the neighborhood of Delagoa Bay. This is perhaps the most serious news in connection with the campaign in South Africa that has yet been published. The consequences of the plague attacking the armies in the field are too awful to contemplate. But the possibility of such an occurrence must be taken into account. The conditions under which soldiers are compelled to live, and the inevitable lack of efficient sanitary arrangements in their camps, by which alone the disease can be stayed, present peculiarly favorable features for its spread. Cantlie, Simpson, and Manson have already uttered notes of warning on this point, and now Professor Sambon has emphasized these admonishments in an article contributed to the *British Journal of Tropical Medicine.* Sambon thoroughly agrees with Manson that the plague is not a water-borne but a rat-borne disease, and in addition draws attention to the fact that it can be conveyed by mice, squirrels, monkeys, dogs, cats, and man himself. He also gives as his opinion that fleas, bugs, and flies are likewise very important agents in the dissemination of plague, and that it is probably through fleas that the disease is most frequently conveyed from rat to rat, from rat to man, and from man to man. These are the principal measures recommended by Sambon to check the inroads of the plague: (*a*) The avoidance of importing grain and other food stuffs from infected places, as rats invariably accompany such cargoes. It is well known that grain ships have been a principal source of plague epidemics; (*b*) the destruction of rats in ships, especially when plague-infected or leaving plague-stricken localities; (*c*) the destruction of rats in towns exposed to infection; (*d*) the destruction of stray dogs and cats, which may become carriers of the disease when rats begin to die; (*e*) the destruction of fleas in houses and on pet animals; (*f*) the isolation of plague patients; (*g*) the disinfection of all that comes in contact with the latter.

The belief that rats were an important factor in spreading the plague was firmly held by the ancient Greeks, and Sambon relates that in Asia Minor, at the very door of the plague, they worshipped Apollo "*σμινθος*," "that is to say, Apollo the rat, whose arrows spread the plague, and at the same time as the destroyer of rats." This awful divinity was represented on monuments as treading on a rat. In Roman times, when Esculapius replaced the more ancient god of medicine, we again find the same fact recalled on a coin of Lucius Verus struck at Pergamum. It represents Esculapius with a rat at his feet, and a small naked figure standing by with arms outstretched. It is, however, not absolutely proven that the plague is disseminated by rats, although the evidence in support of the theory is remarkably strong—so strong indeed that the destruction of these vermin in infected regions and ships is a course that should, in all instances, be pursued.

With regard to the plague in Portuguese South Africa, there can be no doubt but that it constitutes a grave menace to both the armies in the field. In the first instance it will find an eminently congenial soil amid the filth of the Portuguese towns, and in the second place the transportation of provisions from Lorenzo Marques to the Transvaal will afford favorable facilities for its introduction to that country. In order to prevent so frightful a catastrophe, pressure should be brought to bear upon the Portuguese authorities to induce them to exercise the strictest supervision both over cargoes coming in by sea and over the food stuffs sent inland.

A DUBIOUS DISCOVERY.

The announcement made in several British lay journals, that Professor Metchnikoff of the Pasteur Institute has discovered the means of almost indefinitely prolonging life, will be received by the medical profession with feelings akin to disgust. The Paris correspondent of the London *Morning Post* reports the wonderful new theory in the following well-chosen words: "Professor Metchnikoff's experiments show that the explanation of senile atrophy hitherto obtaining is erroneous. The theory was that certain blood cells devoured others when the vital functions began to weaken. The organic poisons thrown off energetically in youth were believed to remain in the system in old age, or at least to be less energetically ejected, and to poison the finer cells while without action on those of the conjunctive tissues. The noble cells died and became the prey of the other or plebeian cells, thus bringing about the atrophy of the organ wherein the metamorphosis took place. This explanation is erroneous. Professor Metchnikoff has discovered and proved conclusively that the noble cells are not dead in organs atrophied by senility, and, moreover, that they may be multiplied. By assisting them in their struggle with the plebeian cells they will continue to live as actively as in youth. Theoretically, the organism will cease to grow old, and in practice life will be prolonged."

Serums of all kinds have been discovered in profusion in recent times, several of which have been altogether discredited, while others have failed to give the results claimed for them by their authors; but this is only the second occasion within the memory of the present generation that a prominent scientific man has publicly asserted that he had found out how to prolong life to practically an unlimited extent. The reputed discovery carries one's thoughts back to the Middle Ages, when many charlatans averred that they possessed the secret of the elixir of life. A discreet scepticism will assuredly be the attitude of mind of the medical profession with respect to Professor Metchnikoff's reported successful investigations. Probably, however, the public is being hoaxed in the matter, and the professor's name is being used without his knowledge. It is to be hoped that such may prove to be the case. Already too many scientific men of note have besmirched their reputations and the noble calling to which they belong by claiming for their discoveries wholly preposterous curative qualities.

THE TREATMENT OF TUBERCULOSIS WITH TUBERCULIN.

Although the furore that followed the announcement by Koch, in 1890, of a specific remedy for the treatment of tuberculosis soon subsided, in consequence of misguided zeal, unrealized anticipations, and disappointed hope, the distinguished bacteriologist who, at the time, appeared to be forced by his government into a premature publication, has persisted in his investigations along the same lines, and a number of the more conservative of those who adopted his suggestions still continue in the use of his products. It has been shown at least that tuberculin is capable of inducing local and general reaction in the presence of tuberculosis, and that by the systematic injection of gradually increasing doses it is possible to render the infected individual resistant to the toxic activity of the products of the tubercle bacillus. The former of these phenomena has been successfully applied in the early diagnosis of the disease, particularly in animals; and the latter in the treatment of the developed disease.

In a thoughtful address delivered recently before the tuberculosis commission of the Society of German Naturalists and Physicians, Petruschky (*Berliner klinische Wochenschrift*, 1899, Nos. 51 and 52), director of the Bacteriological Institute of the city of Dantzic, pointed out the impossibility of curing tuberculosis with a single brief course of treatment with even specific remedies, by reason of the nature of the anatomical lesions of the disease. Such cure must consist in the permanent suppression of the infectious agents and their toxins, and treatment, to be successful, must therefore be extended over long periods of time. Mere restoration to physical activity and earning capacity is not sufficient. Upon the basis of nine years' experience, Petruschky expresses the opinion that the desired result can be obtained with the aid of tuberculin, and he reports twenty-two cases in which cure in this sense was effected, the patients being freed of symptoms and not reacting to injections of tuberculin, and tubercle bacilli being absent from the sputum for periods of from six to twelve months. A graduated plan of treatment was pursued, the injections being discontinued with the cessation of the reaction to tuberculin, and being resumed at intervals of three or four months, when it was found that the reaction to tuberculin was again present.

News of the Week.

Typhoid Fever is prevailing to an unusual extent in Trenton, N. J. During last week there were forty cases and five deaths.

Dr. Conan Doyle, the author, has returned to medicine, according to the *Medical Press*, and will start soon for South Africa to take charge of a field ambulance.

The Prescription of Proprietary Remedies.—At a recent meeting of the Memphis (Tenn.) Medical Society a resolution was passed condemning the use of proprietary medicines.

"The Maryland Medical Journal" appears with the new year as a monthly instead of a weekly. The change is an improvement in a journal which has always held a high rank in American periodical literature.

Diphtheria in a Children's Home.—The Fairfield County (Conn.) Home for Destitute Children at Norwalk is under quarantine on account of two cases of diphtheria occurring there recently. There are also several cases of measles in the same institution.

A Death from Seasickness.—A four-year-old boy died on an Atlantic steamer just after it reached the pier in this city last Sunday, and the ship's physician attributed the death to exhaustion following seasickness, from which the child suffered severely during the entire voyage.

Carbolic Acid to be Dearer.—The price of carbolic acid has risen quite rapidly during the past week or two, owing to the impossibility of importing any from Great Britain. The scarcity there is said to be due to the fact that this substance is necessary in the manufacture of lyddite.

"A New Auto-Extension Fenestrum Splint" is the name given to a form of splint described at a meeting of the Tri-State Medical Society at Memphis. The apparatus is ingeniously constructed and will doubtless be serviceable in many cases, but what in the world is a fenestrum?

Smallpox is reported from many towns in North Carolina, and in some places prevails to such an extent that schools and churches have been closed and the holding of courts has been stopped. The disease has appeared also at Blackstone, Va., where the schools have been closed.

Medical Students Robbed.—One of the porters employed in the Bellevue Hospital Medical College was recently arraigned in the police court charged with having stolen clothing and other property from students, and was held for trial. There have been numerous complaints of theft of various articles in addition to overcoats and canes.

To Guard against Premature Burial.—The Society of Medical Jurisprudence recently presented a communication to the New York City board of health, calling attention to the manner in which death is now ascertained and certified to. In the communication it is asserted that the "distinction between real and apparent death, according to the scientific authorities who have paid special attention to this question, being a delicate task and requiring precise scientific tests—first of all, only authorized practitioners of medicine should decide whether a person is dead or not. As it is now, any person without any medical knowledge or trained capacity of observation who happens to be present when a person stops breathing can report him to be dead, and in most cases the physician who has seen him alive will certify to his death without even having seen his body, much less having tested the reality of actual death. We therefore respectfully suggest a change in the blank forms of death certificates so that they be made to contain the declaration that the physician personally has examined the body. We furthermore recommend that the chief signs of death be enumerated in the blank, and that the physician shall indicate the presence or absence of each with 'Yes' or 'No.' The questions which we would suggest to ask would be: Has the respiration stopped permanently? Has the pulsation of the heart stopped permanently? Do the dependent portions of the body show a purple discoloration? Is rigor mortis present? Are the corneas dull? Are the pupils dilated? Are there unmistakable signs of putrefaction? Furthermore, we suggest that by ordinance your honorable board make it illegal to do anything to the body of the supposed dead which, if he were alive, would cause him pain or injure him, before the certificate of his death has been signed by the physician."

Professional Men in Cuba.—An Havana newspaper says that the number of doctors and lawyers in the island is out of proportion, both as regards the number of inhabitants and the money in Cuba. Nevertheless, a great many students in both professions will soon be qualified, and many Americans are practising medicine illegally on the island. Owing to the lack of other occupations for young Cubans under the Spanish régime, those who could not afford to go abroad to study engineering or other professions were forced to become lawyers or doctors, these being the only degrees that could be obtained in the island.

Military Hospitals for South Africa.—We learn from the *British Medical Journal* that Lord Iveagh has offered to provide at his own cost a completely equipped hospital for the lines of communication in South Africa. The hospital will be known as the "Irish Hospital," and the chief surgeon will be Sir William Thomson, lately president of the Royal College of Surgeons in Ireland. The staff will consist of four surgeons and six dressers. The offer of Mr. Langman to equip a station hospital of one hundred beds for the lines of communication has also been accepted by the War Office, and Mr. Robert O'Callaghan, surgeon to the French Hospital in London, will be the senior surgeon.

The California Crusade against Consumptives.—The board of health of Oakland, Cal., has advised the board of education of that city to dismiss from the public schools any teacher or pupil suffering from pulmonary tuberculosis and to prevent the admission of any such sufferer in the future. One of the proposed regulations provides for a compulsory bacteriological examination of any pupil or teacher under pain of dismissal.

Typhoid Fever is still very prevalent at Ladysmith, twenty deaths having occurred there in two days.

A Congress for the Study of Tuberculosis will be held in Naples in the spring of the present year, in connection with an exposition of hygiene.

Accidental Poisoning of a Physician.—Dr. William J. Belcher, an English physician, died a short time ago in consequence of his having accidentally swallowed carbolic acid by mistake for solution of magnesia, when mixing a draught for his own use.

A Gift to the Flower Hospital.—The widow and the daughter of the late Roswell P. Flower have given $200,000 to the hospital founded by him, the only condition attached to the gift being that the name "Flower Hospital" shall be retained in perpetuity.

The New York State Anti-Vivisection Society held its annual meeting at Saugerties last week. Officers were elected for the year as follows: *President*, Dr. John Vedder; *First Vice-President*, Mr. Renssalaer Potts; *Second Vice President*, Dr. Luigi Galvani Doane; *Secretary*, Anna Sargent Turner; *Treasurer*, Grace F. Reed.

An Indictment against a Christian Healer.—The grand jury in Council Bluffs, Iowa, has returned two indictments against a Christian Science healer and a woman for compassing the death of the daughter of the latter. The girl is reported to have died of appendicitis while the "healer" was praying over her, the mother having refused to have medical advice for the child.

A Question of Diagnosis.—There is a dispute between the Indiana board of health and the physicians in the western part of the State over the differential diagnosis of smallpox and chickenpox. The board of health officials assert that a smallpox epidemic prevails at Clay City and other places, but many of the physicians say the disease is chickenpox and point to the fact that there has not been a death, and also that vaccinated persons as well as those not vaccinated have had the disease. The disease, whatever it is, is increasing, and many persons are seeking vaccination. The presidents of the State Normal School and the State University have advised all the students to be vaccinated, and over one thousand have submitted to the operation. The State board of health announces that the disease prevails in fourteen counties in Indiana.

No Use for Bent Needles.—A new student in the training-school was detailed a few days ago to help in the out-patient department of one of the city hospitals. After a man had had a scalp wound sewed up the neophyte was asked by the dispensary surgeon to wash the needles. There were two dozen of them. Two or three were straight, the rest curved in various shapes. She washed the straight ones and threw the rest away. When remonstrated with for the waste, she was greatly astonished to hear that surgeons prized such things as bent and twisted needles.

"The Archives of Pediatrics."—Dr. Walter Lester Carr, of New York, will take editorial charge of this journal with the new year. Dr. Carr has been a frequent contributor to the literature of pediatrics, and his assumption of the editorship promises a better future for the *Archives*.

The Plague is reported to have made its appearance at Noumea, capital of the French penal colony of New Caledonia. Ten Kanakas have succumbed to the disorder and four whites have been attacked. The disease is said to be spreading.

A Prolific Descendant of Distinguished Ancestry.—There died on January 9th, at Philadelphia, a man aged fifty years, who was a descendant of Benjamin Franklin. His father was an officer in the war of 1812, and he was himself the father of twenty-one children.

Relief Work in Puerto Rico.—A report of the relief work for October and November in the island of Puerto Rico has just been published. The population of the island is estimated at 918,926. The average daily indigent during the two months was 221,087 persons; the average weekly sick 17,372, and the average weekly deaths 632 persons. The annual death rate was 35 per 1,000 inhabitants, while the normal rate of deaths is 26 per 1,000 inhabitants. The increased mortality was confined to the mountain districts, where, in some localities, the death rate increased three hundred per cent. The amount received for the relief of the suffering people of the island up to November 30th was $15,224. The amount disbursed up to the date mentioned was $7,417. Up to November 30th the total amount of food received to relieve the sufferers was 17,162,788 pounds. Of this 16,548,316 pounds has been issued up to November 30th. The amount of unissued food on hand at San Juan November 30th was 614,272 pounds. It is estimated that not less than 2,000 additional tons of food will be required before the end of January, when the plantains and bananas will be ripe. Four-sevenths of this amount should be of rice; two-sevenths should be of beans, and the remainder of the amount required should be either codfish or bacon. With the food already issued and now on hand, and with the 2,000 tons required in addition to that already issued, the total issue will be 20,162,788 pounds.

College of Physicians of Philadelphia.—At a stated meeting of the section on general medicine held on January 8th, Dr. F. Savary Pearce and Dr. J. M. Swan read a paper entitled "Friedreich's Ataxia, with the Report of a Fatal Case." The patient was a girl, seventeen years old, in whom the symptoms were first noticed at the age of three years. The knee-jerks were present for a long time, but were lost in the last years of life. Nystagmus also appeared late. The patient died of pulmonary tuberculosis, probably acquired from a brother, who died of the same disease. An autopsy could not be secured. Dr. Herman B. Allyn presented a communication entitled "A Case of Rheumatic Pericarditis, with Sero-Fibrinous Exudate; Recovery." The case was characterized by moderate elevation of the temperature, violent delirium, a duration of five weeks, and the occurrence of pleurisy as a complication. Dr. Hobart A. Hare read a paper entitled "A Case of Aortic Aneurism, in which Electrolysis was Performed Three Times." The operation consisted in the introduction into the aneurismal sac, through a hollow needle, of about ten feet of coiled gold wire, and the passage for about an hour of an electric current gradually increased from 2 to 100 milliampères. For a time injections of gelatin also were employed, a mixture of gelatin gr. xviii., sodium chloride gr. xviii., and water fl. ℥ ii. being used, and some seventy injections being made. Although fatal rupture eventually ensued, the patient's life was prolonged for some eight months. In another case similar palliation was effected. Dr. D. D. Stewart also reported a case of aneurism of the aorta, in which coils of wire were introduced on three occasions, and an electric current was passed, resulting in the preservation of life for a number of months. The specimen from this case was exhibited, and disclosed a fusiform aneurism of the ascending portion of the arch of the aorta, with an added saccular dilatation, in which the coils of wire were found surrounded by clot. Dr. Alfred Stengel presented a communication entitled "The Definition and Significance of Accentuation of the Second Pulmonary Sound." It was pointed out that the character of this sound depends essentially upon the relation between the pressure in the ventricle and that in the artery, and that the term accentuation is employed with relation to the first sound and to the other sounds rather than as an absolute qualification. The sound may undergo alteration in intensity, in pitch, and in quality. Dr. H. A. Hare was elected chairman and Dr. S. M. Hamill clerk for the ensuing year.

German Hospital, Philadelphia.—According to the annual report of the German Hospital, 2,890 patients were admitted during the year 1899 to the wards, while 37,071 visits were made to the dispensaries. In the Mary J. Drexel Home 382 patients were admitted during the year, and 5,797 visits were made to the dispensary. Reference was made to the increase of abuses in the dispensaries, and the insolence and arrogance of some of the applicants, who labor under the delusion that the city authorities furnish the means for the support of the free dispensaries.

A Great Question Tentatively Settled.—A committee appointed at the Northfield Summer Conference of Christian Workers, last August, to investigate the statements of Professor Atwater of Wesleyan University on the nutritive value of alcohol, has made an exhaustive report in a sixteen-page pamphlet. The committee acted in co-operation with the Non-Partisan National Women's Christian Temperance Union, the permanent committee on temperance of the general conference of the Methodist Episcopal Church, the Presbyterian Woman's Temperance Association, and a number of other scientific bodies, and has decided that alcohol is not a food.

Dr. V. Czerny, professor of clinical surgery at the University of Heidelberg, has accepted the invitation of Dr. Robert F. Weir, president of the American Surgical Association, to be present at the meeting of the association in Washington in May. He will read a paper on the "Surgical Treatment of Gall Stones."

Bequests to Charities.—By the terms of the will of the late Dorman B. Eaton several large bequests are made for educational and charitable purposes. Columbia and Harvard universities receive $100,000 each. The New York Skin and Cancer Hospital gets $10,000 and the Society for the Suppression of Vice $25,000.

The Fifth District Branch of the New York State Medical Association.—The sixteenth annual meeting of this branch will be held in Brooklyn on Tuesday, May 22, 1900. It is proposed to choose diabetes as the topic for discussion. Fellows who are particularly interested in this topic, and have any clinical data to present or theories to offer, are requested to correspond with Dr. J. C. Bierwirth, president, or Dr. E. H. Squibb, secretary, P. O. box 760, Brooklyn, N. Y.

A New Hospital for Boston.—By the will of the late Robert Breck Brigham, of Boston, the bulk of an estate estimated at $5,000,000 is given to charity. Provision is made for the establishment of a new hospital in Boston, to be known as the Robert B. Brigham Hospital for Incurables. The new hospital is to be maintained as "an institution for the care and support and medical and surgical treatment of those citizens of Boston who are without the necessary means of support and who are incapable of obtaining a living by reason of chronic and incurable disease or permanent physical disabilities." Nearly every charitable institution in the city is remembered, the most of them by $1,000 annuities. Some of them received larger bequests outright.

The Fourth International Congress of Psychologists will be held in Paris, August 20–25, 1900. The fee for members is 20 francs, which is to be sent to Dr. Pierre Janet, 21 Rue Barbet-de-Jouy, Paris. The work of the congress will be divided among seven sections, as follows: 1, Relation of psychology to anatomy and physiology; 2, relation of psychology to philosophy; 3, experimental psychology and psychophysics; 4, pathological psychology and psychiatrics; 5, the psychology of hypnotism and suggestion and related questions; 6, social and criminal psychology; 7, animal psychology, comparative psychology, anthropology, and ethnology.

The Consolidation of Medical Missions.—The International Order of the Double Cross was organized recently in this city. One of the primary objects of the order is the uniting of all medical missions and missionaries throughout the world. The membership is open to physicians, medical students, and nurses of both sexes, the active membership to be divided into four guilds—physicians, students, nurses, and helpers—and all medical missionaries are to be considered as honorary members. The emblem of the order, from which it gets its name, consists of the double cross formed by the crosses of St. George and St. Andrew. The following officers have been elected: *President*, Dr. G. D. Dowkontt; *Secretary*, Cyril H. Haas; *Treasurer*, the Rev. W. W. Smith, M.D.; *Registrar*, the Rev. Theodore F. Hahn. These four officials, together with Drs. William Steward, John B. Busteel, and H. Zeckhausen, form the executive council.

The Population of Cuba.—According to the returns thus far received from the 1,550 census enumerators in Cuba, whose work is nearly completed, it is estimated that the population of the island is about 1,200,000, or 400,000 less than the Spanish census of 1887 showed.

The Study of Tropical Diseases in Germany.—In the budget of the German empire for 1900 there appears a subsidy for the Institute of Tropical Hygiene which it is proposed to establish in Hamburg. The empire will contribute 20,500 marks yearly to the maintenance of the Institute, which is to be opened in October of the present year.

For the Restriction of Tuberculosis.—A joint meeting of the Philadelphia County Medical Society and the Pennsylvania Society for the Prevention of Tuberculosis was held on January 10th, and a series of papers dealing with the various phases of the prevention and the treatment of tuberculosis were presented. Dr. L. F. Flick read a paper dealing with the "Plans of the Pennsylvania Society for the Prevention of Tuberculosis." These include the education of the public by means of tracts describing the nature of the disease, its mode of spread, and the measures necessary to prevent its dissemination; and the erection of hospitals and sanatoria for the treatment of the disease throughout its various stages, particularly in the poor. At present the society, having no hospital of its own, is compelled to pay for the care of a number of patients in the few hospitals that will receive cases of the kind. Dr. J. C. Wilson read a paper entitled "The Necessity of Hospital Care of the Consumptive Poor." Hon. W. N. Ashman presented a communication entitled, "Work at Present Being Done through Private Charity in the Treatment of Consumption," in which he described the good accomplished particularly by the Rush Hospital for Consumptives. Dr. Howard S. Anders read a paper on "The Necessity for State Aid in the Treatment of Consumption among the Poor," in which he pointed out the duty of the commonwealth to its dependent sick. Rev. Charles Dickey discussed "The Cost of Maintenance and Management of Hospitals and Sanatoria for the Treatment of Consumption," contending that for the present it would be wisest to utilize existing resources by the isolation of special wards or the setting apart of special buildings for the tuberculous, instead of erecting costly plants and perhaps antagonizing the community rather than inviting its co-operation. Dr. Guy Hinsdale read a paper entitled, "Localities Suitable for the Treatment of Consumption in Sanatoria throughout Pennsylvania," showing that at least several parts of the State are admirably adapted for the location of such institutions by reason of their elevation and their climatic conditions. Dr. E. O. Otis, of Boston, read a paper entitled "The Necessity for City Hospitals for the Treatment of Advanced Cases of Consumption among the Poor," and he laid particular emphasis upon the necessity for the registration of cases in order to reduce to a minimum the liability of infection through otherwise undiscoverable foci of disease. Dr. J. M. Da Costa pointed out that by reason of the knowledge of the transmissibility of tuberculosis, as the result of scientific investigation, the general hospitals had been closed to tuberculous subjects, so that the necessity for providing for their special hospital care was particularly urgent and devolved upon the State. Other speakers were Major William H. Lambert, formerly president of the bureau of charities and correction, Dr. J. E. Stubbert, of the Loomis Sanatorium, and Mr. William B. Hackenburg, president of the Jewish Hospital.

Philadelphia Pediatric Society.—At a stated meeting held January 9th, Dr. S. M. Hamill exhibited a case of pulmonary obstruction in a girl about twelve years old, in which there had previously been attacks of tonsillitis and of measles, with a systolic murmur, most audible in the second left intercostal space adjacent to the sternum. The lesion was thought possibly to be a congenital one, although there was an absence of cyanosis and of clubbing of the finger-ends. The possibility of associated persistence of the ductus arteriosus was also considered. Dr. J. P. Crozer Griffith read a paper entitled "Miliary Scarlet Fever, with a Report of Cases." The opinion was expressed that the occurrence of a miliary eruption in cases of scarlet fever is unrelated to the severity of the primary disease and to the intensity of the cutaneous eruption. Dr. Alfred Stengel was elected president, Dr. Alfred Hand, Jr., secretary, and Dr. Herbert B. Carpenter treasurer, for the ensuing year.

Philadelphia Hospital. Dr. H. Augustus Wilson, clinical professor of orthopedic surgery in Jefferson Medical College, has been elected orthopedic surgeon to the Philadelphia Hospital, a newly created position.

New Medical Fraternity.—The Jefferson Society of Jefferson Medical College was installed as the Epsilon chapter of Alpha Kappa Delta Fraternity on January 6th.

The Pathological Society of Philadelphia.—At a stated meeting held January 11th, Dr. E. A. Woldert read a paper upon "Some New Stains for the Sporozoa of Malaria, with Specimens." Drs. F. A. Packard and A. Hand, Jr., exhibited specimens from a case of status lymphaticus, with gastric tetany. The patient was a child, three years old, with excessive secretion of glairy mucus and pronounced symptoms of tetany. Death occurred suddenly, without apparent cause, and post-mortem examination disclosed an enlarged thymus gland and unusual development of the lymphatic glandular apparatus of the small intestine, particularly the lower portion of the ileum. Dr. Joseph Sailer exhibited a specimen of syphilis of the spinal cord, presenting thrombosis in the floor of the fourth ventricle. The patient had received numerous arrow-wounds in South America, and it was thought that the instruments used might have been infected with syphilis through the saliva of the natives. Dr. Sailer exhibited also two specimens of mitral obstruction, one presenting the classical funnel-shaped appearance, and attended with a large excavated thrombus in the left auricle; the other showed apparent atrophy of the right ventricle, and the remains of multiple infarction of the spleen and of the kidneys. He exhibited besides the heart from a degenerate, whose death had resulted from a fall in consequence of acute intoxication with a small amount of alcohol. The aortic valve was constituted of only two cusps. Dr. Simon Flexner presented a human lung, showing actinomycosis. The lungs were indurated, and exhibited the characteristic sulphur-yellow granules. Dr. S. M. Hamill exhibited a specimen of hemorrhage into the suprarenal capsule and the connective-tissue capsule of the kidney, from an infant, seventy-eight hours old, born without complication. Dr. F. A. Packard exhibited caseous tuberculous adrenal glands from a man in whose case a diagnosis of Addison's disease had been made during life. The semilunar ganglia of the sympathetic also appeared thickened and altered. Dr. Alfred Hand, Jr., exhibited specimens of tuberculosis of the lung, spleen, and kidney, from a colored child. The lung was extensively tuberculous, and the remaining organs were the seat of miliary tubercles.

The Medical Service at the Paris Exposition has been organized by Dr. Gilles de la Tourette, formerly chief of clinic at the Salpétrière under Charcot. He has ten assistants, Drs. Donbre, Reymond, Critzmann, Bourges, Emory, Goubert, Laborde, Dandieu, Deschamps, and Gaillard.

Regulation of Ritual Circumcision.—The Hungarian government has issued a decree regarding ritual circumcision, placing the operation under medical supervision, and insuring that it shall be performed under the rules of surgical antisepsis.

Sanitary Progress in Guam.—In a recent report by Captain Leary, governor of Guam, it is stated that all precautions are being taken to improve the sanitary condition of the station as far as present means and facilities permit, but a suitable water-supply system is necessary in order that the ground cisterns and wells may be closed and sealed, as they are contaminated by absorption of drainage impurities. The evaporating-plant at the station is nearing completion, and the sewage system from the government houses to the ocean will be finished in a short time. Dr. Philip Leech, surgeon United States navy, in his report says that Assistant Surgeon Stone has persuaded the people of Agat to establish a hospital with ten beds. So striking have been the results that the authorities of the village are now building and have nearly finished an additional hospital for twenty beds. The people appear to be grateful for what is being gratuitously done for them, and seem to appreciate the importance of co-operating with the American physicians, not only in their medical work, as shown by their building hospitals at Agat, but also in their efforts to make sanitary improvements.

Philadelphia County Medical Society.—At the stated business meeting held January 17th, new members, delegates to the convention for revision of the Pharmacopœia, to the American Medical Association, and to the Medical Society of the State of Pennsylvania, and officers for the ensuing year, were elected, and the reports of the directors, the treasurer, the censors, and the publication committee were read. Dr. B. F. Stahl, chairman of the committee appointed to secure the admission of medical students to the Municipal Hospital for instruction in the diseases treated there, namely, diphtheria, scarlet fever, and smallpox, made a report stating that with the co-operation of the board of health and the physician-in-chief to the hospital, Dr. William M. Welch, courses of instruction had been instituted to classes of ten students each from the various medical schools in the city. The following officers were elected for the ensuing year: *President*, Dr. John Musser; *First Vice-President*, Dr. George Erety Shoemaker; *Second Vice-President*, Dr. Francis M. Perkins; *Secretary*, Dr. Ellwood R. Kirby; *Assistant Secretary*, Dr. William S. Wray; *Treasurer*, Dr. Collier L. Bower; *Censor*, Dr. Thomas H. Fenton.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending January 20, 1900. January 12th (changes by cable from Asiatic station).—Assistant Surgeon D. L. Wright detached from the *Monterey* and ordered to the *Isla du Luzon;* Medical Director D. Dickinson ordered to duty as a member of the naval medical examining-board, Washington navy yard, January 20th; Medical Director G. S. Beardsley detached from the naval retiring-board, Washington navy yard, and ordered home to wait orders; Medical Inspector J. C. Wise detached from the naval medical examining-board, Washington navy yard, January 20th, and ordered to duty as member of the retiring-board same day. January 16th.—Surgeon L. G. Heneberger detached from the naval recruiting rendezvous, Detroit, Mich., and ordered to the training-station, Newport, R. I.; Surgeon O. Diehl detached from the *Michigan* and ordered to the naval recruiting rendezvous, Philadelphia, Pa.; Passed Assistant Surgeon A. R. Alfred detached from the New York navy yard and ordered to the *Texas;* Passed Assistant Surgeon F. W. Olcott detached from the *Texas* and ordered to the naval recruiting rendezvous, Detroit, Mich.; Passed Assistant Surgeon H. D. Wilson ordered to duty on the *Michigan;* Passed Assistant Surgeon C. E. Riggs detached from the naval recruiting rendezvous, New York, and ordered to the New York navy yard; Surgeon H. N. T. Harris ordered to temporary duty on the *Vermont* in connection with the crew of the *Albany;* Assistant Surgeon R. Spear detached from the naval recruiting rendezvous, Philadelphia, Pa., and ordered to the *Constellation* temporarily; Assistant Surgeon H. A. Dunn ordered to the naval proving grounds, Indian Head, Md. January 18th (changes by cable from Asiatic station).—Passed Assistant Surgeon L. Morris detached from the *Helena* and ordered to the *Brooklyn;* Assistant Surgeon D. H. Morgan detached from the *Iris* and ordered home; Medical Director G. S. Beardsley placed on the list of retired officers of the navy from January 22, 1900; Medical Director J. M. Flint placed on the list of retired officers of the navy from February 7, 1900; Pharmacist J. H. McGuigan detached from the naval proving-grounds, Indian Head, Md., and ordered to the New York navy yard; Pharmacist S. Englander detached from the New York navy yard and ordered to the naval hospital, New York.

Heart Injury Without Immediate Death.—The case of a man at Brunswick, Md., is reported in which life persisted for sixty hours after the reception of several gunshot wounds, one of which, it was found on post-mortem examination, had perforated the heart and another the intestines.

Pennsylvania Board of Medical Examiners.—Dr. Henry Beates, of Philadelphia, a member also of the State Medical Council, has been reappointed a member of the Pennsylvania medical examining-board; and Dr. Hiram S. McConnell, of New Brighton, and Dr. R. W. Ramsey, of Chambersburg, were appointed members of the same board in succession to Dr. Joseph K. Weaver, of Norristown, and Dr. Samuel W. Latta, of Philadelphia.

The Burlington County (N. J.) Medical Society, at its annual meeting held at Mount Holly on January 16th, elected the following officers for the ensuing year: *President*, Dr. Frances S. Janney; *Vice-President*, Dr. W. P. Melcher; *Secretary*, Dr. A. W. Taylor; *Treasurer*, Dr. Enoch Hollingshead; *Censor*, Dr. J. W. Hollingshead; *Chairman of Medical Section*, Dr. V. H. Shipps; *Chairman of Surgical Section*, Dr. A. Small; *Diseases of Women and Children*, Dr. Emma Weeks.

The Montgomery County (Pa.) Medical Society, at its annual meeting held at Norristown on January 18th, elected the following officers for the ensuing year: *President*, Dr. J. J. Kane, Norristown; *Vice-Presidents*, Drs. D. W. Shelley, Ambler, and P. H. Corson, Plymouth; *Recording Secretary*, Dr. H. H. Whitcomb, Norristown; *Corresponding Secretary*, Dr. J. K. Weaver, Norristown; *Treasurer*, Dr. S. N. Wiley, Norristown.

Dr. Howard Kelly, of Baltimore, while lecturing at the Johns Hopkins University a few days ago, was bitten on the finger by a rattlesnake. He sucked the wound for a minute and then continued his lecture none the worse for his accident. The reptile had probably exhausted its supply of venom in striking at various inanimate objects before getting a bite of human flesh.

The Late Dr. W. A. Hammond.—The board of directors of the New York Post-Graduate Medical School and Hospital record with profound sorrow the death of their former colleague, William A. Hammond, M.D., surgeon-general of the United States army, retired. On the 4th of April, 1882, Dr. Hammond, who was then professor of diseases of the mind and nervous system in the University Medical College of this city, assisted in the organization of the faculty for the Post-Graduate Medical School. He was professor in the college from the date of its opening, October 1, 1882, at 209 East Twenty-third Street, until 1888, when he resigned his position and removed to Washington, D. C., where he suddenly died on January 5, 1900. Dr. Hammond was an accomplished executive officer, punctual, scientific, and thorough in his work as a clinician, and he always attracted large classes by the force and clearness of his teaching. It was, perhaps, owing to his effort more than to any other member of the faculty who resigned from the University of the City of New York, that the initial step was taken which led to the organization of the Post-Graduate Medical School. During the early years of its struggle for existence, Dr. Hammond gave most unsparingly of his talents, his time, and his pecuniary resources, toward its successful establishment, which he saw achieved during his term as professor.

He was most genial and courteous in his relations with his fellows. His memory will always be cherished by them with hearty appreciation of his great qualities.

The directors order this record to be spread upon their minutes, and a copy thereof sent to the surviving members of his family.

D. B. St. John Roosa, President; Andrew H. Smith, Vice-President; George N. Miller, Secretary.

Obituary Notes.—Dr. A. L. Boughner died at Chester, Pa., on January 16th, at the age of forty-four years, from septicæmia, due to a wound of the finger received three months ago. He was graduated from the Normal University, at Lebanon, Ohio, in 1882, and from the University Republique, at Ann Arbor, Mich., in 1885.

Dr. Thomas H. Franklin died suddenly on January 9th, at Atlantic City, at the age of fifty-nine years. He was a graduate of the medical department of the University of Pennsylvania, and he served in the Pennsylvania Cavalry during the Civil War.

Dr. S. P. Bartleson died suddenly at Clifton, Pa., on January 16th, in the sixty-ninth year of his age, apparently as a result of angina pectoris. He was a graduate of Jefferson Medical College.

Dr. Abraham H. Witmer, first assistant physician to the Government Hospital for the Insane in Washington, died on January 18th of cardiac disease. He was born in Lancaster County, Pa., fifty-four years ago, and was graduated from the Jefferson Medical College in 1866. He became connected with the hospital in 1876.

Dr. Lyman Rodgers, of Bennington, Vt., died suddenly on January 22d. He was a graduate of the medical department of the University of Vermont in the class of 1858. He was an ex-president of the Vermont State Medical Society, and had served a term as State Senator.

Dr. Alfred J. Watts died at his home in Brooklyn, N. Y., on January 22d, of apoplexy. He was born in England in 1825 and studied medicine there, obtaining his qualification shortly before coming to this country in 1848. He practised first in Utica and later removed to Brooklyn. He was the inventor of crystal or "fern-leaf" gold used in filling teeth, and he soon gave up practice and devoted his time to the perfection of his invention.

Dr. John Cargill Shaw died on January 23d, from pneumonia, at his home in Brooklyn, in his fifty-fourth year. He was born in Jamaica, W. I., and came to this country in his seventeenth year. He was a graduate of the College of Physicians and Surgeons in this city in the class of 1874. For several years he was attached to the medical staff of the Long Island College Hospital and of St. Mary's Hospital, and he also served for four years as superintendent of the Flatbush Asylum.

Dr. Columbus W. Krise, of Carlisle, Pa., died suddenly on January 23d, at the age of fifty-two years. He was born in Gettysburg, and was graduated from the medical department of the University of Maryland in 1871. He was a member of the Cumberland County and Pennsylvania medical societies and the American Medical Association.

Progress of Medical Science.

New York Medical Journal, January 20, 1900.

Chronic Abscess of the Frontal, Ethmoidal, and Sphenoidal Sinuses followed by Meningitis and Death.—J. H. Bryan records a case of this nature which upon operation showed thick pus and granulation tissue in the frontal sinus, with caries of its front wall and of the entire ethmoid bone. All dead bone which could be detected was removed. On the sixth day after operation, the temperature began to rise and sepsis developed. In spite of prompt intervention, including the use of anti-streptococcus serum, death resulted two days later. Autopsy revealed acute leptomeningitis secondary apparently to ethmoid caries. Sphenoid disease undiscovered at operation was also present.

The Therapeutics of Heroin.—M. Manges concludes an elaborate article upon this new remedy. Replies to a circular letter show success in three hundred and eighteen and failure in ninety-eight cases of various affections, principally of the air tract. A valuable bibliography is appended.

The Influence of School Life on Vision.—P. A. Callan has examined many school children during the last twenty-five years. He thinks that they are overcrowded in their studies, and that this has much to do with the large number of visual defects met with in this class of patients.

Cholelithiasis.—E. C. Davison gives a general description of this affection. He reports one personal operative case, and compares the advantages and relative indications for cholecystectomy and kindred operations.

Diarrhœa.—C. O. Molz enumerates the general causes, varieties, characteristics, and therapeutic measures of the various forms of diarrhœa. He follows the teachings of William Osler and L. E. Holt.

Enucleations of the Eye.—D. Webster reports cases of enucleation for panophthalmitis, for degenerated cataract with secondary hemorrhagic glaucoma, and for ophthalmitis, the result of injury.

On the Detection of Calculi in the Liver and Gall Bladder.—By Carl Beck. See Medical Record, vol. lvi., p. 642.

Suppurative Ethmoiditis and Its Treatment.—By F. S. Milbury. See Medical Record, vol. lvi., p. 684.

Medical News, January 20, 1900.

Gonorrhœa; Its Dangers to Society.—Albert Neisser, in discussing this subject, states that one feature of gonorrhœa of special significance is the fact that its infectiousness may persist for a very long time in spite of seemingly successful treatment of the local affection of the genitalia. The affection does not remain limited to the primary focus of infection in the mucous membrane, but progressively invades other parts: neither does it limit itself to the superficial mucous membrane. Special mention is made of gonorrheal arthritis with its tendency to relapses, ankylosis, and disability. At least ten to twenty per cent. of all blindness is due to gonorrheal infection. Another important factor to be noted in this disease is the sterility which results from it. Neisser concludes that we now know that this disease is always infectious, communicated from one person to another, and we can take measures to prevent its spread.

Diuretics in Renal Dropsy: Their Indications and Uses.—E. R. Axtell divides diuretics into two classes, the direct and the indirect. For practical purposes he further divides the direct diuretics into two classes, the saline and the stimulant diuretics. Axtell believes that much harm can result from the use of these drugs unless they are judiciously chosen, and he contends that all diuretics should be withheld in acute nephritis until the acute inflammation has subsided. Renal diuretics should be used in those cases of dropsy in which there is great need of a drug that will make the remaining kidney tissue do its work actively—but not then, until diaphoretics and hydragogue cathartics have been tried. A brief consideration of each of the following drugs concludes the paper: scoparius, squill, caffeine, pilocarpine, digitalis, diuretin, sweet spirits of nitre, and calomel.

A Visit to the Newest Psychopathic Hospital.—Frederick Peterson describes the psychopathic hospital at Giessen—about an hour from Frankfort-on-Main.

The Operative Treatment of Myopia of High Degree by the Removal of the Crystalline Lens.—By Charles Stedman Bull. See Medical Record, vol. lvi., p. 636.

Boston Medical and Surgical Journal, January 18, 1900.

Otitis Media in All Grave Diseases of Infancy.—E. H. Pomeroy calls attention to Ponfick's table of autopsies performed upon one hundred children who had died of various diseases, as heart disease, gastroenteritis, burns, pneumonia, etc., in only nine of which the ears were found to be normal. He believes that most of the diseases of infancy are more positively and demonstrably infectious from bacteria than we can easily prove in adults, and considers the middle ear as an incubator and generator promoting general toxic disturbance in many cases of localized infectious diseases. He urges careful examinations of the ears in all diseases.

Gun-Shot Wounds by the Reduced-Calibre Rifles in the Santiago Campaign.—Major Louis A. La Garde, who thoroughly tested the Krag-Jorgensen rifle or present service gun, compares the results of his experimental work with what was observed in the Santiago campaign, and concludes that the experiments and conditions found agree, and that, in addition to other advantages claimed by Professor Hebler for the reduced-calibre rifle, it possesses the greatest advantage of all, that the wound produced, though sufficient to disable, is much more humane than that produced by the old-style projectile.

A Rhode Island Philosopher.—A biographical sketch of Elisha Bartlett, by William Osler.

Philadelphia Medical Journal, January 20, 1900.

Case of Tuberculosis of the Kidney without Marked General Symptoms.—J. M. Da Costa reports the case of a man twenty-three years of age, who did not appear to be ill, whose only symptom was a sudden pain in the region of the kidneys lasting two weeks, accompanied by fever and weakness. The diagnosis of renal tuberculosis was made after finding the tubercle bacillus in the urine.

The Absorption of Iron from the Gastro-Intestinal Tract, and the Dietetics of Anæmia.—John C. Hemmeter discusses anæmia due to (1) food deficient in iron, (2) the presence of an excess of sulphur compounds in the digestive tract, and (3) a disturbance of metabolism. When iron is indicated, he advises recourse first to the inorganic compounds.

An Outline of the Principles of Malpractice as Related to Medicine and Surgery.—William C. Woodward defines malpractice as conduct on the part of the physician which does not conform to certain standards and which results in the injury of the patient. The unjustly accused physician has practically no redress.

Origin, Development, and Degeneration of the Blood-Vessels of the Ovary.—An abstract of a lantern demonstration by John G. Clark. The author ascribes the cessation of ovulation and the menopause to a gradual impairment of the vascular systems of this organ.

A Pneumatic Sigmoidoscope.—William V. Laws describes an instrument for inspection of the upper part of the rectum and the sigmoid flexure after inflation with air.

Creolin Poisoning.—E. W. Pressly reports a case in which poisoning followed rectal irrigation with a one-per-cent. creolin solution.

Journal of American Medical Association, Jan. 20, 1900.

City Milk Routes and Their Relation to Infectious Diseases.—Ernest Wende advocates the registration of city milk routes as the most certain way to insure the purity of the supply. He gives instances of epidemics in the city of Buffalo which were in this way traced to their true source and promptly checked. He says that while chemical analysis and bacteriological tests are both of great utility, the register takes the place of all in its importance and possibilities in the way of prevention of milk epidemics.

Typhoid Fever in a Leper, Following Immediately but Accidentally on Treatment with Antivenomous Serum.—J. F. Schamberg reports this case as interesting because there is no recorded instance of the simultaneous existence of these diseases. The patient recovered from the typhoid, his original disease remaining entirely unaffected by either that or the serum injections.

Ectopia Lentis.—C. P. Pinkard reports two cases of this disease which he examined in 1893. The writer says that the outcome of these cases, being so characteristic of certain changes in the zonule, warns us to be careful in our prognosis as to the possible inheritance of this disease by the children.

The Present Status of Surgical Tuberculosis.—Ralph Elmergreen reports three cases: one of tuberculosis of the skin, another of tuberculous lymphadenitis, and the third of tuberculosis of the epiphysis of the femur resembling sarcoma.

Extension Massage of the Ossicles with a New Aural Masseur.—Hamilton Stillson describes this instrument, which he has used for the last ten years with excellent results in the treatment of certain forms of deafness.

The Physician in Hawaii.—E. S. Goodhue presents notes of some experiences while government physician and medical superintendent of the Government Hospital in Hawaii.

Sarcoma of the Face and Temporal Region.—By Joseph H. Branham. See MEDICAL RECORD, vol. lv., p. 880.

Influence of the Medical Practitioner on Medical Progress.—By Joseph D. Bryant. See MEDICAL RECORD, vol. lvi., p. 635.

Surgical Treatment of Perforation of the Bowel in Typhoid Fever.—By W. W. Keen. See MEDICAL RECORD, vol. lvi., p. 641.

The Lancet, January 13, 1900.

A Mode of Operating in Appendicitis.—C. B. Keetly describes a mode of operating which he believes is adapted for use on any day or at any stage of an acute or subacute attack, though not indicated in every case. The skin and external oblique aponeurosis are incised above the anterior superior spine and the outer half of Poupart's ligament, parallel to the latter. Deeper muscles are penetrated by separation of their fibres and toward the outer part of the incision with scissors. The transversalis fascia is divided, and the peritoneum carefully separated from the iliac fascia, the surgeon palpating for the deep surface of the appendix or surrounding inflammatory products. A strong light is thrown into the wound and the signs of pus (infiltration of tissue, etc.) are looked for. If pus is found, the infiltrated tissue is torn open with two pairs of dissecting-forceps. In all cases two drainage tubes are carried to the bottom of the wound. The douche and syringe are avoided.

Volkmann's Ischæmic Paralysis: its Treatment by Tendon Lengthening.—H. W. Page narrates a case illustrating this condition, which seems to be an old lesion with a new name. It is the paralysis ensuing in the forearm from prolonged immobilization in fractures by apparatus which impedes the free circulation through the part: hence the term ischæmic. Page alludes to the difficulty in restoring the muscular structures to functional activity in these cases, and describes the wasting and other trophic disturbances which ensue. In the case alluded to, he exposed the flexor tendons at the wrist, each one in turn being split longitudinally, severed to the right and left at the opposite end of each incision, extended, and sutured with silk in the usual way. While entire recovery of function has not yet been realized (one year), results in the case have been extremely gratifying.

Diet in Typhoid Fever.—R. W. Marsden fed two hundred typhoid patients with milk, bread and milk with custard, fish with mashed potato, chicken, bread and butter, and finally minced meat. In the series of cases diarrhœa was absent throughout in sixty-one; in twenty-nine, though it was present when fish was given, there was no interference with its steady improvement; and in one hundred and seven, in which it was present, it was not increased by diet. Hemorrhage occurred six times, in no case being fatal. No case of perforation occurred. Relapses were noted in forty-eight. In one hundred and eighty there was not the slightest evidence of any alteration in the temperrature due to ingesta. Marsden believes that there is no justification for resisting a craving appetite in the manner at present in vogue.

Malaria and Mosquitoes.—G. Bastianelli and A. Bignami maintain that energetic treatment with quinine from the commencement of the infection of the malarial fevers has a great importance for general prophylaxis, since the parasites by its means can be prevented from developing into those forms which continue their life in the Anopheles.

Hypothermia.—E. B. Hulbert narrates the case of a man, aged thirty-six years, admitted to hospital for chronic headache and drowsiness. Syphilis was denied, and no gross lesion could be discovered on autopsy ten weeks later. Interest centred upon his temperature range. It ran from 81.6° F. (rectal) to normal and a little above. An epitome of the literature of subnormal temperature is given.

A Simple and Trustworthy Method of Quantitative Estimation of Mercury in Urine.—H. Schumacher and W. L. Jung advocate the addition to the suspected fluid of stannous chloride and the pouring of the resulting mixture on an asbestos filter containing gold. The filtrate is clear, and the whole of the mercury is retained by the gold asbestos. The latter is dried, weighed, and then ignited, the loss equalling the mercury in the given quantity of fluid.

Poisoning by Corrosive Sublimate in a Pregnant Woman.—M. D. Eder records a case in which thirty grains of the sublimate were taken by mistake. The woman was six months pregnant: prompt intervention saved her life, and she was delivered of twins at full term. A severe hemorrhage occurred two hours after delivery, but was controlled.

A Case of Enormous Nasal and Post-Nasal Polypus: Paralysis and Death.—A. C. Mukherji describes a case occurring in a young Mohammedan who refused operation and died apparently from the effects of pressure upon the brain by the mass. The nature of the polypus is not stated, but in places it was cartilaginous.

Prescribing Alcohol against Our Own Interests.—F. C. Coley believes that physicians should do all possible to discourage the use, in every way, of alcohol among the poor. The latter will then have money enough to employ a physician when sick, and thereby the abuse of medical charity will be greatly lessened.

Protracted Gestation.—J. Phillips records the case of a primipara, aged seventeen years, in whom confinement took place on the three hundred and twenty-third day after her last period, and three hundred and sixteen days after coitus.

Cancer of the Penis.—Marmaduke Shield prefers for this affection the operation of Gould, and condemns the use of the hot galvano-écraseur wire. He details his personal experience with six operative cases.

British Medical Journal, January 13, 1900.

A Case of Excessive Hemorrhage from a Varicocele of the Labia Majora.—In this case reported by J. E. Rosenstein, the patient, a young married woman, four and a half months pregnant, had always been well until the bursting of the varicocele while she was stooping to remove a shoe. There was no evidence of heart trouble, and no trace of varicose veins was to be found elsewhere.

Hypodermic Administration of Mercury in Syphilis.—W. Hubert S. Fosbery reports two cases in which he used intramuscular injections of 7 minims of mercurial cream made according to the formula of Surgeon-Major Lambkin (about one part of mercury to four of excipient). The writer found this preparation too strong, causing pain and mercurialism, although effective as regards the syphilis.

Carcinoma of the Ascending Colon and its Treatment.—W. McAdam Eccles reports two cases of this disease tending to prove that for the success of a colectomy it is almost essential that the operation should be performed before the chronic obstruction has become an acute one, and also showing with what success the mass can be dealt with extraperitoneally.

Concussion of the Retina.—Sydney Stephenson gives notes of retinal changes noted in the case of a boy who had been struck in the eye with a cricket ball. Similar retinal changes were first noted several years ago by R. Berlin, who described a series of cases.

A Case of Rupture of the Ureter or Renal Pelvis.—E. Percy Paton reports this case, in which recovery took place after lumbar incision and drainage, which procedure the author prefers in most cases to an immediate nephrectomy.

Enterectomy for Gangrenous Hernia.—W. P. Montgomery reports two successful cases of resection and primary suture in gangrenous hernia. These cases were both operated on in the Manchester Royal Infirmary.

Valvular Drainage Tubes in Empyema.—William Williams presents a diagram of an apparatus for draining or pumping out an empyema, and reports a case of tuberculous empyema in which this tube was used, resulting, as far as the writer could ascertain, in the first cure in a case of this kind.

Acute Orchitis in an Infant Eleven Weeks Old.—In this case, reported by F. Ashton Warner, the cause of the orchitis could not be found. It recovered completely after treatment with opium internally, hot followed by cold fomentations, and support of the scrotum.

Fracture of Both Clavicles.—James Battersby reports a case of this unusual double accident, a man engaged in shunting railroad cars having been struck on both shoulders by the buffers of two cars, which were being shunted against one another.

Rectal Feeding in Exhaustion following Children's Ailments.—Christopher A. A. Coulthard has found nutrient injections by the bowel very valuable in the case of children suffering from extreme exhaustion following diarrhœa.

A Calcified Lipoma in a Hernial Sac.—R. A. Milligan describes this specimen, which he found while performing an operation for strangulated hernia. It was the size of a nut, so hard that it could not be cut with a knife, and the author had no doubt that it was calcareous.

Description of Ambulance for the Mounted Service.—T. F. S. Caverhill strongly advocates the provision of mounted bearer companies for cavalry brigades.

Retention of Menstrual Blood from Atresia of the Vagina.—The second of two clinical lectures by Charles J. Cullingworth.

A Century of Surgery.—A lecture by Christopher Heath.

Medical Press and Circular, January 10, 1900.

Otorrhœa.—Paul Range concludes his article on treatment. Paracentesis is indicated whenever yellowness, tenseness, and bulging outward of the tympanum shows the presence of pus. It is easy and harmless. The canal should be first washed with soap, then with alcohol, and then sprinkled with 1 : 1,000 bichloride solution. The incision should be made in the infra-umbilical region; the vertical cut being preferred. Simple otorrhœa is treated by expectation or by active attack, destroying the source of pus by chemical action, removal of necrosed tissues, etc. Irrigation of the canal is advised, but only by sterile solutions. Surgical intervention is indicated in cases in which no improvement has been obtained by antiseptic treatment; when the probe reveals the existence of osseous lesions; when a cholesteatoma is detected or suspected; when hearing is completely lost, so that no further damage can be wrought in this direction: and when there is the slightest symptom pointing to encephalic complication.

Diphtheria.—W. R. Smith gives the English statistics since 1855, when they began to be recorded. The mortality in recent years is not so high as a generation ago. The cat has been found by Klein to be susceptible—the lungs being chiefly affected. The disease can be transmitted by those apparently well. The most fatal form is that associated with the streptococcus group. The majority of patients seem to retain the bacilli in the throat from two to nine weeks, and in one in whom antitoxin was used they were found for over two hundred days. It is not unusual to find bacilli after the hundredth day.

Hepatic Multilobular Cirrhosis.—Murrell reports a case in which post-mortem findings showed a liver of four pounds and eleven ounces, wrinkled on its surface, tough, slaty in color, the microscope showing the fine-framed variety of multilobular cirrhosis. The patient had been well until four months before admission, when he noticed blood in the stools followed by ascites and jaundice.

The Hyssop.—John Knott studies the botanical history, symbolism, toxicology, and therapeutics of the hyssop. There are two varieties, the Hyssopus vulgaris and Hyssopus infrequens. There are two kinds of the common garden hyssop, the ordinary and the white or red flowered kind, difficult to distinguish from each other. The medicinal advantages are questionable.

Deutsche med. Wochenschrift, December 21 and 28, 1899.

Speech and Sense Perception in Idiots. Kellner tabulates the results of the examination of 544 idiots. Of this number 291 showed defects in one or more of the special senses. The power of speech was wanting in 81, but of these 42 could understand what was said to them, and of the latter 5 were capable of work. In addition to these there were 15 deaf-mutes, and 11 had the use of a few words only. Sixteen were blind in one or both eyes; 170 were more or less color blind; 6 were very hard of hearing or totally deaf; the sense of taste was perverted or absent in 102; smell was wanting in 75; both taste and smell were absent in 34; sensation in the integument was defective in 105; and organic sensation (hunger, thirst, desire to evacuate the bladder or bowel, pain in abdominal troubles, etc.) was dulled in 68.

The Diagnostic Significance of Acute Exudations into the Abdominal Cavity.—H. Braun regards the occurrence of a rapid effusion into the peritoneal cavity as significant of a twist in the small or large intestine, especially the latter, or of strangulation of a knuckle of intestine in some abnormal opening, either congenital or formed by peritoneal bands, an adherent diverticulum, or the like; it is less common in cases of intestinal invagination, and does not occur in cases of obstruction by foreign bodies or tumors. Of course, in order that the sign may be of value one must be sure that the effusion has taken place rapidly and that it is not a case of long-standing ascites.

The Etiology of Epidemic Cerebrospinal Meningitis.—Leo Zupnik reports a case of this disease in which he isolated a diplococcus resembling Weichselbaum's meningococcus, but which on culture tests was found to differ from it. He reviews the literature of the subject, and comes to the conclusion that there is no unique specific etiological factor in epidemic cerebrospinal meningitis. The micro-organisms found in different cases of this disease are (1) Fraenkel's pneumococcus, (2) Weichselbaum's meningococcus, of which Pfaundler distinguishes two types, (3) the microbe isolated by the author and by Pfaundler, and (4) possibly also a meningococcus described by Kister.

Two Cases of Perigastritis Adhæsiva.—H. Westphalen and W. Fick report two cases of this condition in which Rosenheim's symptoms were well marked. These are: (1) The persistence of pain after thorough treatment of gastric ulcer with large doses of bismuth or with nitrate of silver, and (2) the absence of improvement following mechanical therapy when the latter has been indicated by motor disturbances of the stomach. Operative treatment is indicated only when the gastric function is interfered with by the adhesions and consequent fixation of the pylorus.

Renal Diabetes.—Eger reports two cases of chronic nephritis in which glycosuria occurred, but that the latter was due to an acute onset of renal insufficiency he does not venture to assert. He suggests, however, a more careful study of hospital material to determine this point, and thinks it not improbable that a suddenly occurring glycosuria may be found to be in some cases a symptom of renal insufficiency or uræmia.

A Case Showing the Necessity of Medical Inspection in Schools.—R. Lohnstein reports the case of a boy who had been operated upon successfully for congenital cataract. The child needed strong convex glasses, and with these could see quite well. He had been sent away from the public school and placed in a school for the blind. He was readmitted to the public school on the author's certificate, but was quickly returned to the blind asylum by the teacher.

A Death Under Ether.—J. Schneider reports a case of this nature. The patient had a very weak heart with marked excentric hypertrophy of the left ventricle, advanced arteriosclerotic changes, contracted kidney, and cirrhosis of the liver, and the author thinks the ether had little to do with the death specifically, and it would be better to describe the case as one of death during rather than from ether narcosis.

Renal Diabetes.—Paul Friedrich Richter has made a number of experiments with cantharidin, corrosive sublimate, and other kidney poisons, the administration of which is followed by glycosuria. He also cites a few cases from medical literature which would seem to point to the existence of a glycosuria of renal origin.

The Origin of Leucocytosis.—P. Lengemann discusses the production of leucocytosis through changes in cells emigrating from the bone marrow.

Wiener klinische Wochenschrift, December 28, 1899.

The Influence of the Mechanical Irritation of the Liver on the Heart.—M. Heitler states that the relation between the liver and the heart, in the sense that disturbances of the heart occur through disturbances of the liver, has long been known. Recently de Giovanni and Potain have made careful investigations in this direction. A definite symptom complex in the lungs and heart has been shown to be dependent on disturbances of the stomach and liver, oppression, dyspnœa, a feeling of suffocation, dilatation of the right heart, and further consecutive changes. Heitler finds, with a large area of heart dulness and a small pulse, a large area of liver dulness and spleen dulness, and vice versa. He also finds that if he strongly percusses or shakes the liver, the pulse, which was previously small, immediately becomes large and full and the area of heart dulness is decreased.

The Dietetic Treatment of Diabetes Mellitus.—Rudolf Kolisch advocates a strict vegetable diet which he has modified for the special use of diabetic patients. This diet has many times met with excellent results in severe cases. The vegetable diet keeps the body in good condition with the least possible expenditure of heat and the least disturbance of nutrition. This diet also supplies to the organism more carbohydrates than is possible with a meat diet. The first result of the vegetable diet in the diabetic is a decrease in the quantity of urine. Often acetone and acetic acid disappear from the urine. For light cases a mixed diet has proved beneficial. He considers an exclusive milk diet to have very good results in diabetes.

The Relations of the Anterior Corpora Quadrigemina to the Eye Movements.—S. Bernheimer finds from experiment that the anterior corpora quadrigemina are neither a reflex centre for the eye movement, nor do the neurons to the cortex pass through them. The connecting neurons from the nuclei of the eye muscles to the periphery of the angular gyrus all decussate. The decussation must be in the median line under the surface of the aqueduct of Sylvius, for after taking away the anterior corpora quadrigemina the synergistic eye movements emanating from the angular gyrus remain just the same, and apes, after their anterior corpora quadrigemina are destroyed, still have perfect and spontaneous eye movements.

New Experiments Concerning the Absorption of Casein.—Wilhelm Knoepfelmacher declares as a result of new experiments that a part of the casein phosphorus in the fæces is separated out unused.

Berliner klinische Wochenschrift, January 1, 1900.

Artificial Production of Gout.—H. Kionka calls attention to the fact that gout is observed in certain animals and birds as well as in man. In the common fowl of the barnyard, gouty manifestations may be produced by the introduction into the body of chromic, oxalic, and carbolic acids, acetone, aloin, sublimate, and sugar candy. Kionka was led to experiment along this line, and placed a number of hens under good conditions, confining them entirely to a diet of chopped lean horse-flesh which was fed to them twice daily. They were able to drink as much water as they wished. After a varying interval averaging about four months (during which time the fowls appeared perfectly well) they began to show evidences of a disease which gradually assumed the characteristics of true gout.

New Words and New Conceptions in Pathology.—R. Virchow speaks of the signification which has been given to various medical terms in the past, and calls attention to the modifications in meaning necessitated by the growth of our pathological studies and their results. He admits that he himself has been responsible for the introduction into the nomenclature of pathology of not a few new words, but finds his justification in the fact that they were needed. The fact, too, that they have been received by the medical world without protest confirms the wisdom of his choice of terms.

Operation for Fibroma of the Mesentery with Extensive Resection of the Small Intestine.—E. Lexer describes the case of a man aged forty-one years from whose abdomen a fibroma attached to the mesentery was removed along with over six feet of intestine. The greatest measurement of the tumor was 25 cm. and its weight five pounds. The patient was up on the twentieth day.

Endemic Bath-Conjunctivitis.—Fehr alludes to a group of cases of conjunctivitis seen in one of the eye institutions in Berlin. Investigation showed that the patients all lived in the same locality and frequented the same public bath. The disease seemed to be an infection and at first was mistaken for trachoma. Closing of the bath checked the spread of the malady.

A Contribution to the Character, Course, and Treatment of the Recent Epidemic of Trachoma in Berlin.—P. Schultz insists upon the necessity of a more frequent renewal of the water in the swimming pools of the public baths in Berlin. A description is given of the methods employed to bring the epidemic mentioned to a close.

The Significance of Glycuronic Acid in the Phenylhydrazin Test in Urine.—P. Mayer does not believe that the presence of this acid in urine vitiates at all the value of the phenyl-hydrazin test for glycosuria.

A Case of Chyliform Ascites in Syphilitic Cirrhosis of the Liver.—By V. Poliakoff. See Medical Record, vol. lvii., page 29.

Bulletin de l'Académie de Médecine, December 26, 1899.

The Respiratory Reflex and its Fundamental Mechanism in the Cardio-Respiratory Function, as Demonstrated by Radioscopic Observation.—J. V. Laborde describes an experiment upon a dog, in which every step in the process of asphyxiation by means of a cannula with a stop-cock introduced into the trachea was observed in detail, thanks to the *x*-rays. When the animal was at the very point of death, rhythmical tractions of the tongue, without the introduction of air through the cannula, restored the respiratory and cardiac mechanism. The introduction of air then brought the apparently dead animal back to life.

Remote Results of Perineal Urethrectomy.—M. A. Poncet describes an operation which has for its object the formation of an artificial perineal meatus, and reports excellent results in twenty-three cases in which the operation was performed two, three, five, and even seven years ago.

Multiple Sebaceous Epitheliomata.—Poncet, Léon Bérard, and Lumière report the case of an old man who for forty years has suffered from tumors of the sebaceous glands which from an anatomico-pathological standpoint are epitheliomata.

La Riforma Medica, December 21–28, 1899.

Variety and Significance of the Encapsulated Bacilli Frequently Found in the Diseased Nasal Mucosa.—A. de Simone examined the nasal secretion in fifty cases of catarrhal rhinitis, and succeeded in isolating thirty-five kinds of encapsulated bacilli, some of them possessing the culture characteristics of the bacillus mucosus, some of Frisch's bacillus, and others of the pneumo-bacillus. He believes that these bacilli, which so frequently lodge in the pharynx, migrate into the nasal mucosa, and then cause the disturbances which many writers have supposed to be due to some special variety of micro-organism.

Apyretic Fevers.—G. B. Ughetti says that the title of his article sounds like a contradiction of terms, but insists that fever does not necessarily mean high temperature. He describes cases of typhoid, etc., in which there was hyperthermia, and gives it as his theory that in infective apyretic fevers there is usually such an immense amount of toxin produced, either from the specific agent or from associated microbes, that their constant hyperthermic effect is counteracted in some way as yet unknown.

Vratch, December 25, 1899.

The Influence of Suprarenal Preparations in Addison's Disease.—L. A. Kushnir reports two cases of Addison's disease in which he made a careful study of metabolism and of the influence upon it of preparations of the suprarenal body. In this affection, he says, metabolic activity is reduced, but it is increased by the administration of suprarenal extract. He found the action of this drug was to increase the rapidity of the pulse and respirations, and to reduce the appetite. There was no improvement whatever in the patient's condition; the pigmentation of the skin continued and the asthenia increased from day to day. The conclusion was that there is nothing to hope for in the administration of suprarenal preparations in Addison's disease.

Supervision of Prostitution in the Kazan Government in 1897–98.—N. N. Poroshin presents a statistical study of prostitution, its causes and sanitary aspects.

French Journals.

Eosinate of Sodium in the Treatment of Epilepsy.—Bourneville and Chapotin have undertaken a series of therapeutical studies upon the composition of the eosinate, and upon the hypothesis of Le Goffe and Sainton. The practical results obtained by them differ from the theoretical hopes as to the advantages of the remedy. In various experiments the drug was given in does of 25 cgm., gradually increased until in the ninth week 3 gm. were administered. A series of tables and observations upon the various forms of epilepsy are presented. In ninety-four per cent. of cases accidents implicating the skin chiefly were noted, but these did not occur when less than 2 gm. were given. The lesions consisted chiefly in redness followed by swelling of the face and hands. Later under slight traumatisms atrophic troubles of severe nature may come on, with ulceration, etc. The eruptions differ, as a rule, from those produced by bromism.—*Le Progrès Médical*, December 30, 1899.

The Therapeutic Problem of Regeneration of Organs.—Paul Carnot refers to his work published last year. From a general point of view we may say that every time an organ has been profoundly implicated, the only truly curative therapeusis consists in replacing anatomical elements irreparably damaged by new cells. The regeneration of organs constitutes the natural process of cure, developed especially in the inferior animals and in the young. He studies the influence of mechanical agents on cellular proliferation, the influence of infectious agents and their toxins, the influence of nutritive materials on the proliferative activity, and he concludes by showing how far we are from a complete solution of the problem.—*La Presse Médicale*, January 6, 1900.

Hydrotherapy in Infancy.—J. Combe studies the question of cold-water bathing, whose adversaries are becoming more and more scarce, in fevers and acute diseases. He gives indications and contra-indications. He thinks that sea-bathing or sea-air is very beneficial in chronic diseases, especially for city children, but should be avoided in the nervous, excitable, hysterical, epileptic, and choreic children. Also when they suffer from blepharo-conjunctivitis, keratitis, otitis, bronchitis, rheumatism, heart disease, eczema, pertussis, and itching affections, they should be removed from the sea-side. Rachitic and scrofulo-tuberculous children should remain months and even years. Repeated sojourns are probably more beneficial than prolonged stays.—*La Médecine Moderne*, January 3, 1900.

The Danger of Administering Chloroform in the Presence of a Gas-Flame.—G. Maurange refers to the dangers pointed out by Catrin based upon an article in *The Lancet*, and goes on to give his personal experience in a number of instances in which chloroform, administered in a closed room with the gas burning, produced in the attendants mucous-membrane irritation with cough, dyspnœa, and a feeling of malaise. The intoxicating agent is the chloride of carbonyl, the phosgene gas of Sir Humphry Davy, one of the products of decomposition of chloroform evaporating in the presence of the flame.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, December 31, 1899.

Traumatic Intra-Peritoneal Rupture of the Bladder.—J. Vichard reviews the whole question, and, in conclusion, agrees with Pousson that, after having sponged with care all tissues touched by the urine, the attempt should be made to suture the bladder in two planes, one for the mucous and muscular coats and the second for the peritoneum, unless, for instance, the mucous membrane has been too much injured. Catgut is employed for the first plane and silk for the second.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, January 7, 1900.

Complete Section of the Median Nerve at the Wrist; Suture; Cure.—Albert Monchet gives the result of operation in a girl aged thirteen years, whose wrist was cut with glass. The tendon of the palmaris longus was found cut through; it was sutured, and after three or four months the wound opened, and the silk was thrown off; after which permanent healing took place.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, January 4, 1900.

Tuberculosis in Workingmen.—Grandmaison says no occupation is exempt from tuberculosis, and he bases his studies on thirty-five patients taken from various employments. Closed working-rooms are the chief centres for dissemination. Sanatoria are advised for the laboring classes, but they will always be insufficient to accommodate all. It is scarcely within the bounds of realization that a city can protect itself against the dissemination of this disease by the working classes.—*La Presse Moderne*, January 3, 1900.

Senile Atrophy.—Weinberg give a résumé of a critical study which Metchnikoff has himself made during the past year of his researches relating to the prevention of senility. Documents are still too few to determine the cause and mechanism of senile atrophy. It is to be hoped that the day will come when serums obtained by the aid of appropriate elements may counteract atrophic and hypertrophic lesions of organs.—*La Presse Médicale*, January 6, 1900.

Dysenteriform Enteritis.—H. Roger gives a bacteriological research into the cause of an epidemic of dysentery nostras, illustrated with culture results. He describes a bacillus differing from those previously found, and thinks his observations show the existence of a special form of dysenteriform enteritis.—*La Presse Médicale*, January 3, 1900.

The Physician and Surgeon, December, 1899.

The Contagiousness of Pulmonary Consumption.—Ernest L. Shurly questions whether tuberculosis is contagious in the ordinary acceptation of the term, and does not believe that the individual right of patients should be prejudiced by the method of reporting his name or quarantining him. He agrees with Professor Hueppe that strict cleanliness, fresh air, and proper marriage relation will do more toward the prevention of tuberculosis than any quarantine measures. In any case it is for the medical profession and not for sanitary boards of laymen to decide the matter.

Sympathetic Ophthalmia.—M. R. Beaudoin-Bennett thinks that in this affection operative interference has no place, the only admissible operation being scleral incision or puncture after the subsidence of the acute symptoms, if there is extreme tension.

Uterine Fibroids.—W. P. Manton believes that when these growths cause pain, hemorrhage, and discomfort, medicinal and electrical treatment means time wasted, and eradication is the only rational measure.

Tuberculosis of the Peritoneum.—Hal C. Wyman reports and describes several cases of this nature The leading feature was always an ascites not to be accounted for by other diseases.

A Survey of Modern Therapy.—Frederick McD. Harkin thinks that if we will endeavor not to overdose our patient, and if he has an enduring constitution, he will very likely get well in spite of our medication.

Conservatism in Medicine and Surgery.—By Frederick W. Robbins. The retiring president's address before the Detroit Academy of Medicine.

A Case of Hip-Joint Amputation by Wyeth's Bloodless Method.—By R. B. Baird and G. L. Cornell.

Medicine, January, 1900.

A Study of Aural Vertigo.—Lewis S. Somers states that vertigo may be objective or subjective, two groups of phenomena being invariably associated with the affection, the first being the motor disturbances, the second circulatory. Aberrant vasomotor disorders are frequently noted, such as sweating and superficial congestion, while nausea and weak pulse are quite frequent. Anæmia, hyperæmia, and inflammatory changes may cause vertigo. It may be of cerebral or ocular origin. It may depend upon disorders of the viscera or toxæmia. The sudden suppression of long-continued discharges is sometimes attended with this symptom, and it also takes place in lithæmia, while reflex vertigo may result from affections of the stomach and uterus. The labyrinth is an indispensable factor in its production.

Some Considerations in Sugar Testing, with Description of a Method for the Detection and Estimation of Sugar in the Urine.—Arthur R. Elliot submits the following reagents:

1. Sulphate of copper, c. p.	gr xxvii.
Glycerin, c. p.	ʒ iij.
Distilled water	ʒ iiss.
Liquor potassæ q.s. ad	℥ iv.

Dissolve the sulphate of copper in the glycerin and water; gentle heat will facilitate solution. When cool, add the liquor potassæ, mix thoroughly, and filter. 2. A saturated solution of c. p. tartaric acid in distilled water. Method: A drachm of No. 1 is brought to the boiling-point in a test-tube; 3 drops of No. 2 are added and the solution is boiled again. The urine is added drop by drop, boiling and shaking the test-tube after each addition until reaction. If no change follows the addition of eight drops of urine, sugar is not present.

Nursing in the Lying-in Period.—Gustav Kolischer calls attention to a few important points to be observed in nursing during the puerperium. He approves of the administration of ergot after confinement. Micturition should be watched but the catheter avoided if possible. If there is pain in the pelvic articulations, a firm bandage should be applied. Fissures of the areola of the nipples should be cauterized. If the bowels are obstinate the faradic current should be employed.

Spondylitis Deformans, Spondylarthritis, or Osteoarthritis of the Spine.—O. M. Steffenson considers this a chronic affection of the vertebræ, producing osteophytes between their articular surfaces, which terminates in partial or complete ankylosis of the spine. Efforts at increasing the nutrition of the patient, and the use of tonics, are followed by the best results.

Secondary or Membranous Cataract.—Henry D. Noyes describes the operation through the sclera by the knife-needle for secondary cataract. He commends the method for general adoption in this affection, having found it, from his own experience, practically devoid of serious risks.

Serious Heart Disease Without Rheumatism; A Further Report.—A. L. Benedict declares that while rheumatism is especially related to endocarditis, nevertheless, scarlet fever may produce the lesion as well as the other infectious diseases. To support his statement he reports a number of cases.

Annals of Surgery, January, 1900.

The Employment of Local Anæsthesia in the Radical Cure of Certain Cases of Hernia, with a Note upon the Nervous Anatomy of the Inguinal Region.—Harvey Cushing tabulates notes of thirty cases of hernia operated upon under cocaine anæsthesia. Interesting diagrams are given showing the areas of anæsthesia produced by the injections. The solution employed was cocaine mur. 0.1, morph. mur.

0.02, sodii chlor. 0.2, aq. dest. ad 100. The advantages are absence of vomiting and retching, less liability to urinal disturbances, rare necessity of catheterization, and ability to operate safely in patients who would not bear a general anæsthetic. The disadvantages are the longer time required for operation and the infliction of a certain amount of pain.

Note on Mortality After Operation for Large Incarcerated Herniæ.—H. O. Marcy reports two fatal cases. The object of the paper is to discuss how we are to determine the danger to life because of the increase of intra-abdominal pressure. When any considerable portion of the abdominal contents has been for a long time displaced, Marcy thinks it advisable to keep the patient for quite a while in bed with a limited diet and moderate purgation: this lessens the amount of abdominal contents and thereby occasions a corresponding reduction in the hernial contents to be returned. In even a greater degree will the abdominal wall be thinned and relaxed.

The Surgical Aspects of the Modern Small-Bore Projectile.—A. Schachner discusses the change in the character of projectile wounds as illustrated by recent wars, and considers the conditions governing the behavior of projectiles in general. He sums up the results of his discussion in thirteen distinct conclusions, emphasizing the fact that the rotary action of projectiles may continue after the penetrative action ceases, and that the character of the wound is partially dependent upon this rotation.

On Vesico-Urethro-Vaginal Fistula.—J. S. Horsley describes a successful operation for this lesion done on a primipara of twenty-two years. Nearly all of this class of cases require several operations before cure is complete.

Mammoth Ovarian Tumors.—By J. B. Bullitt. See Medical Record, vol. lvi., p. 570.

British Journal of Dermatology, January, 1900.

Multiple Epithelioma Developing upon Lupus Erythematosus.—J. J. Pringle adds one more to the extremely limited number of cases in which epithelioma developed upon a patch of lupus erythematosus. Among previous cases two have been reported in this country, one by Riesomeyer in the *St. Louis Courier*, 1886, and one by J. D. Wyer, in the *Texas Medical Journal*, 1892–93. Dr. Taylor, of Liverpool, has seen two cases, and Kreibich, Kaposi's assistant, is about to publish an instance, from which quotations are made from the advance sheets.

A Case of Chronic Interstitial Nephritis; Dermatitis Exfoliativa; Uræmia; Death.—Sir Dyce Duckworth relates the history of a woman who died with uræmic symptoms after presenting the signs of pityriasis rubra, or dermatitis exfoliativa, such as is usually encountered in elderly people.

Pediatrics, January 15, 1900.

An Enlarged Liver in Rickets.—R. Turnstell Taylor reports the case of a boy, two and a half years of age, who, up to the age of one year and nine months, seemed healthy. He then had fever, followed by Parrot's paralysis, and the diagnosis of rickets was made. On admission, the case was a typical one of rickets. Everything was against the specific origin, but because improvement did not take place under other means inunctions were begun, when improvement was rapid and progressive. The case, the author thinks, points to a relationship between syphilis and rickets, and suggests, in all cases of rickets in which the liver is enlarged, that antisyphilitic treatment should be instituted, although the history may be negative as to its specific nature.

A Case of Patent Meckel's Diverticulum.—R. Abrahams gives an instance in which during the first week it was noted that the cord became inflated at its distal end when the baby cried. The cord soon fell off, when an elongated mass, an inch and a half long, protruded from the umbilicus, simulating highly congested mucous membrane. A probe passed into its central opening entered the abdominal cavity, and when it was withdrawn fæces were seen upon its tip. Fecal matter and flatus escaped. The tumor was ligated and excised, and the stump cauterized, with resulting cure. Four months later the diverticulum was found still closed.

Alveolar Catarrh in Children.—J. C. Gettings and Charles H. Judson relate instances of this condition, which was described by Douglas Powell. They also present the conclusions reached by Duerck and Beco. They suggest the possibility that alveolar catarrh may originate and run its course without the agency of the tubercle bacillus, that the lesion resulting may offer a suitable nidus for the growth of the bacilli, and, though the number of cases is small, the physical signs are sufficiently definite to warrant a classification under this heading.

Congenital Lateral Curvature of the Spine.—Henry Ling Taylor reports two cases of this deformity in children aged three months. Ketch made a study of two hundred and twenty-nine cases and found that a great number occurred before the age of twelve years, and Eulenberg found five cases under one year of age in one thousand examined.

Deutsche Aerzte-Zeitung, January 1, 1900.

Carbonic Oxide in Tobacco Smoke.—C. Binz says there are three kinds of poison in tobacco smoke; (1) nicotine; (2) that which is obtained by the slow ash formation, pyridin, etc.; (3) carbonic oxide. The results of his studies of the question are given in the following conclusions: (1) Carbonic oxide is always easily shown to be present in tobacco smoke. (2) Its percentage, depending upon the volume of the smoke gas, varies between 0.6 and 7.6. The variations depend upon the rapidity of the ash formation and the quantity of atmospheric air drawn in or the lung-air blown out. (3) A never-so-slight acute poisoning from carbonic oxide of tobacco smoke is, under ordinary conditions, scarcely to be expected. (4) Whether the daily taking in of the small quantity of carbonic oxide which, through many years of smoking, gets into the blood of smokers, cannot set up a chronic injury, is a question still to be settled. For the qualitative determination of small quantities of carbonic oxide in the blood the test with tannin in definite watery solution, and at a temperature of about 40° C., is better than that by the spectroscope alone or that with the spectroscope and ammonium sulphide.

Tetanus and its Treatment.—E. Stadelmann says that in a disease like tetanus, which may recover spontaneously, a definite conclusion as to the result of serum treatment is difficult to establish. The views of von Jaksch and others are given, and four cases are briefly related. Ordinary tetanus he believes starts from the spinal cord and not from the brain. It is, therefore, rational treatment to inject the serum into the canal, and in the future it is his intention to inject part of the serum into the vein, and part intradurally by lumbar puncture.

Pneumothorax in Secondary Sarcoma of the Lungs.—Ulrich Rose quotes the statistics of Bich, who shows that malignant tumors of the lungs are rare precursors of pneumothorax. Out of twenty-one cases of pneumothorax one showed multiple secondary sarcoma of the lung as the cause in a woman forty-five years of age. Morphine is here naturally to be advised more than in any other form of pneumothorax.

Zeitschrift für Diät. u. Phys. Therapie, December, 1899.

Treatment of Nephritis with Mineral Waters and Baths.—Felix Schlagintweit has treated one hundred cases of Bright's in various forms and stages at Brückenau. In chronic diffuse nephritis the diuresis is markedly increased, and the specific gravity rarely shows a tendency to fall. There is usually a decrease in albumin, sometimes an increase. After the administration of mineral waters and milk the specific gravity and percentage of albumin may vary thus: (*a*) Specific gravity sinks, albumin remains the same; (*b*) specific gravity and albumin sink; (*c*) specific gravity sinks, albumin increases; (*d*) specific gravity increases, albumin remains the same; (*e*) specific gravity and albumin increase; (*f*) specific gravity and albumin remain the same.

The Border Line of Normal Temperature.—Marx concludes that (1) the temperature in health is normally under 37° C., and usually between 36 and 37° C. (2) Occasional rises of 37.2° C. are observed in health, but are attributable to special circumstances (indigestion, fever). (3) Temperatures above 37.2 C. are usually combined with subjective symptoms and thus out of the normal. (4) Temperatures under 36° C. occur without collapse. (5) Many phthisical patients have temperatures varying within the normal boundary.

Fermentation of Slowly Fermenting Sugars.—Ernst Bendix shows that such sugars as milk sugar, galactose, and xylose, which have heretofore been considered as slowly fermenting, or not at all capable of fermentation, are, after the addition of various organic substances (pancreatic powder, organ powder, liver powder, spleen, ovarian, and intestinal powders) easily fermented by certain bacteria.

Experimental Observations upon the Excretion of Hydrochloric Acid in the Human Stomach with Various Food-Stuffs.—Chr. Jürgensen and J. Justesen give at length secretory phenomena of the stomach with various food-stuffs, as shown from experiments. The gastric contents were aspirated at various periods and tested. A table of cases and charts accompany the article.

Bathing and Swimming from a Hygienic Standpoint.—Julian Marcuse claims that bathing and swimming produce a variety of hygienic effects, which prove from a prophylactic standpoint an excellent protection against the invasion of disease. They perfect the skin, harden and strengthen the body, and benefit the heart, lungs, and nervous system.

Aix les Bains in Savoy: Sulphur Baths; Douche Massage.—Von Leyden gives a description of this bathing-place and its baths. Douche massage as practised here is described. Patients suffering from gout, asthma, chronic joint affections, neuralgia, paralysis, muscular atrophy, and syphilis seek treatment at this place.

Therapy of Impotence.—By J. Zabludowski.—See Medical Record, vol. lvii., p. 120.

Archives Générales de Médecine, January, 1900.

Glossodynia.—C. Chauveau classifies this affection in the following manner: 1, Glossodynia secondary to neuralgia of the trigeminal; 2 glossodynia of the insane; 3, tabetic glossodynia; 4, hysterical glossodynia; 5, rheumatism of the tongue muscles; 6, glossodynia from local causes such as dental affections, pharyngeal granulations, hypertrophy of the posterior pillars of the fauces or of the tonsil, lingual varices, chronic glossitis, and especially papillary hypertrophy of the "foliaceous region" first described by Albert. Pain is the chief symptom. The use of the galvanocautery is the best treatment.

Umbilical Tumors.—Nicolas Giannettasio reports a case in a woman, aged forty-four years. The tumor was the size of a walnut, and was situated partly within the umbilicus. It was removed and the patient made a good recovery, there being no trace of a recurrence two years later. The histological examination showed that the neoplasm was a fibrous myxoma. Many parasites belonging undoubtedly to the blastomycetes were found in the peripheric, growing portions of the tumor.

Unusual Resistance and Tolerance of the Organism and the Liver to Alcohol.—Dr. Follet reports the case of a man, aged forty-eight years, who died of pneumonia, who for thirty years had taken at least three litres of red wine daily, besides several appetizers. The liver, kidneys, and the organs were normal.

Caseous Infection in Pulmonary Tuberculosis.—M. Solles and M. Baillet, whose work is reviewed by Henri Benjamin, hold that the bacillus kills the phagocytes and transforms them into a mass of dead cells, *i.e.*, tubercles. As a result each tubercle is transformed into casein, which constitutes phthisis and causes death.

Laennec's Cirrhosis in the Preascitic Stage.—Emile Boix reports and describes a case due to alcohol and daily drinking of a litre of black coffee. It was cured by milk diet, calomel, and salol.

Preparalytic Hemichorea.—E. Boinet reports two cases of this rare affection, which bring the number up to thirteen of known cases due to hemorrhagic foci or to cerebral softening.

Origin of the "Charité" Hospital of Paris.—P. Tillaux gives the history of this celebrated institution, which is soon to be torn down by order of the municipal council.

Diseases of the Respiratory System.—By Louis Rénon.

Revista Ibero-Americana de Ciencias Méd., Dec., 1899.

Sciatic Neuritis.—M. Otero Acevedo gives the result of a study of 276 cases of sciatica, of which 203 occurred in males. There was one case in a child of eight years, and four in children from eleven to fourteen years of age; the greatest number of cases was in individuals between forty and fifty years old; only two of the patients were over seventy years of age. The most common cause was rheumatism (145 cases): then cold and wet (85), trauma (18), influenza (7), malaria (5), gout (2), and hysteria (1); in 13 cases the cause was not definitely recorded. The author makes a sharp distinction between sciatic neuralgia, which is purely a symptom, and sciatic neuritis, which is a disease. The neuralgia always precedes and accompanies the neuritis, and there are cases of the latter in which pain is the only symptom, but the pain of neuritis is deeper and more continuous than is that of neuralgia sine materia.

Treatment of Pneumonia at the Beginning and at the End of the Nineteenth Century.—Federico Rubio makes a comparison of the treatment of pneumonia at the beginning of this century with that in vogue at the present time. The main reliance of the therapeutist then was on bloodletting and counter-irritation. Now, some resort is still had to counter-irritation, but apart from that therapeutic nihilism prevails. In comparing the results of these two methods, the author inclines to regard the abandonment of bloodletting as a distinct loss; the practice was formerly abused, no doubt, but this is no excuse for the present neglect. The antiphlogistic treatment of the beginning of the century left the organism more weak, perhaps, but it left the organs with fewer lesions.

Phosphaturia.—F. Murillo studies a case in which the relation between phosphaturia and hyperchlorhydria was manifest, and concludes that in many cases the hyperchlorhydria is the determining cause of the phosphaturia. In the case reported, however, the patient was neurasthenic and arthritic, and the author believes that arthritism, which is thought by many to be the cause of neurasthenia, was also here the cause of the hyperchlorhydria. He opposes the view of Klemperer that phosphaturia is not a result of hyperchlorhydria, but is rather a manifestation of disease of the nervous system. He holds that the gastric disturbance and the nervous exhaustion are concomitant affections, neither dependent on the other, but both due to a precedent arthritism.

Surgical Neurology.—Eulogio Cervera reports two cases showing the benefits of surgical treatment in certain nervous affections, and demonstrating also the advances of modern surgery in the direction of greater conservatism. The first was one of degenerative lesions in the lower extremity following section of the sciatic nerve in a stab wound. An incision was made close to the cicatrix and the divided ends of the nerve were freshened and sutured. The man made an excellent recovery. The second case was one of dislocation of the ulnar nerve of eighteen months' standing, accompanied by neuritis. An incision was made, and the nerve was exposed and returned to the epitrochleo-olecranon gutter. The pain was relieved and the man recovered with full use of the forearm and hand.

A Gigantic Lipoma of the Neck.—Juan de la Sota y Lastra reports the case of a boy, eight and three-fourths years old, who had a tumor depending from the right side of the neck which rested in his lap as he sat on a chair. The circumference of the pedicle was 40 cm., of the widest part of the tumor 70 cm., and its weight was 7.8 kilos (over 17 pounds). The tumor was noticed at birth as a small projection the size of a hazelnut, and had grown steadily. The growth was removed and the boy made a good recovery. The microscopical diagnosis was a fibro-myxo-lipoma.

Anatomy of the Ethmoidal Cells.—P. L. Peláez Villegas says that the arrangement of the ethmoidal cells is exceedingly variable, and in consequence there is no regularity in the topography and arrangement of the openings leading to the frontal, maxillary, and sphenoidal sinuses. He proposes a new division of the ethmoidal cells in place of the classical division into anterior and posterior.

A Rare Lesion of the Hand.—Antonio Martínez reports the case of a woman whose left hand was greatly swollen; on the dorsum were several ulcers which gave exit to a lymphatic fluid, and the fingers were flexed. An incision showed the presence of sclerotic tissue, and then an investigation brought out a history of hereditary syphilis. The patient was subjected to an antisyphilitic treatment by mercurial inunctions and large doses of potassium iodide alternately, and a speedy cure was obtained. The author's diagnosis was syphilitic sclerosing periangitis.

The Book, the Review, and the Periodical.—Federico Rubio compares these three forms of scientific literature, giving the preference in general to the review over the book.

Application of the Experimental Method in the History of Medicine.—Under this title Luis Comenge gives a sketch of the early history of medicine in Spain.

Four Cases of Tubal Pregnancy.—G. Abascal reports four cases of this nature in which operation was performed at an early period.

An Operating-Table.—R. Martin Gil describes and pictures a new operating-table, the position of which can be varied in numberless ways.

Il Policlinico, December 15, 1899.

Experimental Researches into the Pathogenesis of Concussion of the Brain and Spinal Cord.—Francesco Saverio Cavicchia and Umberto Rosa in all their experiments have observed spasm of the blood-vessels in the early stages of concussion. Macroscopic and microscopic examinations have given absolutely negative results. The degenerative lesions observed by Schmaus and others they believe to be the result of more serious lesions in the spinal cord, rather than of simple concussion.

Ovarian Cysts.—Alberto Pepere concludes that in the genesis of follicular cysts, at least in a certain number of cases, the epithelial cells of the follicle play the chief part. Cystic adenomata may arise from the papillary residua of the hilum, or from the epithelium covering the superficies of the ovary. These new growths may become intensely malignant, while retaining their glandular formation. The majority of dermoid cysts are to be regarded as productions with an embryonal character of the ovum cell, rather than as fœtal inclusions.

The Treatment of Hemorrhage in Pregnancy.—J. Keogh Murphy considers that accidental hemorrhage is not due to external injury, but to disease of the uterus, often accompanied by kidney mischief. When contractions are present, rupture of membranes and delivery will suffice; when absent, vaginal plugging, uterine binding, and general stimulation should be used, until the cervix dilates sufficiently to allow of delivery. If internal hemorrhage continues, Porro's operation will probably have to be performed. Saline infusions, rectal, subcutaneous, or intravenous, can be used with good effect.—*Treatment*, December 28, 1899.

Irido-Choroiditis due to Intestinal Auto-Infection.—Elia Baquis reports a case in which the eye symptoms were clearly referable to prolonged attacks of enteralgia and obstinate constipation. That there is a close connection between intestinal lesions and diseases of the eye is well known. Given an infected area in any part of the organism, distant portions may be affected by living germs or their toxic products. In the case reported the author believes that the process was a chemical one. Toxic products of digestion, not having been eliminated, were absorbed into the circulation and injuriously affected the eyes.—*La Settimana Medica*, December 23, 1899.

Therapeutic Hints.

A New Combination for hypodermatic injection in syphilis is the following:

℞ Hydrarg. chlor. mit.	gr. lxviiss.
Orthoform	gr. xij.
Ol. petrolat.	ʒ iiss.

M. S. From fifteen to thirty drops can be injected; securing the analgesic effect of the orthoform.

—LOZA.

Vaginal Irrigation for leucorrhœa:

℞ Potass. chlorat.	12 parts.
Vini opii.	10 "
Aquæ picis	300 "

M. S. Add two or three drachms to a quart of warm water.

—LUTAUD.

In Mercurial Stomatitis.—

℞ Potass. chlorat.	ʒ v.
Sapo. medic.	ʒ iiss.
Calcii carbonat.	ʒ v.
Ol. menth. pip.	♏ xv.
Ol. caryophylli	♏ iv.

M. S. Use as dentifrice.

—*Practitioner.*

Neuralgia of the Face.—

℞ Butyl chloral hydrat.,	
Spt. vini rect.	āā ʒ iiss.
Glycerini	ʒ v.
Aquæ	℥ iij.+ ʒ vi.

M. S. A teaspoonful once or twice daily.

—*Progrès Médical.*

Cough in Phthisis.—

℞ Codein	gr. iss.
Terpin. hydrat	gr. xv.
Ext. hyoscyami.	gr. iss.
Ext. belladonnæ.	gr. $\frac{3}{4}$
Mas. cyroglossi.	gr. viiss.

M. ft. pil. No. x. S. One four times daily.

—*Journ. des Pratic.*

Digestive Infections in infants at the breast.

℞ Benzo-naphthol	0.30–0.50 cgm.
Cretæ præparat.,	
Bismuthi subnit.	āā 2–3 gm.
Mucil. acac.	60 "
Elix. paregoric	gtt. vi.–xij.

M. S. Shake and give a teaspoonful every hour, decreasing as improvement occurs.

—SCHOULL.

Painless Blister.—

℞ Mentholis,	
Chloralis	āā gr. xx.
Ol. theobrom	ʒ ss.
Spermaceti	ʒ i.

M. ft. past. S. Apply.

A General Antidote for Poisons.—Borate of sodium mixed with milk is said to be the best general antidote after the stomach has been emptied. For vegetable poisons permanganate of potassium in one-percent. solution. For carbolic acid, vinegar. This is said to act well also externally.

Acute Alcoholic Delirium.—

℞ Chloralamid.	gr. xv.
Hyoscin. hydrobrom.	gr. $\frac{1}{100}$

M. S. Also useful in acute alcoholic mania.

—D. R. BROWER.

Vomiting in Phthisis.—

℞ Cocaine	0.25 cgm.
Elix. cinchonæ	20 gm.
Aquæ	150 "

M. S. Dessertspoonful every two hours.

—BARIÉ.

Or—

℞ Menthol	1 gm.
Spt. vini gal	20 "
Syr. simp.	30 "

M. S. Dessertspoonful in a little water every hour.

—LICHTENSTEIN.

Seborrhœal Eczema.—

℞ Sulph. præcip	10 gm.
Spt. camphoræ	10 "
Aquæ	250 "

M. S. Apply.

—HILLAIRET.

Bronchitis.—

℞ Terpinol,	
Sodii benzoatis	āā gr. ij.
Sacch. alb.	q.s.

Ut ft. pil. No. i. S. Six to twelve daily.

Arthritis.—

℞ Ext. hyoscyami	gr. xv.
Iodoformi	gr. xxx.
Sodii salicylat.	ʒ iss.
Petrolat	ad ℥ v.

M. S. Apply externally.

—*Therapist.*

Goitre.—

℞ Zinci sulphat.,	
Ac. salicylici.	
Iodoformi.	āā ʒ ij.
Ac. boric	ʒ iij.
Ac. oleic	℥ viij.

Keep at boiling heat for several hours, pour off the liquid, and bottle when cold. Apply by friction twice daily until slight desquamation occurs; after this once daily.—CHARETTE.

Anæsthesia of Urethra.—

℞ Cocæ	1
Aquæ	10

M. S. Apply.

—HERMAN.

Bromoform Syrup.—

℞ Bromoform	♏ xl.
Tinct. aconit	♏ l.
Syr. codein	ʒ iss.
Syr. tolu,	
Syr. rhœad	āā ʒ ivss.
Spt. vini rect	ʒ iiss.

M. S. Graduate dose according to age in pertussis, pneumonia, and bronchitis after measles.

—*Med. and Surg. Bull.*

Hemorrhoids.—

℞ Tinct. camph. comp	℥ i.
Camphoræ.	ʒ i.
Ung. bellad.	℥ xv.

M. S. Apply.

—NEHIGAN.

Palatable Effervescing Quinine.—

℞ Quinin. sulphat..	4
Acid. citric	10
Syr. simplicis,	
Syr. aurantii cort.	āā 1
Aquæ destillat	q.s. ad 20

M. S. Add ten or more drops to 50 gm. of water containing 30 cgm. of bicarbonate of sodium.

—*Therapist.*

Influenza.—In twenty cases treated by A. Claus there was remarkable amelioration of pain, fever, etc., after from two to four half-grain doses of salophen.

Succus Cinerariæ Maritimæ is said to act in the absorption of cataract when dropped into the eye daily, two or three drops at a sitting. The editor of *Experience* says of it, that in many instances the results are "nothing short of miraculous."

Permanganate of Potash in Dysentery is recommended in the form of injections by Gastinal, who gives to adults about 500 c.c. of a solution equal to 0.5 gm. to the litre and at a temperature of 45° R. For children 0.2 gm. and for very young children 0.1 gm. to the litre is recommended. The injections, which are to be retained from one-half to two minutes, must be given slowly; being preceded by a cleansing enema and followed by an hour's rest in bed. Their action is both astringent and antiseptic. Excellent results are said to be also obtained in proctitis.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CLOSING CENTURY OF COLLEGE OF SURGEONS—BRADSHAW LECTURE—ARCHIVES OF NEUROLOGY—THE WAR—THE SCIENTIFIC BRANCHES OF THE ARMY—SMALLPOX AT HULL—DEATHS OF VETERANS—DEATH OF SIR JAMES PAGET—THE CINEMATOGRAPH IN TEACHING OPERATIVE SURGERY—NEW YEAR'S HONORS—A LIVINGSTONE EXHIBITION—"LANCET" RELIEF FUND—INFLUENZA.

London, December 29, 1899.

The closing year marks the close of a century since the Royal College of Surgeons received its first charter in 1800. Mr. H. G. Howse, who is the senior vice-president, delivered the Bradshaw lecture at the college on the 13th inst., and marked the occasion by taking for his subject "A Review of Surgery during the Past One Hundred Years." But it was a large order, and could not be executed in a single lecture except in the form of a few samples. So Mr. Howse discoursed of amputations and epidemics, leaving a host of other subjects untouched. Most of the time was, in fact, devoted to infectious diseases (anthrax, typhus, typhoid, diphtheria), as the lecturer thought that in this direction there is the most hope of advance in the immediate future. In some of these diseases advance has been made by methods which differ in different cases, and which are most likely susceptible of further improvement. But in most zymotic diseases we still are searching for clear, easily applied diagnostic tests. The need of such a test for tetanus was illustrated by reference to Larrey's memoir, in which cases were included among his illustrations which evidently were not tetanus at all. This was for want of a definite test, for which we are still searching and which the new century may give us.

While admiring the great advances of the last one hundred years and hoping for similar progress in the next, encouraging our bacteriologists and pathologists to persevere in their investigations, Mr. Howse concluded with a word of warning on the tendency to conclude too much from a single instance. Errors in this direction will produce more serious errors in the future. We are too apt to be dogmatic in our views which further knowledge may oblige us to modify. Nowhere is this more strikingly shown than in the rapid changes of antiseptic and aseptic details in the treatment of wounds. "It may reasonably be doubted how far some of these are really scientific and how far they are mere fads." Mr. Howse clenched this remark by quoting a saying of the late Master of Trinity: "We are none of us infallible; no, not even the youngest of us."

The day after his lecture Mr. Howse, as vice-president, took the chair at the council of the college in the absence of the president. At this meeting he received a formal vote of thanks for the lecture and was requested to print it. The council further agreed upon its usual *non possumus* in reference to the resolutions carried at the annual meeting of fellows and members. The council also considered the great clothes question, settled how much narrower the crimson facings of the member's gown must be than those on that of the fellows, and gave the tailor a good advertisement. It is really very amusing to see these eminent surgeons discussing the cut of a gown; but they went one better than this and formally resolved that "members who are graduates of universities shall be entitled, if they please to do so to wear their university gown on the occasions on which the member's gown may be worn." I cannot tell you which of the councillors originated this ridiculous resolution. He may pride himself on the success of his joke, but it seems rather hard to reduce the proceedings of the council below the level of broad farce. The council having assumed the right to authorize gowns for fellows and members, now seems to arrogate to itself the further authority to tell graduates of the universities when they will be graciously permitted to wear their legally authorized gowns.

If any of your readers desire to follow up my account of the late debate on tabes and general paralysis of the insane, they will find material for further study in the "Archives of Neurology from the Pathological Laboratory of the London County Council." This work extends to five hundred and fifty pages and has many illustrations. It is edited by Dr. F. W. Mott, F.R.S., who opened the debate at the Pathological Society, and is issued by the county council at 15*s*. It is to be followed by other volumes annually. You will remember that when the Claybury Asylum was built the county council determined to erect and fit up a first-rate laboratory for neurological research. This was done, and Dr. Mott was appointed director. A better appointment could not have been made, and the account of Dr. Mott's researches and those of his collaborators will interest all neurologists. These researches are original and well planned. They deal with questions that are surrounded with difficulties and doubt, eschewing the restatement of those which are settled. The questions relating to general paralysis, tabes, and syphilis are stated with clearness, and the investigations respecting them bulk largely in the "Archives." Other neurological researches are, however, reported, all of which are of the highest importance.

The war in South Africa is absorbing the attention of all classes, and already reputations seem to be ruined by the neglect and folly of some at the head of affairs. It is satisfactory to find that up to the present the medical department has come out of the trial with great credit, although it has been half starved by the War Office and reduced to such a dangerous degree that large numbers of civil surgeons have been hastily engaged for service both at home and abroad. Four additional consultants have also been engaged to go to the front, viz.: Sir William Stokes, surgeon to the Queen in Ireland, who sails to-morrow, and Mr. Kendal Franks, surgeon to the lord-lieutenant, and at one time resident in Johannesburg. These will well represent Irish surgery, so we may hope to hear no more of a grievance on the score of Dublin men being forgotten. From London, Messrs. Watson Cheyne and G. L. Cheatle, both of Kings College, will start shortly. Professor Ogston is also off to the Cape, but not on the government's behalf. He is going as an independent observer. You will remember his criticism at Plymouth on the way in which the army and navy medical departments are managed.

No fault can be found with the selection of the government if civil surgeons are to go. But what a reflection it is on the War Office and its boasted readiness! Nemesis seems on the track of Lord Wolseley. He has followed the evil example of his predecessor in starving the medical staff and insulting its members. Now at the first brush he has to acknowledge he must supplement it with civil surgeons—the civilians he has so much despised. That he blundered, too, in his estimate of the enemy's resources he has had to admit publicly. Now we are lamenting that he was allowed to abolish the chief office of artillery, and that against the opinion of every expert. So our guns are too few and too feeble. What has this to do with the medical department? Much in every way. The public cannot well understand the medical position, but the failure of the artillery is obvious and provokes a demand for immediate change of the system and removal of the man, whoever he may be, who is responsible. The commander-in-chief of course is the expert of the government; as such Lord Wolseley represented that everything was ready. He pooh-poohed all suggestions from those who know the country, and relied entirely on the infantry, despising, as he always has done, the scientific branches. His ineptitude is further manifested by the sight of his officers scouring the two hemispheres for horses, because he would not accept those on the spot; calling for volunteers because he fancies Cape horsemen are "mere civilians"; and snubbing the engineer, artillery, and medical departments out of sheer prejudice against scientific corps. Surely the revenge of these corps is at hand! But alas, the tragedies that are bringing it about!

The epidemic of smallpox at Hull has held its ground, and between seven hundred and eight hundred cases have been reported.

Death has been busy among our aged brethren. James Adams, of Aberdeen, died on the 20th inst., aged eighty-two years; J. F. Hodges, of Belfast, on the 13th, aged eighty-four years; R. H. Meade, of Bradford, aged eighty-five years, on the 23d; Andrew Spearing, of Belfast, aged seventy-four years, on the 17th; J. E. Brodie, of Glasgow; F. J. A. Waring, a retired surgeon in the Royal Navy, of Hove. These and other veterans have well served their generation and left their memory green where their lot was cast.

The death of William Cadge, of Norwich, was announced this week, but was afterward contradicted. He has been very ill with influenza, but I hear to-day there is hope of his recovery.

January 3, 1900.

Paget is dead. With these three words doctors greeted each other on Sunday, for the great and venerated surgeon died on Saturday night, "full of days and full of honors." For many years Sir James Paget occupied the foremost place in the profession and enjoyed the complete confidence and reverence of his brethren. He had retired for a long time from practice, but his personality was so distinct and his influence so unexhausted that he seemed to be still among us. His intellect was keen, his acquirements were numerous, his researches careful, and his judgment was well balanced. All his faculties were brought to bear on the case or subject under his notice, and his decisions were often regarded as almost infallible. Then outside professional topics his attainments secured the respect of all, and his views excited the greater interest by the felicitous way in which he expressed them. His essays could not fail to attract attention by their literary excellence, while they were full of instruction or well-sustained argument, often stated with remarkable force and charming eloquence.

Sir James Paget reached the age of eighty-five years. He was a Barts' student, and remained connected with that hospital all through his career. He took the membership of the College of Surgeons in 1835, and was, of course, one of the first batch of fellows when that order was instituted. In 1847 he was Arris and Gale professor; in 1865 he entered the council; was vice-president in 1873–4, and president in 1875. The next year he entered the General Medical Council, in which he represented the college until 1881. There is a fine bust of him by Boehm in the college, and his portrait, presented to Lady Paget in 1873, is in St. Bartholomew Hospital. Other colleges and societies offered him their highest honors, and universities did not lag behind. Thus the Dublin College made him an honorary fellow and the University M.D. Oxford, Cambridge, and Edinburgh presented their respective highest degrees. Of the London University, which grants no honorary degrees, he was for a considerable time vice-chancellor. Of societies it would be tedious to enumerate his distinctions; suffice it to mention the F.R.S. and the Paris Institute, with the presidency of more than one of the medical societies.

He was created a baronet in 1871, and appointed serjeant-surgeon to the Queen in 1877. He had long before been surgeon to the Prince of Wales. His "Lectures on Surgical Pathology," his "Clinical Lectures and Essays," and his "Studies of Old Case-Books" are classics as far as medical works can be classical, and no one can do better than look into either of them for an hour's delight and instruction. There are many other important contributions in St. Bartholomew's Reports, the Transactions of the Royal Society, and some of the medical societies. But these samples of his distinctions merely serve to show the esteem in which he was held as a surgeon and a scientist. They can only dimly suggest what he was as a man. Courteous, kindly, sagacious, genial, modest, his presence was ever welcome. A good talker, an eloquent lecturer, he charmed both young and old. As a surgeon, thoroughly informed and conscientiously careful, he was also possessed of that insight which so often looks like intuitive diagnostic power. His operative procedures were always steady, safe, and sure, and he never sought after the speed which some younger men call brilliant. His nature could not "appeal to the gallery."

Sir James leaves four sons—the eldest, John, of course, succeeds to the baronetcy; two are clergymen, and Stephen follows his father's profession and is already well known as a surgeon. Two daughters also survive him. The funeral took place yesterday. The first part of the service was held at Westminster Abbey and the actual interment at Finchley cemetery. Representatives of the many institutions with which he was connected were present; as some said, "everybody was there." The Queen, the Prince and Princess of Wales were also represented and sent wreaths.

You may perhaps remember that a good deal of interest was felt by some of those present at the Edinburgh meeting of the British Medical Association (1898) in a demonstration given by Dr. Doyen, of Paris, on the cinematograph. Some, indeed, were inclined to regard the exhibition as scarcely scientific, but others, knowing that M. Doyen was one of the foremost French surgeons, were well aware that he needed no clap-trap and was unlikely to bring forward anything that was not serious. Well, he has followed up his work with animated pictures and demonstrated their utility in teaching operative surgery. Dr. Doyen is not only an operating general surgeon, but also an eminent gynæcologist, and he has applied the cinematograph to that branch. At the invitation of the British Gynæcological Society he came over to London and gave a demonstration at their December meeting. The *modus operandi* in a number of operations was demonstrated by slides showing separately and consecutively the instruments required and the steps of the operation. This was followed by showing the operation complete as recorded by the cinematograph. In this way Dr. Doyen's ovariotomies, abdominal and vaginal hysterectomies, were exhibited in actual performance, to the evident delight of those present. A vote of thanks was proposed by Dr. Routh in a neat little French speech, and carried unanimously after complimentary remarks by Drs. Spanton, Godson, and MacNaughton Jones.

It would seem that the cinematograph has come to stay as a useful educational apparatus. Not a few, however, still regard it as a toy. But that was the case with the camera in time past, and yet what has photography accomplished for science! There may be a considerable rôle for the cinematograph.

The New Year's honor list is a short one, and so will disappoint many. Surgeon-General Lovell and Dr. Lauder Brunton are knighted. Dr. Cockburn, agent-general for South Australia, gets a K.C.M.G. Dr. Pringle, of the privy council of Jamaica, Dr. Patrick Manson and Dr. Wordsworth Poole, P.M.O., of the higher force, received a C.M.G. Dr. A. D. MacKinnon, of Uganda fame, receives the same order.

An interesting exhibition was opened on the 1st inst. by the Livingstone College. Many relics of the distinguished medical missionary and traveller were lent for the occasion, and there was a considerable collection of articles intended for travellers in unexplored regions. Major Ross discoursed on malaria and mosquitoes, and to-day Dr. Battersby is to lecture on "Health in the Tropics."

The eleventh annual report of *The Lancet* relief fund shows that £245 has been distributed to twenty-four practitioners who were suddenly in urgent need. This fund was established to help cases of real emergency, in which immediate aid would be likely to enable the recipient to tide over his difficulties. It is entirely supported by *The Lancet*. The sums granted this year ranged from £5 to £20.

Influenza is again taking a heavy toll in London, and many of the doctors are down with it. In November there were about fifteen deaths a week from it, but in December the number rapidly increased until in the week ending the 30th there were one hundred and seventy-three deaths registered from this disease. In the two preceding weeks the deaths were thirty-eight and sixty-nine. The increase is therefore great, and with it of course the epidemic is widespread, the non-fatal cases being very numerous. The deaths from all respiratory diseases last week were eleven hundred and seventy-two, above double the average.

THE APPENDICITIS QUESTION.

To the Editor of the Medical Record.

Sir: Allow me to add my humble mite of commendation of the remarks made by Dr. John Wyeth relating to the "appendicitis question," and published in a recent issue of your journal. Most heartily do I approve of what he advises in the treatment of abscesses occurring in connection with an inflamed appendix inaccessible to the gentlest and readiest manipulation.

It is very well for men like Dr. Morris and Dr. Deaver to practise and even publish "ideal surgery" respecting these cases. It is quite another thing for such operators to encourage and even demand such surgery at the hands of the general profession, in which, in these latter days, surgeons have multiplied with such amazing rapidity. Armed with a diploma and the certificate of an "up-to-date" post-graduate course in New York City, who will question the right, nay, the duty, of such men to undertake the most complicated operations in surgery? But do these legal authorities necessarily confer either natural or acquired surgical abilities? Rather do they not too often authorize and stimulate surgical temerity? Probably it would surprise Dr. Morris to know with what comparative infrequency an experienced and thoughtful surgeon is called in to operate for the average so-called country practitioner, who now considers himself lost in the race unless he has been to the cities, where he is imbued with the daring and enthusiasm of the great surgical pioneers. The results of the latter must be attempted, if not equalled, no matter what the cost.

Now if it be true that fifty thousand persons die annually in the United States from appendicitis, will Dr. Morris tell us, if he knows, how many succumb to reckless and indiscriminate operating? Notwithstanding increased facilities in the United States for learning surgery, how will Dr. Morris lessen this great mortality under existing conditions likely to be continued, so that his statistical assumptions, vehemently protested, will be taken at the value which he places upon them in support of the treatment that he advocates? Already, in this locality at least, the teaching of Drs. Morris, Deaver, and others is having the effect perhaps intended. Abscess cavities are opened and the deeply embedded appendix is laboriously and exhaustively sought after. If the limiting exudation wall is freely broken down by the manipulation, the post-mortem consolation to the family often runs like this: "I should have been called in earlier; the abscess had broken into the peritoneal cavity." Moreover, how annoying to an operator in an abscess case to be confronted with the reproach that he did not remove the appendix, when his neighbor, who had perhaps operated during the quiescent period, is able triumphantly to exhibit an appendix which, "following the surgical rule," he had skilfully removed! For the laity is not educated to make any distinction between these conditions, but rather the contrary. In the public view appendicitis is only appendicitis. Therefore the appendix must be removed at any hazard.

If it be a fact, as Dr. Wyeth avers, that in the vast majority of cases these abscess cavities soundly heal after proper opening and drainage, no further operation being required, is it not wise to inculcate his timely warning and advice? Certainly my experience strongly supports Dr. Wyeth in his contention. I have often questioned the feasibility of the advice of Dr. Deaver to antisepticize the abscess cavity and then safely to remove the appendix no matter how situated. In my last abscess case I am sure it would have been impossible to render thoroughly aseptic the pus-bearing area, including several minor pus cavities irregularly and remotely located in the septic exudation wall of the primal abscess. No amount of irrigation or wiping out with antiseptics would have accomplished this; and to break down the intervening trabeculæ would have been fraught with certain disaster to the patient. The abscess cavity was properly drained and granulated up, being now soundly healed. Judging from past experience I have little, if any, fear that a second operation will be required.

Henry K. Leake, M.D.

Dallas, Tex.

To the Editor of the Medical Record.

Sir: Allow me to make an analysis of Dr. Horner's defense of medical treatment of appendicitis, in the Medical Record for December 30, 1899, and comment upon some points that he makes.

Dr. Horner says he "believes that physicians can draw more practical conclusions from the means in their possession than the hospital surgeon with all his statistics. The general practitioners mingle with physicians of their own vicinity and have the benefit of one another's experience and observations." This is all very well, provided that the general practitioners are men of trained observation and accustomed to making accurate records of their cases in a scientific way. If the physicians in Dr. Horner's vicinity are men of this sort, I wish to have their reports upon appendicitis cases. I have tried for several years to get reports from physicians who had kept accurate records of their appendicitis cases, and have not been able to get such reports. On the other hand, the statistics are accurately kept in the best hospitals, and they are the very data upon which we must depend for our conclusions. The memory of one's experience, impressions, and observations is extremely treacherous unless one can turn to carefully recorded data; as I myself find in trying to quote at society meetings without the figures at hand.

Dr. Horner says: "It does not follow at all that appendicitis cases are alike because they are caused by bacterial infection, except it be in their etiology." I insist that they are alike in this respect, that no prognosis can be made of the extent of bacterial infection in any progressing case, and that the character of any given case is always determined afterward, never in advance. Cases which are found to have progressed to a complicated stage are complicated cases at the time when the surgeon is called to operate. The special reasons for the treacherous nature of appendicitis are fully described by authorities and need no further discussion.

Dr. Horner says: "If every one who has an appendix were to go to a surgeon and have it removed, and granting the surgeon the low mortality of one per cent., there would still be a great many deaths from the operation in cases without infection." Does the doctor know of any responsible surgeon who will operate for removal of the normal appendix?

The doctor further says: "That physicians are none too conscientious in refusing to advise operation in every primary case that comes along, will in my opinion be conceded by physicians and surgeons alike." Some of the most desperate cases with which we have to deal in everyday practice are primary cases that have been watched by physicians from the days when they were slight cases. The reasons for surprises have been fully described.

The doctor says: "The physician is always open to conviction, and if Dr. Morris can convince the general practitioner that his way is the right way and will save more lives than ours, we are prepared to follow, but not merely on his say-so." I have not always found that physicians were open to conviction. I have found that they were quite like other men in this respect; that men with trained minds had the habits of men with trained minds, that men who depended upon impressionist views preferred impressionist views, and that some preferred controversy for its own sake. The right way for saving lives does not depend upon my methods, but upon the classified knowledge of authorities which is accessible to all who read.

The doctor further says: "Dr. Morris asks us to tell him as to our cases, length of time wasted in bed, state of health after subsidence of acute attacks, and the state of the appendix as learned by accurate palpation. Let Dr. Morris also tell us of hernia pads worn for months after operations that do not relieve pain, of subsequent operations for adhesions; of operation for diseased appendix and removing an inflamed ovary which was the real cause of the trouble; of operation only to push the dislocated kidney back into position, of those who succumb to anæsthetics, of those whose kidneys and other internal organs have been damaged by the ether or chloroform, and of other little things we physicians consider before we send a perfectly healthy man who has had appendicitis once, and probably never will have it again, to be operated upon." Dr. Horner evidently has not closely witnessed the work of men who are successful in their operative work, or he would not quote the above list of casualties, which certainly do occur in the hands of men who have not properly equipped themselves for the management of these cases. Hernia pads should not be worn by patients of the surgeons in whom I have confidence. The days of post-operative hernia following appendicitis operations are about past. Subsequent operation for adhesions means that the physician did not give his case to the surgeon until it had become a complicated case. Operating for diseased appendix and removing an inflamed ovary which was the cause of the trouble means usually that the diagnostician did not use quite all of his resources before proceeding to assume a grave responsibility. Operating to push a displaced kidney back into position means carelessness usually, and if that was all that was done to the kidney the whole case was apparently mismanaged. As to patients succumbing to anæsthetics, I have never had that accident occur, either in appendicitis work or in any other department of surgery. Cases in which the kidneys or other internal organs have been damaged by the ether or chloroform were cases in which these organs had been previously damaged by some other cause, and in which they would presumably have been more damaged by the toxins of bacteria if the operation had not been done. Unless one has confidence in the ability of a surgeon to use judgment in these matters, he should make a study of surgeons as part of his duty toward the public. As to sending a perfectly healthy man to have operation done, the doctor would probably find it difficult to find a responsible surgeon who would operate upon such a patient.

I hope that the doctor will not find any spirit of discourtesy in my direct manner of statement. I have the highest regard for the good intention of physicians who, like Dr. Horner, are working for the best interest of their patients from their point of view. For the sake of progress it is important to have the point of view based upon our well-classified knowledge of the subject. We have abundant statistics showing the comparative results of medical and of surgical treatment in appendicitis. We know the reasons for these statistics. I have published the letters of a series of unselected consecutive appendicitis patients, all of whom stated that they suffered less under surgical treatment than under any form of medical treatment. If patients suffer less under proper surgical treatment, if the loss of time is less, if the death rate is less, the way is clear for physicians who Dr. Horner says are always open to conviction.

ROBERT T. MORRIS, M.D.

January 14, 1900.

THE TREATMENT OF PNEUMONIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have read with great interest the editorial in your issue of January 6, 1900, referring to the recent paper of Dr. A. H. Smith, of New York, on "The Treatment of Pneumonia in the Light of its Newer Pathology."

I agree with you in the doubt you express on the pathology of the pneumonia as outlined by Dr. Smith. As regards the treatment also I believe, as you do, that "if the toxic effects are greater than the body can combat, the patient must die; if not so great, the body will wage its own war, and the methods of treatment are but turns in the scale one way on the other."

Here I may repeat what I expressed in an article which appeared in *Sieroterapia*, Fascic. 7, 1899, that every physician had until now his own (empirical) treatment for pneumonia, and (I am translating) if the patient did not die, his recovery was due only to his natural constitutional strength and not to the ordinary treatment administered by the attending physician.

In the *New York Medical Journal* of August 26, 1899, was published a second article of mine on the same subject, in which, reporting six cases of the grave form of pneumonia cured with antipneumonic serum, I said: "There is a great deal of satisfaction in the knowledge that we now have a remedy which attacks the cause of the disease, and that it is no longer necessary to witness the progress of pneumonia with the feeling that we are powerless and can do nothing except try to stimulate the heart, to give expectorants, and to attempt to reduce the temperature by some antipyretic measure." Since then I have successfully treated nine additional cases by the same method.

Many well-known directors of clinics in Italy have used this serum with success, and many convincing laboratory experiments have been made by the Royal Academy of Medicine of Naples, as well as by Drs. Eyre and Washbourn at the Guy's Hospital laboratory in London. The last-named found (*Lancet*, April and October, 1899) that the serum possesses the potency claimed fcr it. One cubic centimetre protected a rabbit against three thousand fatal doses of living pneumococci, and they think they may affirm that in the future other successes will be obtained with the serum in the treatment of pneumonia in man, and in other affections produced by the pneumococcus.

I am really surprised that so eminent a physician as Dr. Smith, in his search for the best weapon against pneumonia, has not taken notice of the rational one. In the interests of humanity I hope that Dr. Smith will soon relegate to empiricism the creosote with which he has supplanted his remedies of yesterday.

Antonio Fanoni, M.D.

66 West Tenth Street.

Society Reports.

NEW YORK MEDICO-SURGICAL SOCIETY.

Stated Meeting, January 12, 1900.

Egbert H. Grandin, M.D., President.

The Physiological Effects of Alcohol in Health and Disease.—Dr. Henry Ling Taylor read a paper with this title. He said that there were three principal views held regarding the effects of alcoholic beverages, viz., (1) The ignorant, (2) the biassed, and (3) the scientific. Belonging to the first class were those persons who seem to place no limit to the strengthening and healing virtues of alcohol, and who drink it when tired, weak, or sick, or indeed whenever there was even the slightest excuse for so doing. (The reader then passed around some of the text-books used for the purpose of compulsory instruction of children in the public schools regarding the alleged effects of alcohol.) Many of the statements quoted were astounding in their misrepresentations. Such teaching indicated the views of the biassed. According to the scientific view alcohol was powerless to prevent but temporarily allayed fatigue. In old age, and in certain conditions of debility, moderate indulgence in alcohol was beneficial. Alcohol should not be used by healthy people habitually as an appetizer. Mixed drinks and alcoholized tonics were much more harmful than pure spirits. Alcohol was often useful, sometimes indispensable, in pneumonia, typhoid fever, diphtheria, sepsis, and other serious acute diseases. It was a dangerous remedy in many nervous disorders, or if continued regularly for long periods. It was his opinion that alcohol was not so often or so frequently prescribed as formerly. It was thought that the practice of English hospitals of reporting the annual consumption of alcohol per capita might be profitably imitated in this country. Lord Roberts had stated recently that the admissions to the hospital in the British army were 208½ per thousand for abstainers and 301½ for non-abstainers. In conclusion, Dr. Taylor said that physicians should prescribe alcohol only when physiologically indicated; they should insist that the physiology taught in the public schools should not be a distorted physiology; they should discountenance the giving of alcoholic beverages to children except on a physician's prescription, and they should demand that the amount of alcohol contained in bitters and tonics be printed on the bottle.

Dr. H. H. Seabrook said that the physiological effects of alcohol in health were shown in the eye by the action on the blood-vessels. In chronic cases one frequently saw changes in the motor nerves, which might be peripheral or due to changes in the brain. These changes did not differ essentially from the changes occurring in other portions of the body. In the retinal and choroidal vessels there would be found arterial sclerosis in those who had taken alcohol for a long time. The special changes observed in the eye were those seen in the optic nerve of a chronic drunkard. The central fibres of the optic nerve underwent an inflammatory change, which was followed by atrophy, and which destroyed the central vision to a considerable extent. This change differed somewhat from the changes observed in other diseases. The change was similar to that observed in cases of poisoning from tobacco, iodoform, or bisulphide of carbon, and less intense than the change due to poisoning by lead. Certain changes were sometimes observed in the peripheral fibres. The ingestion of alcohol, therefore, when long continued seemed to act as a poison, though not as a virulent one. In slow forms of corneal ulceration stimulation of the heart and dilatation of the peripheral vessels resulting from the administration of alcohol was often most beneficial. The healing process in these cases was often exceedingly tedious, even under the use of the usual tonics; it was very materially hastened by taking alcohol. It was well known that syphilitics, and those using tobacco to excess, were most apt to exhibit the changes in the nerves already mentioned as a result of the use of alcohol.

Dr. S. E. Jelliffe said that one of the best arguments, to his mind, in favor of the good effects of alcohol was the almost universal use of it in all ages. He believed alcohol was a blessing, and when used in moderation in health conduced to that intimate social intercourse so necessary for one's success in life.

Dr. W. Gilman Thompson spoke more particularly regarding the use of alcohol in disease. It was well, he said, for physicians to ask themselves whether it was not possible to order less alcohol in the treatment of disease. Alcohol had some diuretic action in disease, but there were so many better diuretics that it certainly was not required for that purpose. In the majority of nervous disease alcohol was also not only uncalled for, but was positively injurious. On the other hand, there were conditions of nervous exhaustion and certain neuralgic affections which yielded well to alcohol. The effect of alcohol on the vascular system was the most important one for the therapeutist to consider. He was of the opinion that in a very large proportion of cases in which alcohol was used other and better remedies could be employed. Some years ago it had been customary to use much larger doses of alcohol in typhoid fever than now; the reason was found in the fact that its stimulating effect had been largely superseded by that secured by the judicious use of hydrotherapy. This former too liberal use of alcohol was certainly capable of developing a neuritis when the alcohol was administered for a considerable time in this fever, and it had seemed to him that there had been less neuritis since less alcohol had been given. In pneumonia alcohol was useful as a temporary stimulant. In alcoholic pneumonia it was certainly wrong to withhold alcohol, and so give an additional shock to the already depressed system. If, in such cases, the alcohol made the tongue moist, softened the pulse, aided respiration, reduced the temperature, and did not impart a strong odor to the breath within an hour or two after its ingestion, one might be sure that it was doing good. The habitual use of alcohol certainly tended, in a most insidious way, to excite premature degenerative changes. Some years ago he had been interested in collecting certain statistics from his hospital practice regarding alcoholic drinking. In his own division at Bellevue Hospital in the year 1898, there had been in all five hundred and six patients. Of this number there had been one hard drinker in every four, and only thirty-five total abstainers among three hundred and eighty men. Among one hundred and twenty-six women the proportion of hard drinkers had been one in sixteen. In examining these patients one was constantly struck with the large proportion of cases exhibiting arteriosclerosis. He had never been able to trace any case of alcoholism to the ordinary and temporary therapeutic use of alcohol in severe acute disease, and the same seemed to be true of the morphine habit, but it was an entirely different problem in chronic disorders when the patient continued for a long time to use alcohol or morphine without the physician's knowledge or consent. With regard to the use of alcohol in chronic disorders of the stomach, he was of the opinion that, as a general rule, it should be advised to leave alcohol alone. Late in life the moderate use of alcohol often prevented insomnia and added to the comfort of closing years. It was probable that many persons would become chronic alcoholics if it was not that they were blessed with bad stomachs, which did not allow them to become "full" without speedily getting empty again. In his opinion, alcohol was absolutely unnecessary for the preservation of health. The social side of this question was an entirely different matter. It was probable that the majority of persons would live longer if they did not use alcohol habitually, even in moderation. The use of alcohol could not be continued for long without lessening the resistance of the tissues and leading to more or less deleterious effects. Much depended upon constitutional peculiarities and general habits of life. Of course, alcohol should be distinctly prohibited to persons having a strong hereditary tendency to its excessive use. Finally, alcohol used properly for medicinal purposes undoubtedly saved life in acute diseases, as it constituted a valuable means of tiding over a crisis. In some of these cases he believed that alcohol acted not only as a cardiac stimulant, but as a true food.

Dr. William H. Porter said that when this question was considered from its standpoint as a food, one obtained a clearer conception of it. To his mind alcohol belonged to the same class of foodstuffs as starch, sugar, and fat. Assuming the natural intake of oxygen by the lungs to be 750 gm., by using 600 gm. of oxygen all of the starch, sugar, fat, and proteid matter could be burned that was required to generate the necessary amount of heat and keep up the constructive work of the body. This would leave 150 gm. of oxygen per day. Figured from a chemical basis this would allow nearly two ounces of clear alcohol to be burned without exceeding the oxygenating capacity of the system. He had been very much interested in the experiments of Professor Atwater at the government station, as they had demonstrated that this amount could be actually consumed in the body without overtaxing the oxygenating capacity of the system. It should be remembered, then, that this quantity could be burned in the system if its ingestion was properly distributed over the twenty-four hours. It had been pretty conclusively demonstrated by Anstie that alcohol did not enter the blood, as such, in any considerable quantity. Alcohol was very rapidly transformed into some other compound. It was his belief that alcohol was drawn up into the epithelial cells of the alimentary canal, and was there quickly oxidized, with the production of heat, carbon dioxide, and water. As a result, it had a tendency to overstimulate the nervous mechanism. This overstimulation was followed by depression, and unless the ingestion of the alcohol was evenly distributed over the twenty-four hours there must be inevitably an overstimulation. With this overstimulation there would be temporary contraction of the blood-vessels, thus interfering with the nutrition of the system. However, greater harm came from the use of alcohol by its disturbance of digestion, thereby exciting in the alimentary canal putrefaction, fermentation, and the formation of toxic products, and so indirectly affecting the system deleteriously. Physiologically speaking, there was no occasion for the use of alcohol in any individual in health until after the age of fifty or sixty years, and, in the majority of cases, its use before that time tended to cause derangement of digestion, and to affect the system injuriously through the absorption of the toxic products formed in the intestinal canal by the putrefactive fermentation of the proteid constituents. This opinion seemed to be strengthened by the position taken by insurance companies, who claim that beer-drinking people are the poorest risks. Such persons did not take in as much alcohol as spirit drinkers, but they eat more, and have more digestive derangement. He believed that in disease alcohol was very serviceable when the individual was unable to digest sufficient starch and sugar to yield the requisite amount of heat. In that sense alcohol might be looked upon as a food, though never as a good food. He quite agreed with Dr. Thompson in the assertion that more alcohol was given in disease than was needed. Assuming that typhoid-fever patients were able to take only one-half the usual amount of food, then such a person should not require over three ounces of alcohol in twenty-four hours. This would generate all of the necessary heat, and to go beyond this point meant only that the nervous system would be overstimulated, and that this would probably lead to neurotic conditions subsequently. He believed very positively that as people advanced in years and the digestive functions waned, the judicious use of a small amount of alcohol materially improved digestion and enabled such people to live longer and more comfortably than without this use of alcohol. This was especially true in cases in which the individual had not been accustomed to the use of alcohol. He believed that alcohol should never be given to the healthy individual under the age of fifty or sixty years, and that it should be used very cautiously in disease, the greatest care being taken that it did not cause disturbance of digestion. If this did occur, even in disease, then one might be sure that the alcohol was doing more harm than good. If the urea rose and the uric acid diminished under its utilization, then it was evident that the alcohol was doing good. With reference to the teaching of the effects of alcohol, Dr. Porter said that the more nearly the absolute truth could be brought before the youthful mind the greater the likelihood of doing good; in due time, the truth would come out in any event. He knew of a student who had been absolutely compelled to falsify his opinion on the physiological action of alcohol in order that his book might be brought before the schools.

Dr. Ernest W. Auzal quoted statistics collected by Jacquet and presented in a report recently made regarding alcoholism in the hospitals of Paris. The report had been based on a study of 4,744 cases seen in twenty-three hospitals. Of this number, 3,416 had been seen in the out-patient departments, and 1,328 among the in-patients. Of the former, 23.27 per cent. and of the latter 45.93 per cent. had been alcoholics. The drinks used chiefly were wines, liqueurs, and rum, but the use of absinthe was specially common. Of the 4,744, 217, or 4.57 per cent., had shown some disease dependent upon the alcoholic habit, such as gastritis, gastro-enteritis, various hepatic diseases, and paralyses. Of the whole number, 252 had advanced tuberculosis of the lungs, and of these 180, or 71.42 per cent., had been addicted to the use of alcohol before the first symptom of tuberculosis had made its appearance. The mortality had been greatest among those notoriously intemperate, such as liquor dealers, saloon-keepers, drivers, and cooks. Jacquet was of the opinion that physicians had unthinkingly contributed to the alcohol habit, as the annual consumption of alcohol in the Paris hospitals had doubled in the last twenty years. During the past year, however, there had been a marked decrease. He suggested that every patient leaving the hospital should be given a memorandum setting forth the dangers of alcohol. He also suggested that a permanent committee be appointed to consider this question of the effects of alcohol, and report annually.

Dr. E. Eliot Harris thought there was a proper use, as well as an abuse, of alcohol. He believed it was a valuable agent in relieving congestion of the internal organs, due to sudden chilling of the surface of the body. Alcohol relaxed the cutaneous arterioles, thereby retaining blood in the capillaries of the skin and adjacent tissues, and in this way it acted as a preventive of many diseases of the internal organs which followed what is popularly known as "taking cold." Alcohol had the power to bleed a man into himself, as it were, which made it a valuable agent in relieving embarrassment of the heart in pneumonia. There seemed to be a useful niche for alcohol in acute infectious diseases, in which its power as an antiseptic became manifest. When one considered the trouble arising from the abuse of so valuable an agent as alcohol, one could not but feel convinced that mankind, as a whole, would be benefited if it ceased to be manufactured.

Dr. McMurdy said that in hospital practice, in which tub baths were readily given, it might be easy to reduce the quantity of alcohol used in typhoid fever, but hydrotherapy was not applicable to tenement-house practice, in which alcohol must consequently be used freely. In diphtheria alcohol was often absolutely demanded, even though antitoxin was also used. He would not wish to practise medicine without alcohol.

Dr. J. Henry Fruitnight, in answering the question as to whether children in health should have alcohol, said that he would reply most emphatically "no." He would not dare to treat a severe broncho-pneumonia in a child without the administration of alcohol. He would be cautious about the use of alcohol in scarlatina because of the liability to nephritis. Years before the use of antitoxin excellent results in the treatment of bad septic cases of diphtheria had been secured by the free use of alcohol, and he still advocated its use in such cases, even if antitoxin was employed.

Dr. Theodore K. Tuthill expressed the opinion that alcohol was always a positive poison in health, and sooner or later its continued use must work to the injury of the individual.

Dr. William M. Leszynsky referred to the case of a child, aged five years, who had been brought to him at one time with an alcoholic multiple neuritis and paralysis, which soon terminated in death. The ignorant mother had thought she was doing a good thing for her little one by giving it regularly two bottles of beer and several drinks of whiskey daily. The speaker thought the text-books exhibited would prove useful, by impressing upon the older children the truth that alcohol was a poison and should be avoided.

Dr. Robert A. Murray spoke of the very common use by the laity of proprietary medicines containing a large percentage of alcohol. He believed such nostrums were often responsible for giving to individuals a taste for alcohol. He had never seen a case of acute disease treated with alcohol in which there had been any deleterious after-effects, except when the family had continued to give the patient during convalescence alcoholics instead of proper food.

Dr. Frederick Holme Wiggin said that with increasing experience he found himself depending less and less upon alcohol in the after-treatment of cases of abdominal surgery. His results had been much better by relying more on attention to digestion and the use of peptonized milk for nourishment than on alcoholic stimulation. As he believed shock was almost invariably due to hemorrhage, the best treatment was the introduction of saline solution either into the bowel or directly into the circulation.

Dr. A. E. Bieser spoke of the therapeutic efficacy of alcohol in septic conditions associated with various diseases, such as diphtheria, pneumonia, and typhoid fever. In these diseases alcohol seemed to fortify the cells so as to enable them to meet the demands made upon them by the invading bacteria.

Dr. E. H. Grandin said that he used much less alcohol now in septic conditions than he had done ten years ago, though he was free to confess that he still found it very useful in very low grades of sepsis. He agreed with Dr. Wiggin that shock was chiefly the result of hemorrhage, and therefore he relied upon the introduction of saline solution.

Dr. Taylor, in closing, read a letter from Prof. R. H. Chittenden, of Yale, expressing regret at his inability to be present, and stating that a recent investigation by Swedish chemists had fully established the results of Professor Atwater regarding the food value of alcohol. It was evident from the discussion, Dr. Taylor said, that the medical profession in this country used alcohol less than formerly, though clinging to it tenaciously to meet certain therapeutic indications. In this respect the habits of physicians here seemed to be in sharp contrast with those of the medical profession in Europe.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 18, 1900.

William H. Thomson, M.D., President.

Myocarditis.—Dr. John H. Musser, of Philadelphia, read a paper on this subject. He said that when the heart muscle was healthy few or no symptoms arose as the result of a valvulitis. The symptoms of myocarditis were intermingled with those due to other neural changes. A case was cited exemplifying the occurrence of myocarditis following, and secondary to, pericarditis. Myocarditis with dilatation was frequently seen as the terminal event in such lung diseases as emphysema. Myocarditis, both local and general, was often the result of coronary-artery disease. To the group of cases of myocarditis of toxic origin belonged the curious and puzzling cases of myocarditis associated with arrhythmia. In all forms of myocarditis there were certain common phenomena, particularly the sallow complexion of the individuals and the similarity of the physical signs. When this peculiar pallor was present one would not go wrong in assuming that the coronary arteries were implicated. These cases gave evidence of endarteritis in the vessels. The physical signs given by the heart were those of myocarditis alone, or of myocarditis plus hypertrophy or plus dilatation. The apex beat would be displaced to the left, and the cardiac dulness would be somewhat increased. Quite early there was "gallop rhythm," a cantering or reduplication of the systolic sound. It was more commonly heard about the fourth rib, and was sometimes more marked in the supine position, and usually more marked after exercise. Myocarditis was often overlooked in fevers because of the temporary disappearance of "gallop rhythm." Murmurs were not heard constantly until late in the disease unless complications were present. He believed, with Sewall, that the papillary muscles were the source of the auscultatory phenomena of myocarditis. It was not so much the presence of reduplication, or of gallop rhythm, or of murmurs, as the variability of the auscultatory phenomena which was so characteristic of this pathological condition. When dilatation supervened the physical signs changed in keeping with the physical condition of the heart. The terminal events of myocarditis varied; there might be apoplexy or ruptured aneurism, or renal phenomena. Again, there might be sudden and severe angina, or a gradual cardiac exhaustion lasting for a few days and terminating in œdema of the lung. In cases of myocarditis with angina, the attack might come on suddenly or be preceded by more or less dyspnœa. In the very large majority of the cases myocardial disease was present; whether it was causal or not he would not state. The course of these cases might be slow or rapid; one attack might terminate life, or the attacks might recur only at very long intervals. They might be preceded by a moderate amount of dyspnœa, and perhaps also by some arrhythmia. The pain was the predominating feature. Notwithstanding the temporary abatement of the symptoms the disease would progress, and eventually death would follow, and apparently from trifling causes. In some cases a slight change in the nutrition or general health would be sufficient markedly to affect the pain. In cases of myocarditis with dyspnœa, the latter might come on only after exertion, or when at rest, or perhaps only at night. In these patients the face was generally pale and anxious, and the forehead bathed in perspiration, the patient presenting all of the usual signs of profound shock. Examination of the heart would show its action to be rapid, feeble, intermittent, and irregular. Such an attack might at first occur at intervals of a year, but as the disease progressed this interval would be shortened. These attacks should be distinguished from those of acute dilatation of the heart occurring in certain cases of cardiac debility, because this was necessary in order to institute a proper treatment. This differentiation could be made, in a measure, by estimating the degree of cyanosis, and by a consideration of the fact that the signs in the lungs were those of œdema, in the case of heart failure, rather than congestion, while in cases of dilatation the phenomenon of congestion was the more prominent one. In cases of acute dilatation there was tachycardia, whereas in cases of œdema, with temporary arrest of ventricular action, the heart action was more apt to be slow. In the myocardial cases there was no congestion of the other organs, as for example the kidneys. In cases of dilatation, relief could be promptly afforded by venesection or by local blood-letting, whereas in myocarditis few physicians would care to resort to this procedure. The character of the breathing in myocarditis was very suggestive; the patient would speak to you for a short time, and would then have to rest in order to regain his breath. However, the frequency of respiration was not so great as that which attended dilatation of the heart. Cases of myocarditis presenting the so-called Stokes-Adams syndrome—pericarditis and pseudo-apoplexy—were very interesting to the clinician.

Myocarditis in Infants and Children.—DR. HENRY KOPLIK read this paper. He said that, in spite of the little space devoted in the text-books on diseases of children to the consideration of myocarditis, it was not at all rare, being a very common accompaniment of such acute infectious diseases as diphtheria, scarlatina, and typhoid fever. Romberg had called attention to the important fact that even in the severest cases all of the muscular fibres of the heart were not affected. Experimental research had made it probable that the myocarditis in these cases was the result both of the high temperature and of the toxins of the disease, and it was evident from clinical experience that high temperature alone was not responsible for its causation, as it was frequently found in rapidly fatal cases of pneumonia, for instance, in which the temperature had been low. In severe cases of pertussis, myocarditis would be found, partly as the result of the strain on the heart produced by the paroxysms of coughing, and partly as the result of the action of the toxins of the disease. While it was true that a most extensive myocarditis was often found at autopsy, in cases in which no symptoms referable to the heart were observed during life, there were many cases in which the feeble apex beat and heart sounds, with or without pallor and dyspnœa, should be sufficient at least to put the physician on his guard and cause him to suspect the presence of myocarditis.

Semeiology of Myocarditis is Complex.—DR. E. G. JANEWAY said, regarding the value of the facial expression as evidence of a myocarditis, that he could recall cases in which eminent clinicians had told the person during life that they had no heart disease, and yet the autopsy had shown extensive myocarditis. If there had been anything significant about the facial expression in these cases it certainly could not have escaped the notice of such acute and experienced clinical observers. Again, it was no unusual thing for angina to be mistaken for dyspepsia. This was largely owing to the proneness of attacks of angina to occur after partaking of a hearty meal.

DR. I. ADLER said that we could no longer divide sharply, as was formerly supposed, cases of myocarditis into two classes, viz., interstitial and parenchymatous. At a very early stage the muscle fibres underwent degeneration. In cases of simple atrophy or brown atrophy, in which the muscle became primarily affected and destroyed, the connective tissue underwent proliferation. He had never seen a specimen of myocarditis under the microscope in which both types had not been visible. Even in the most advanced cases of myocarditis the microscope would almost invariably show very many muscular fibres unaffected, and this might explain the apparent absence of cardiac symptoms during life. It was highly probable that the degree of the disturbance of the heart depended very largely upon the localization of the myocarditis. His clinical experience had led him to believe that in those cases of myocarditis characterized by œdema and dyspnœa the myocarditis was principally localized in the auricles. Arteriosclerosis was not by any means confined to the later years of life, and it was in these youthful cases of arterial disease that myocarditis was especially noted. This arterio-sclerosis was sometimes noticed shortly after puberty, chiefly in males. It was commonly the result of various toxæmias, the most notable of which was perhaps that resulting from the use of tobacco. Then there were cases of hereditary myocarditis without any toxic element, occurring almost wholly in young males.

DR. MUSSER closed the discussion. He said that he had not intended to convey the impression that the peculiar pallor alluded to by him was a constant sign, but only that when present it was very significant.

SECTION ON MEDICINE.

Stated Meeting, January 16, 1900.

JOHN H. HUDDLESTON, M.D., CHAIRMAN.

The Plague Bacillus.—DR. W. H. PARK gave a demonstration of the plague bacillus, the material having been obtained from two men sick with the disease on the steamer *Taylor* from Santos, Brazil. He had seen the men on the day of their arrival, and as they presented only an abscess of the lymph nodes in the groin they probably would not have been suspected of having the disease had it not been for the history of illness on board the ship. He had removed some of the pus from these abscesses, and had been much disappointed the following morning to find that there was no growth. After some difficulty he had succeeded in getting the culture. There was no difficulty in cultivating the bacillus when the material was obtained in the early stages of the disease. From what he knew now of the bacillus and its mode of growth, he felt that there should be no difficulty in the future in making the bacteriological diagnosis of the plague in the course of about twenty-four hours.

A Criticism of a New Method of Preparing the Skin for Vaccination by Denudation with Caustic Potash Solution.—DR. F. S. FIELDER read a paper on this subject (see page 143).

DR. S. F. MORRIS said that he had known nothing until this evening regarding this caustic-potash method of vàccination, and he could not see that it possessed any advantage, excepting in the one matter of not causing pain; but that should not be considered very seriously, for he was able to vaccinate a sleeping baby without awakening it. If caustic potash alone was applied to the skin, and no vaccine virus was rubbed in, the skin would probably closely simulate the ordinary vaccination scar. There was no such thing as "pitting" of vaccination. The large, hard cicatrix left by the present method of vaccination with bovine virus was entirely different from that formerly produced by the humanized virus. At that time the method in vogue had been to scrape off the superficial layer of the epidermis without drawing any blood whatever. In these cases the pitting seemed to be produced because the ulcer did not penetrate through the skin into the cellular tissue. With proper care scarification with the needle could be done in such a way that there would be no flow of blood unless pressure was made on the surrounding tissues. When the surface of the skin was denuded with caustic potash the serum was coagulated by the potash; hence, if great care was not taken to rub in the virus, it was probable that a much larger percentage of failures would result than had been noted by the reader of the paper. The speaker said that he had used almost every known method of vaccination that had been proposed and practised during the past thirty years. As a medical student he had been taught to make a little pocket with the lancet in the epidermis and introduce into this a "scab" when no liquid virus could be obtained. He had vaccinated many thousand children in the schools by using the lancet, but the great drawback to this method was the difficulty of properly cleansing the lancet when vaccinating such a large number of children. Subsequently he had found that the needle was far better than the lancet for such work. He had recently reported to the health department on fourteen hundred and sixty-five vaccinations performed with a certain lot of virus. Of this number there had been only one hundred failures, and a large number of these failures had been due entirely to the wilful removal of the virus by the colored children. These children had varied in ages from six to eighteen years, and the vaccinations therefore had been secondary ones, yet he had obtained, even under these adverse circumstances, over ninety per cent. of successes. This seemed to him an excellent showing for the method of needle scarification. He had never found it necessary to make any preliminary cleansing of the surface; he got no bad results except from the meddlesome after-treatment of ignorant mothers. Years ago, when he had been in the habit of scarifying a large area, he had sometimes seen erysipelas during the summer months, but never, even by this method, during the winter months. For this reason he ordinarily preferred to vaccinate in the winter time.

Œdema following Vaccination.—DR. W. H. PARK said that he had understood that Dr. Hutchins had claimed better results from the caustic-potash method, and he would like to ask Dr. Fielder if Dr. Hutchins had really made any careful comparative tests to substantiate such a claim. He would also call attention to the fact that in some individuals vaccination seemed to be followed by œdema of the whole upper extremity without any really septic condition being present. This œdema usually subsided in two or three days without anything more serious than a little inconvenience.

DR. FIELDER closed the discussion. He heartily agreed with Dr. Morris that there was no such thing as a characteristic vaccination scar. He had personally found it difficult to make an adequate scarification with the needle on a struggling child without drawing some blood. The health-board vaccinator who had secured the largest percentage of successes had made a practice of needling deeply and drawing blood, and then depended upon a very thorough rubbing in of the virus. He certainly believed if he had not taken great pains to rub in the virus after using the caustic potash there would have been many more failures. He had not understood that Dr. Hutchins had made any comparative tests. He did remember that Dr. Hutchins claimed to have had "only two failures in thirty-six primary vaccinations"; such a showing among primary vaccinations was not considered a good one at the present day among experienced vaccinators.

A Critical Study of the Justus Blood Test for Syphilis.—DR. D. H. JONES read this paper. The test depended upon the assertion that a single inunction of mercury, in all untreated cases of syphilis, caused a reduction in the hæmoglobin due to the sensitiveness of the red blood corpuscles to the action of this drug. Justus claimed that this reduction followed intravenous and subcutaneous injections of mercury as well as inunctions, but that no reaction was obtained if the mercury was administered by the mouth. Justus had reported on three hundred cases he had studied in this way. During the past six months, the speaker said, he had applied this test frequently in some of the hospitals in this city. The quantity of hæmoglobin had been determined by means of the specific gravity test of Hammerschlag. After having tested the quantity of hæmoglobin in this way, the patient was told to rub into the breast from gr. xx. to gr. lx. of mercurial ointment, and after an interval of from twenty-four to seventy-two hours the hæmoglobin was estimated again. The fifty-three cases were divided into thirty-five syphilitics and eighteen controls, and the thirty-five syphilitics were again divided into seventeen cases of active syphilis not under treatment, one under treatment, two latent cases, eight cases of chancre with adenitis, and seven cases of chancre without adenitis. Of the seventeen cases of syphilis not under treatment, thirteen had responded to this test. Of these thirteen twelve had had a macular or papular syphilide, and a history of chancre. They had been tested from three to ten weeks after its appearance. The remaining case had had a characteristic mucous patch on the inner side of the cheek, but no chancre could be found, and syphilitic infection had been denied. Nevertheless this case had improved with suspicious rapidity under mercurial treatment. Three of the four negative cases had been pronounced syphilitic by experienced diagnosticians. Of the eight cases of chancres with adenitis only two had reacted positively. The author concluded that the test had a positive value, yet it often failed in the latent cases of syphilis. Its range of usefulness had not yet been determined; like the diazo reaction in typhoid fever it had a certain positive, but no negative value.

Dr J. Ewing said that he had no criticism to offer regarding the methods employed, except as to the estimation of the hæmoglobin. Personally, he believed that the Fleischl hæmoglobinometer afforded a more accurate means than the specific-gravity method for the estimation of the hæmoglobin. The fact that the administration of mercury caused anæmia had been noted before it had been described by Justus, but this investigator had perhaps been the first to call attention to the fact that a recognizable anæmia might follow from a single dose of mercury. Justus believed that this anæmia was the result of an alteration of the serum, and also of the direct globulicidal action of the mercury itself. It had been shown that immediately after an inunction many of the cells containing a diminished quantity of hæmoglobin had been removed from the circulation; apparently, therefore, there was a reduction of the red cells immediately after the administration of a large dose of mercury. Such a result did not follow if small doses of mercury were used.

The Test Probably Operative in Other Diseases.—The question naturally arose here, Was this change in the blood specific, and characteristic of syphilis only? Personally, he thought there was reason to believe that such a change might be observed in many other diseases, notably in cases of malaria and in all forms of sepsis. There were certainly many cases in which there was a distinct increase in the globulicidal action of the serum, and here Justus' test would be likely to fail. Of the thirty-three cases which Cabot used as controls the hæmoglobin percentage had been between ninety-five and one hundred, except in two cases, and in these two the administration of the mercury had given a positive response, although the individuals were not distinctly anæmic. When there was no increased globulicidal activity of the serum from other causes than syphilis he thought it exceedingly probable that further investigation would show that Justus' test would respond.

Dr. B. Lapowski called attention to a later statement published by Justus in 1896, in which he admitted that his test could be made to respond even when the mercury was administered by the mouth in the form of pills. Justus' method of estimating the hæmoglobin had not been by the specific-gravity method, but by means of the Fleischl hæmatometer. Again, Justus had simply stated that the test was observed after the absorption of mercury—not that it occurred after a single dose of mercury. It did not necessarily follow that the mercury had been absorbed even if a single dose had been given. Moreover, Justus did not ordinarily employ a large but a medium dose of mercury, from 2 to 5 gm. of mercurial ointment.

Dr. Jones, in closing, said that in the article by Justus, published in 1897, the statement had been made that reduction of the hæmoglobin was observed only immediately after the inunction, and that the percentage increased ultimately. He agreed with Dr. Ewing that the specific-gravity method of estimating the hæmoglobin was somewhat crude.

Chronic Vertebral Rheumatism and its Pseudo-Neuralgic Form.—Dr. H. Forestier, of Aix-les-Bains, read this paper. He said that the chronic spondylitis observed by him had exhibited a temporary rigidity of the vertebral column without any ankylosis, pain radiating from the back to the loin and simulating in some cases tabes, and an affection of other joints pointing to its rheumatic nature. In most of the cases the posture and gait had been stiff, and there had been tenderness along the spine with more or less neuralgic pain. These patients had walked with the feet far apart, keeping the trunk immobile. A peculiar feature had been the backache occurring in the early morning, or when the patient had been lying down for a number of hours. As a rule, the knee jerk had been exaggerated, and in some cases there had been ankle clonus. There was no ankylosis of the spine in these cases; the immobilization was due to the pain. The dorsal and lumbar regions had been chiefly affected, the cases involving the cervical region being quite rare. The treatment had consisted in the application of sulphurous waters in the form of "a douche massage." The condition was to be differentiated chiefly from spinal irritation and external pachymeningitis of the spine.

Dr. V. P. Gibney said that he had been familiar with this class of vertebral rheumatism for the past fifteen years, his attention having been first called to it by a paper from one of the bath establishments in France. He had taken an additional interest in it because of the discussion that had occurred as to whether spondylitis was a hyperplasia or a caseous degeneration of the bodies of the vertebræ. To the orthopedic surgeon differential diagnosis was most important. Some of the clinical symptoms given in the paper this evening resembled those of disease of the bodies of the vertebræ. He was glad to hear of the good results obtained from the treatment. In this country massage and counter-irritation, douches, etc., were employed in conjunction with constitutional treatment and local support.

Dr. Forestier, in closing, said that a "douche massage" was given with the person in a sitting posture, a stream of water being directed forcibly against the different regions of the body while the parts were subjected to vigorous massage. The douche to the spine was most conveniently given while the patient was lying in the prone position on an inclined table. The douche massage is given in a stone chamber containing more or less steam, and the temperature of the water is regulated by the physician's prescription. A tremendous stream of water is discharged from a large nozzle with great force against the patient.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 20, 1899:

	Cases.	Deaths.
Tuberculosis	200	180
Typhoid fever	24	10
Scarlet fever	245	13
Measles	777	28
Diphtheria	287	41
Laryngeal diphtheria (croup)	10	11
Cerebro-spinal meningitis	0	4
Chicken-pox	33	0
Smallpox	1	0

Clean Paris.—An English weekly journal says that Paris is probably the cleanest city in the world. Every morning two thousand male and six hundred female scavengers, divided into one hundred and forty-nine brigades, turn out to perform the toilet of the capital. The men work from four in the morning till four in the afternoon, less two hours off for meals, or ten hours a day. The women are engaged in the morning only.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended January 19, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Delaware, Wilmington	January 6th to 13th	..	1
Florida, Jacksonville	January 6th to 13th	2	
Georgia, Jessup	January 16th	1	
Illinois, Cairo	January 1st to 7th	5	2
Chicago	January 6th to 13th	4	
Louisiana, New Orleans	January 6th to 13th	13	2
Nebraska, Omaha	January 6th to 13th	1	
New York, New York	January 6tb to 13th	1	
North Carolina, Greensburg	January 15th	Numerous.	
Ohio, Cincinnati	January 5th to 12th	1	
Cleveland	January 10th	25	
Oklahoma, Blackwell	January 8th	Prevalent.	
Newkirk	January 8th	Prevalent.	
South Carolina, Greenville	January 6th to 13th	2	
Tennessee, Columbia	January 6th	24	
Mount Pleasant	January 6th	8	
Nashville	January 11th to 18th	6	
Texas, Houston	December 31st to January 6th	5	
Virginia, Portsmouth	January 6th to 13th	10	2
SMALLPOX—FOREIGN.			
Belgium, Antwerp	December 16th to 30th	14	4
Bohemia, Prague	December 16th to 30th	10	1
England, London	December 16th to 30tb	12	
France, Lyons	December 16th to 23d	..	2
Germany, Königsberg	December 16th to 23d	1	
Gibraltar	December 24th to 31st	1	
Greece, Athens	December 16th to 30th	10	2
India, Bombay	December 12th to 19th	40	
Calcutta	November 25th to December 9th	..	9
Japan, Yokohama	November 18th to 25th	1	
Mexico, Chihuahua	December 31st to January 6th	..	4
Vera Cruz	December 31st to January 13th.	..	3
Russia, Moscow	December 16th to 23d	7	
Odessa	December 24th to 30th	4	3
St. Petersburg	December 16th to 23d	19	7
Warsaw	December 9th to 23d	12	
Spain, Corunna	December 24th to 30th	2	
Madrid	December 16th to 23d	14	
Uruguay, Montevideo	December 9th	1	
YELLOW FEVER—UNITED STATES.			
Florida, Key West	January 8th	1	
YELLOW FEVER—FOREIGN.			
Cuba, Habana	December 31st to January 6th	..	5
Matanzas	December 20th	1	
Santiago de Cuba	December 31st to January 2d	..	2
Mexico, Vera Cruz	December 29th to January 13th.	..	3
CHOLERA.			
India, Bombay	December 12th to 19th	..	1
Calcutta	November 25th to December 9th	..	74
PLAGUE UNITED STATES.			
Hawaii, Honolulu	January 1st to 16th	5	4
Philippine Islands, Manila	January 16th	5	
PLAGUE—FOREIGN.			
Brazil, Santos	October 15th to December 23d.	38	13
China, Hong Kong	November 25th to December 7th	42	42
India, Bombay	December 12th to 17th	..	248
Calcutta	November 25th to December 9th	..	138
Japan, Kobe	December 10th to 20th	..	3
Nagasaki	December 9th	1	
Osaka and Hiogo	December 2d to 23d	12	9
New Caledonia, Numea	January 1st to 9th	9	5
Portugal, Lisbon	January 1st	1	
Masau	December 25th	9	7

Congenital Hypertrophy of the Pylorus in an Infant.—Batten (*Lancet*, December 2, 1899, p. 1511) reports the case of a male infant, eleven weeks old, who at the age of five weeks had begun to vomit, while at the same time the bowels became very costive, and wasting set in. The food was ejected in from five to ten minutes after feeding. The child had been fed by the breast until the age of nine weeks, and was then tried on cow's milk, but as this did not agree he was given Nestlé's food. The child was thin, and weighed seven and a quarter pounds. The abdomen was flaccid, and easily palpated without pain. On inspection the peristaltic movements of the stomach could be seen distinctly passing from left to right, and following one another in quick succession. On deep palpation in the right hypochondrium, about a finger's breadth outside the nipple line, a firm transverse mass, in shape like the pylorus, could be felt, but which was not always palpable when no peristalsis was taking place. The child was at first fed on equal parts of cow's milk and barley-water, but the vomiting persisted. He was then given two ounces of cow's milk and one ounce of barley-water through a nasal tube every two and a half hours. During the succeeding few days, although the vomiting did not entirely cease, the child improved and passed a digested stool. He improved in appearance, and the vomiting became less. Subsequently a teaspoonful of cream was added to the nasal feeding, and then some cod-liver oil. Eight ounces in weight were gained in two weeks. An attempt to resume feeding by the mouth was followed by repeated vomiting, so that nasal feeding was again resorted to. The pylorus had become less distinctly appreciable than it had been, and at times could not be felt at all. Subsequently the child was applied to the breast, and although the vomiting returned it eventually ceased. The possibility of operative relief was considered, but owing to the feeble and wasted condition of the child it was at the time deemed inadvisable. Steady improvement, however, took place, so that in the course of six months the weight had increased to sixteen pounds. The child was now seized with a fatal broncho-pneumonia. On post-mortem examination the walls of the stomach were found to be unusually thick, and the pylorus was firm and hard. On microscopical examination the mucous membrane and the muscular coat appeared to be perfectly normal in structure, while the circular coat was considerably thicker than normal.

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

OPERATIONS-VADEMECUM. By Dr. Edmund Lesser. 8vo, 190 pages. Illustrated. Verlag Von S. Karger, Berlin.

RECOLLECTIONS OF A REBEL SURGEON. By F. E. Daniel, M.D. 8vo, 264 pages. Von Boeckmann, Schutze & Co., Austin, Texas.

CHILDREN, ACID AND ALKALINE. By Thomas C. Duncan, M.D., Ph.D., LL.D. 8vo, 148 pages. Boericke & Tafel, Philadelphia.

THE COST OF LIVING. By Ellen H. Richards. 8vo, 121 pages. John Wiley & Sons, New York.

PROGRESSIVE MEDICINE. By Hobart Amory Hare, M.D. Vol. IV. 8vo, 408 pages. Illustrated. Lea Brothers & Co., Philadelphia and New York.

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CARE AND TREATMENT OF EPILEPTICS. By William Pryor Letchworth, LL.D. 8vo, 246 pages. Illustrated. G. P. Putnam's Sons, New York and London.

A MANUAL OF THE PRACTICE OF MEDICINE. By A. A. Stevens, A.M., M.D. 8vo, 519 pages. W. B. Saunders, 925 Walnut Street, Philadelphia, Pa.

MASTERS OF MEDICINE: HERMANN LUDWIG FERDINAND VON HELMHOLTZ. By John Gray McKendrick, M.D., LL.D., F.R.SS. Lond. and Edin. 8vo, 288 pages. Longmans, Green & Co., New York.

LES ARMES BLANCHES. Par H. Nimier. Ed. Laval. 8vo, 488 pages. Illustrated. Felix Alcan, Paris.

CONSUMPTION AND CHRONIC DISEASES. By Emmet Densmore, M.D. 12mo, 200 pages. Illustrated. The Stillman Publishing Company, Brooklyn, N. Y.

DISEASES OF THE EYE. By Edward Jackson, A.M., M.D. 8vo, 604 pages. Illustrated. W. B. Saunders, Philadelphia.

DISEASES OF WOMEN. By Charles B. Penrose, M.D., Ph.D. 531 pages. Illustrated. W. B. Saunders, Philadelphia.

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Original Articles.

THE SIGNIFICANCE OF INTRA-OCULAR HEMORRHAGE AS TO PROGNOSIS OF LIFE.

By CHARLES STEDMAN BULL, M.D.

NEW YORK.

It is a well-known and generally recognized fact that certain diseased conditions of the blood and of the blood-vessels cause certain lesions in the interior of the eye. From the standpoint of the clinician a careful study of these changes is of great importance, because they not only affect the vision, but because they are frequently of significance in judging of the general health of the patient.

Close observation of the retinal circulation and blood-vessels affords a certain amount of definite information in regard to the condition of the blood-current and blood-vessels throughout the body, especially of those of the brain, and to a minor degree of the heart and aorta. We know that the intraocular circulation is subject to influences and conditions similar to those which prevail in the general systemic circulation. An increased supply of blood to the brain cannot well occur without a similar increase in the eye, and the same may be claimed also for the anæmic condition resulting from a weakened force of the heart's action or from the diminished volume of the blood. One fact which is not generally recognized may here be mentioned, and that is, that the eye is relatively but sparingly supplied with blood, as a very large part of the blood going to the region of the eye from the external and internal carotid arteries is distributed to the eyelids and orbit. Hence it follows that a hyperæmic or anæmic condition of the parts, occasioned by changes in the calibre of the vessels, will be induced more easily the nearer to the eye the vascular disturbance occurs. If the cause is remote, acute congestion of the blood-vessels is rarely accompanied by retinal hemorrhage with resulting damage to vision. It may be stated that the cause of the intra-ocular hyperæmia being remote from the eye, hemorrhagic extravasations rarely occur if the blood-vessels are healthy. If this were not so, we should meet with retinal hemorrhages in violent paroxysms of cough or in epileptic convulsions, as frequently as we do with subconjunctival hemorrhages.

In obstruction of the trunk of the central retinal artery, the changes in the blood-current marked by a breaking up of the column of blood in arteries and veins, with venous pulsation, are of transient duration, and frequently are followed by increased fulness of the vessels with the appearance of hemorrhages. When the vessels remain contracted, hemorrhages rarely occur, or, when they do, not until a number of days after the onset of the trouble. One interesting fact, to which Haab has called attention, is that when the obstruction is in a branch of the central retinal artery and not in the main trunk, hemorrhages in the retina almost never occur.

When the case is one of thrombosis of the central retinal vein, hemorrhages into the retina are certain to occur, and sometimes even subhyaloid extravasations are found. In this condition general albuminuria is very frequent and leads to a grave prognosis. Hence in all cases of thrombosis of the central vein or of any of its branches, the urine should be carefully analyzed. Experience has taught us that if the patient is young the condition is apt to be connected with constitutional syphilis.

In senile angiosclerosis, marked by thickening in the coats of the vessels, with marked differences in the calibre of the vessels at different points, one of the commonest symptoms is retinal hemorrhages, which resemble those met with in thrombosis of a venous branch. This is an important symptom and signifies marked degeneration of the vascular walls. In this condition we also meet with hemorrhages between retina and choroid, between retina and vitreous, into the vitreous, and very frequently with subconjunctival hemorrhages. Attention is here called to the fact that the more carefully these patients are examined for syphilis and albuminuria, the more rarely do we meet with cases of real senile retinal hemorrhages, for syphilis produces changes in the vessels very similar to those met with in senile angiosclerosis. In this connection it should not be forgotten that arteriosclerosis with accompanying hemorrhage is very closely related to glaucoma.

The recurrent hemorrhages, not infrequently met with in young persons, are due to this degeneration of the vascular coats. They may be of any shape, but are more apt to be crescentic. They are usually subhyaloid, between the retina and vitreous, and the prognosis is good, the number of relapses not influencing materially the ultimate result. If, however, the extravasation is extensive and in the vitreous, the prognosis is grave, especially if there is a history of recurring epistaxis; for in these cases of vitreous hemorrhage the blood comes from the peripheral vessels and indicates disease of the choroidal vessels as well.

In all these cases of intra-ocular hemorrhage in the young the fundamental disease is an affection of the vessel-walls of a really unknown nature, which causes an abnormal brittleness of the coats. Inherited syphilis is probably influential in the production of the lesion. The prognosis as to the integrity of the eye is always doubtful. If the hemorrhages are in the retina, or between the retina and the vitreous, they are less serious than if they occur in the vitreous, and if inherited syphilis is present the prognosis is more favorable.

We have the authority of Gowers for the statement that passive congestion of the retinal vessels, or venous hyperæmia, with or without hemorrhages, accompanies cardiac lesions in which the return of the blood toward the heart is impeded, as in disease of the mitral valves and in fatty heart, and that the retinal hyperæmia is part of a cephalic congestion. If pulsation of the retinal arteries is also present, there is general aortic insufficiency. In mitral disease there is also hypertrophy of the left ventricle, so that the blood pressure is increased during its contraction and the venous hyperæmia results from the regurgitation which accompanies the ventricular diastole.

Simple retinal hemorrhage without retinitis indicates an increased blood pressure, or disease of the vessel walls, or a morbid condition of the blood, and sometimes all three conditions.

Gowers also states emphatically that the existence of angiosclerosis in the retina is a positive indication of a similar condition existing in the vessels of the brain, and that when accompanied by retinal hemorrhage it is a warning signal of impending cerebral apoplexy, especially when accompanied by high arterial tension.

One of the rare ophthalmic lesions is embolism of the central retinal artery or of one of its branches, and this is sometimes accompanied by hemorrhages into the retina. This has been known to be the first indication of an insidious endocarditis.

The same vascular changes are very frequently encountered in chronic nephritis and in diabetes. The tendency to hemorrhage which exists in so marked a degree in many cases of nephritis leads to extravasations in the retina. They are mainly in the nerve-fibre layer, are striated or flame-shaped, and follow the course of the vessels. They are of grave prognostic significance, and independently of the typical signs of retinitis albuminurica point to a not far distant fatal termination of the disease.

In diabetes the retinal hemorrhages appear as small rounded spots. They always occur if the disease has lasted a number of years, and are of unfavorable prognostic significance. The association of nephritis with the later stages of diabetes should not be forgotten, as well as the possibility of the dependence of the retinal hemorrhages on the latter disease, though here the hemorrhages are generally striated.

Dr. Herter, of this city, has made an interesting suggestion with reference to general arterial sclerosis, which may have a bearing upon the causation of certain cases of retinal hemorrhage in which the origin seems obscure. He states that in rare instances a general arteriosclerosis has its beginning in a series of acute seizures of gastro-enteritis, which leave behind them marked impairment of intestinal digestion. When this occurs in persons under twenty-five years of age, there can be little question that the gastro-enteritis stands in a causal relation to the alterations in the vessels and similar changes in the kidneys.

Germane to this suggestion are the remarks of Mr. Marcus Gunn before the Ophthalmological Society of the United Kingdom in 1898. In speaking of general arterial disease, he says: "In many of these patients the primary cause is probably a form of poisoning due to indigestion, a mal-assimilation and imperfect elimination producing disordered nutrition, and the blood-vessels suffer in consequence. Chronic alcoholism is undoubtedly a strong factor in causing this affection, for old age alone does not produce these changes. While confined to the arteries hemorrhages are very infrequent, but as the condition extends to the capillaries and veins hemorrhages are the natural result."

In many anæmic conditions there is a state of diminished blood-pressure which, after prolonged duration, leads to spontaneous retinal hemorrhage. In cases of blindness after sudden and great loss of blood the blood-pressure falls materially, and the elastic intra-ocular pressure forms an obstruction to the circulation in the retina, and as a result retinal hemorrhages are frequent. The loss of sight is here probably due to a hemorrhage within the optic nerve. With returning circulation vision is sometimes partially restored, and then occur the retinal hemorrhages.

Retinal hemorrhages due to a diseased condition of the blood occur in infectious diseases, in pyæmia and septicæmia, in profound pernicious anæmia, in malaria, and in cases of poisoning. While the diagnosis of infectious diseases is not dependent on the existence of retinal hemorrhages, they are frequent occurrences and of prognostic importance. They may occur at all stages and form an unfavorable complication, especially when found early in the disease; they indicate a condition of profound toxæmia. When hemorrhages occur early in acute septicæmia, a fatal termination may be expected in a few days.

The presence of retinal hemorrhages affords valuable evidence in the differential diagnosis between chlorosis and pernicious anæmia, for they are frequent in the latter and never occur in the former. An interesting diagnostic fact is that retinal hemorrhages rarely occur in the cachectic conditions resembling anæmia.

In 1886, in a paper read before the American Ophthalmological Society, I called attention to cases of intra-ocular hemorrhage occurring in persons of middle and advanced life who had been subjected to severe malarial poisoning, and my interest in the subject was revived during the summer of 1898 and 1899 by the number of such cases seen in our troops returning from Cuba. In these cases the blood was extravasated into the vitreous humor and occasionally in the aqueous humor, and was entirely unaccompanied by any sign of intra-ocular inflammation. The hemorrhages always occur suddenly and usually in the posterior part of the vitreous humor. They are generally unilateral, though they may be found in both eyes, and they appear during the febrile or congestive stage. The recurrences of these hemorrhages are spontaneous and frequent, and the process of absorption is always slow. They indicate a condition of profound malarial toxæmia, and the prognosis as to life is decidedly unfavorable.

In a paper read before this society in 1897 attention was called to the occurrence of retinal hemorrhages in typhoid fever, with reference to the stage at which they occurred and their prognostic significance.

In progressive pernicious anæmia the tendency to retinal hemorrhage is very marked. The extravasations are numerous, are striated or flame-shaped, and are most abundant round the optic nerve. The small ones may be absorbed, but the large ones remain and point to an unfavorable termination of the case.

In leucocythæmia retinal hemorrhages are almost an invariable symptom. They are widely scattered in the nerve-fibre layer and are of no particular significance. But if they occur in the optic nerve or vitreous their prognostic significance is unfavorable.

In purpura small retinal hemorrhages are of common occurrence, but more rarely they are subretinal and are then significant of a severe type of the disease.

In jaundice retinal hemorrhages are not common, and when met with they indicate a severe type of disease.

In all hepatic diseases small retinal hemorrhages are common, especially in cirrhosis, and are of no special importance. But in the severe types of cirrhosis and acute atrophy of the liver, large hemorrhages between retina and vitreous or in the vitreous are occasionally discovered, and their prognostic significance is most unfavorable.

Summarizing what has preceded, the following conclusions may be drawn from our experience:

1. Hemorrhages into and beneath the conjunctiva are of little importance in the young, as they usually occur as a result of violent muscular effort, as in coughing or long-continued sneezing. The vessels in the conjunctiva, having little or no support in the loose connective tissue, readily give way to paroxysms of violent expiration. In the aged they occur spontaneously and point to a general weakened condition of the vascular walls.

2. Hemorrhages in the interior of the eye are always of prognostic significance. In senile angiosclerosis

retinal hemorrhages are very frequent, and point significantly to the probable occurrence of cerebral apoplexy.

3. Recurrent retinal and subhyaloid hemorrhages in the young are of slight prognostic importance, especially if due to syphilis, whether inherited or acquired.

4. Hemorrhages into the vitreous in the young are of grave prognostic importance and point to the existence of general vascular degeneration.

5. In chronic interstitial nephritis and in diabetes retinal hemorrhages are of very grave prognostic significance, and independently of the presence of exudative retinitis point to a fatal termination of the disease. The mere presence of thrombosis of the central retinal vein with hemorrhages in the retina should arouse suspicion of the existence of albuminuria, and if this suspicion is confirmed by urinary analysis the prognosis in the case is more unfavorable than in those cases in which the hemorrhages do not exist.

GASTRECTOMY FOR ADENO-CARCINOMA; RECOVERY.

By H. BEECKMAN DELATOUR, M.D.,

SURGEON TO THE NORWEGIAN, LONG ISLAND COLLEGE, AND ST. JOHN'S HOSPITALS, BROOKLYN.

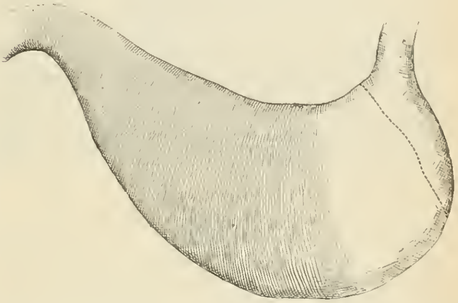
Since Schlatter, of Zurich, proved, by his successful case in 1895, that it was possible for a person to live after complete removal of the stomach, a number of operators have followed his example. It is only in those cases in which the growth is entirely limited to the stomach that gastrectomy is permissible, for in these it offers a chance for permanent cure.

The general indications and contraindications for the operation have so recently been considered by Richardson[1] that it seems hardly necessary to review them here. It is my desire in reporting this case to assist in developing the statistics of this procedure, and to add the following to the reported cases of gastrectomy:

Mrs. S——, aged twenty-six years, Norwegian, housewife, was admitted to the Norwegian Hospital, giving the following history: She became pregnant about a year before we saw her. Previous to this she had suffered with symptoms of dyspepsia, distress, vomiting, etc., but during pregnancy these became much more distressing and constant, and persisted even after the termination of pregnancy. During the three months intervening between labor and her admission to the hospital the vomiting continued, becoming more and more frequent, until finally all food was rejected within a few hours. Pain began and became more and more intense; there was a rapid loss of strength, and her weight had fallen from one hundred and forty pounds to ninety pounds. Examination revealed a tumor, visible to the eye, along the margin of the left costal cartilage; by palpation this could easily be located as at the pylorus.

On May 2, 1898, under ether anæsthesia, a four-inch incision was made, beginning one inch below the ensiform cartilage. The tumor was found to occupy and to be limited to the pylorus and stomach, and to be freely movable. It was my intention to do a gastroenterostomy, but the case seemed so favorable for complete removal of the disease that gastrectomy was decided on. The mass was dragged well into the wound and the omentum tied along the greater curvature with catgut sutures one-half inch apart. Then with scissors this edge of the stomach was cut free. With the fingers behind the stomach so as to direct the ligature carrier, the margin of the lesser curvature was freed in the same manner. Now the stomach was free from the duodenum to the œsophagus. A clamp was next applied to the duodenum, and the intestine was cut across one inch from the pylorus. The field of operation was carefully protected with gauze sponges before the œsophageal incision was made, and this was fortunate, for considerable fluid escaped from the dilated stomach. The entire pylorus, the whole length of the lesser curvature, and nearly the entire cardiac end of the stomach were removed, the incision extending well into the wall of the œsophagus (see diagram). This left the œsophageal opening somewhat larger than the duodenal, so a few silk sutures in double layer were used to reduce this opening. The duodenum was then sutured into the œsophageal opening with fine silk sutures. Thorough cleansing of the field of operation, a small strip of iodoform gauze introduced, and closure of the wound completed the operation. The time required for the operation was fifty minutes.

The patient reacted well, and on the following day had the highest temperature of her convalescence, 99° F. The pulse was 120. Rectal feeding was maintained for seven days. The nourishment consisted of peptonized milk and other predigested foods, the bowel being washed once in twenty-four hours. The gauze packing was removed on the fifth day, and as there was no discharge was not replaced. At the end of the week, feeding by mouth was commenced with one ounce of peptonized milk every two hours. As the patient bore this well it was rapidly increased and other articles of food added, so that at the time of her discharge from the hospital on June 5th she was taking the ordinary mixed diet.



The shaded portion represents the new growth; the broken line the section. At the pylorus the growth measured about one and one-half inches in thickness.

The only unpleasant feature of convalescence was hunger. Before operation the patient had begun to hate the sight of food, but within the first week after removal of the disease it was almost impossible to prevent her being fed by other patients, on the sly, so piteous were her pleadings.

After the patient left the hospital her condition continued to improve, so that at the end of six months she had gained thirty pounds. About six months ago she came to me complaining of nausea, but no vomiting. Examination revealed no evidence of a return of the disease. The cause of this nausea I discovered in September, when I visited her to ascertain her condition, over seventeen months having elapsed since the operation. At this visit I found her tending her two children, looking perfectly well and strong and seven months pregnant. Since then she has removed from Brooklyn, and I do not know what the termination of the pregnancy has been, nor what her general condition is.

In May, 1898, the specimen was presented to the Brooklyn Surgical Society, and in the following October the patient was presented. The growth was examined by Drs. J. M. Van Cott and A. Murray, and pronounced an adeno-carcinoma.

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[1] Boston Medical and Surgical Journal, September 28, 1899.

73 Eighth Avenue.

REPORT OF A SEVERE X-RAY INJURY.

By PATRICK CASSIDY, M.D.,

VISITING SURGEON TO THE W. W. BACKUS HOSPITAL, NORWICH, CONN.

The following is the history of an instructive case of *x*-ray injury. The patient was Dr. John Weldon, of Willimantic, Conn., a man forty years of age, weighing one hundred and eighty-six pounds, and six feet in height, a member of the non-resident staff of this hospital, and a surgeon of large practice. The main points of interest are the following:

(1) The patient during the time of exposure, although perfectly conscious, suffered no injury nor pain. (2) Eight days elapsed before the appearance of any injury, and then only a slight dermatitis. (3) The rapidity of the changes in the tissue involved a truly mummified condition in which the lesion appeared dead, yet had sufficient vitality to be indestructible. (4) To the touch the induration was hard and unyielding and not at all sensitive, but at certain points it would bleed on friction. (5) The severe paroxysms of excruciating pain upon the application of any poultice or wet dressing, showing the induration to be highly absorbent. (6) The marked constitutional symptoms and rapid wasting without much rise of temperature.

This is a brief synopsis of the case to which I was called on September 12, 1899. I found the patient prostrate upon his bed; temperature, 99° F.; pulse, 104; a mere shadow of his former self, having lost over forty pounds in weight, pale and emaciated; he had no appetite, and could not sleep night or day except under the influence of large doses of morphine. The inability to sleep was the result of a severe pain, burning in character, which he described "as if red-hot coals were applied to the part."

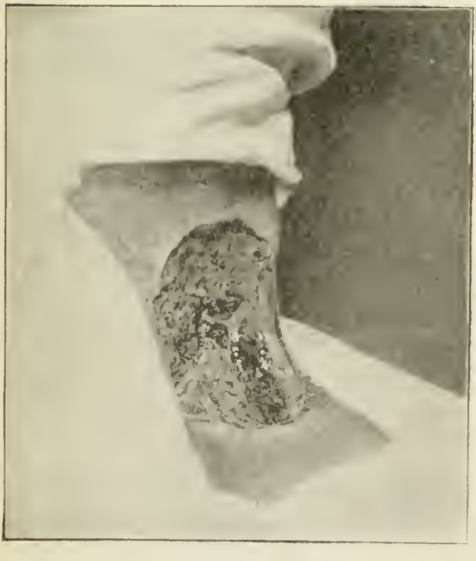

Fig. 1.

On examination I found in the left groin a large lesion, oval in form and five inches in the longer diameter. The centre of the lesion was at the point where the femoral artery emerges from beneath Poupart's ligament. The accompanying illustration (Fig. 1) represents the injury as I found it. The color was a very dark gray, except here and there were dots, slightly red; there was neither discharge nor odor; the skin on the edges appeared healthy.

The patient gave the following history: "On March 18, 1899, for the purpose of procuring a skiagraph of my left hip joint, I exposed the part for forty-five minutes at a distance of five inches from the tube, which was of medium vacuum, of a static machine the plates of which revolved two hundred and twelve times a minute. During the time of exposure there was no sensation of any injury nor of the slightest pain. My first sensation of any harm was an itching in both groins, a little more intense in the left, which occurred a week after. Inspection revealed an acute dermatitis in that region, which rapidly increased, so that at the end of the second week the erythema covered the lower third of both sides of the abdomen and upper third of both thighs. At this time the pain became so intense on both sides, but more on the left, that I was obliged to give up my practice and take to the bed. The inflammation went on to the formation of vesicles, then bullæ, and at the end of the third week the epidermis of the affected area came away. By the application of a powder of the stearate of zinc in about ten days the right side had entirely healed, and the left also, with the exception of a space in the groin as large as the hand, which presented a red, shining appearance and radiated a great amount of heat, with irregular, sharp, lancinating pain. About the middle of June, three months after the exposure, the surface of this lesion commenced to be covered by a thin yellowish membrane, at first easily removed, but only to return quickly, and which soon became so firmly adherent that I could not remove it.

"About July 1st the pain became so intense that rest or sleep could be procured only by large doses of morphine. On advice, I went into the country for a change and in search of rest, which proved so beneficial that the use of morphine was discontinued, but there was no improvement in the healing of the injury. August 1st, I returned to Willimantic with the hope of resuming my practice, having been encouraged by the relief from pain. This hope was doomed to disappointment, as in a few days the pain returned in a form more severe than ever, and again I was compelled to resort to morphine. Through the use of this drug I tried to continue my practice, but the system becoming tolerant, the pain more severe, in the last days of August, completely exhausted in body, broken in spirit from four and one-half months of suffering, I was again forced to take to the bed, and then the removal of the membrane was attempted by the use of the curette.

"During these months I consulted many experts in different cities, both by person and by mail, communicated with every physician of whom I had heard as having any experience with *x*-ray injuries, and read every scrap of literature I could reach on the subject. The consensus of opinions was, 'Use mild remedies, nature will effect a cure.' Upon this advice I have used almost every sedative ointment in the pharmacopœia and applied many lotions and poultices. Some of the ointments afforded relief, but any poultice or wet dressing of whatever nature, when applied, would in a half-hour or less produce the most agonizing pain, as if live coals of fire were placed upon the part."

Recognizing the gravity of his case, I advised his immediate removal to the W. W. Backus Hospital at Norwich, Conn., in which advice the doctor acquiesced, and he entered the institution on the following morning, September 13, 1899. At this time his pulse was 112; temperature, 99.2° F.; respiration, 26.

I hoped to avoid a radical operation by assisting the separation and causing the softening of the leathery tissue, and so ordered the application of Labarraque's solution 1:15. This at first was grateful, but pain was soon present and rapidly increased to such a degree that at the end of an hour the patient suffered such agony as I never before witnessed. The dressing was promptly removed, and a large dose of morphine gave the patient relief in the course of about three hours.

The hospital staff was called in consultation, and it was decided to remove the diseased tissue by the knife. The following morning, September 14, 1899, the patient was etherized, and in the presence of the staff I operated as follows: Beginning at a point one inch external to the femoral artery, I made an exploratory incision two inches in length down through the diseased tissue, which was as difficult to cut as sole leather, and found it, to my surprise, to be fully one and one-half inches in thickness and firmly attached to the muscles of the thigh by the coalition of the healthy with the diseased fibres. To remove the diseased tissue, I dissected the skin around the circumference of the oval lesion, and found that the induration extended nearly two inches under what appeared on the surface to be the line of demarcation; this making the external injury seven and three-fourths inches in diameter, as is shown by illustration (Fig. 2). Beginning at its external border, I dissected the lesion from its deep muscular attachments. In so doing, on the thigh I split the sartorius, pectineus, adductor longus, on the abdomen the external oblique and rectus. Poupart's ligament was exposed. The femoral artery, which was found to be embedded in the induration where it formed a complete sulcus, was carefully dissected from the diseased mass and stood out prominently from the floor of Scarpa's triangle uninjured, with small tufts of the diseased tissue adherent to its coats, which were clipped away later.

The time required for the operation was about one and one-half hours. The shock was slight, and the patient rallied very nicely. The first dressing was bichloride 1:2,000. The next day hot Labbaraque's solution 1:10 was substituted, to be changed every three hours, with irrigation daily with the same solution. This treatment was continued until September 28, 1899, when the wound was found to be in a condition to receive skin grafts, and saline dressing was used. On the morning of the 29th, by Reverdin's method two hundred and ninety skin grafts were placed in position and properly protected. On October 2, 1899, the wound was inspected, and it was found that fully eighty per cent. had taken. These had coalesced so rapidly that on the 8th of October the entire surface was bridged over, but on the 9th the new skin did not appear so healthy; to stimulate and prevent sloughing, a mixture of bovinine two parts and balsam of Peru one part was applied. This treatment had not the effect desired, and many of the dusting powders were tried, but in spite of any treatment, to my chagrin, many of the grafts sloughed.

From the day of the operation all pain ceased, and all opiates were withdrawn except small doses of deodorized tincture at night to give sleep, and this was discontinued September 26th. The only medicine administered was strychnine, gr. $\frac{1}{60}$ every four hours, and tincture of iron, 8 drops every two hours. Sleep, appetite, and strength rapidly returned, and the patient was able on the 10th of October to ride out. The wound had contracted and now was four and one-half inches in diameter; many of the skin grafts were still adherent. On October 14th he left the hospital and returned home fairly well, though walking lame.

The doctor visited me at my office on October 21st, and said he had been in active practice since his return and was fast regaining his strength. The wound had contracted to four inches, but every graft had sloughed. He was still lame. He was using a dusting-powder of aristol and zinc. I advised the continuance of the powder and again to try skin grafts.

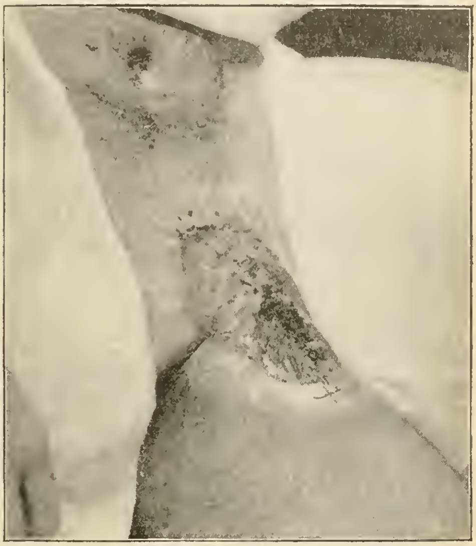

Fig. 2.

On December 6th he again visited me. The wound had contracted to two inches. He had not tried the grafts, as he considered them unnecessary. He had regained his former weight and strength. The lameness remained, but with some improvement and with the partial loss of important muscles, and the healing of the wound by cicatricial tissue. I fear some grade of permanent lameness, the only evil resulting from a serious injury which once aimed at destruction and death.

THE TONOMETER, A NEW INSTRUMENT TO DETERMINE THE AMOUNT OF BLOOD PRESSURE.

By HENRY L. K. SHAW, M.D.,

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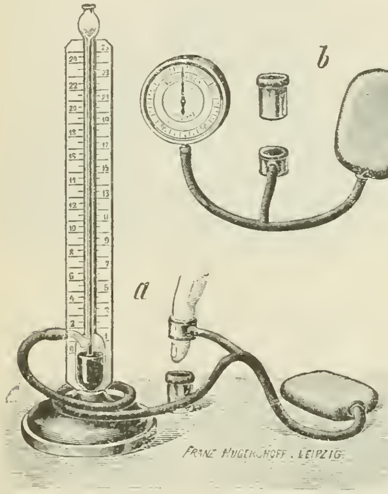
Dr. Morison,[1] in a recent address on the use of mercury in heart disease, spoke of the control of the blood current as being as necessary to the therapeutic domination of the body as the possession of a naval power is to the domination of the world. The main signal station of the arterial system is the radial pulse, which warns us of the approach and keeps us informed of any advance or retreat made by our enemy—disease. One of its most important junctions lies in the indication of the amount of blood pressure. Rightly to determine this is very difficult and requires practice and much experience. Recently ten American physicians, all of whom had spent a year or more in hospital or general practice, were given a number of cases in Nothnagel's clinic to examine with special reference to the arterial tension. The answers were so varied and contradictory that it seemed to have been mere guesswork, and yet some of these men had had large experience. The result can be taken as an index of the average physician's ability to estimate correctly the amount of blood pressure. Most physicians are content with noting the pulse frequency and rhythm, and make the common error of considering a bounding pulse to be one of high tension.

A number of appliances have been constructed to determine the amount of blood pressure, but most of them are complicated and require much skill to manipulate. Sahli[2] says that any improvement in the methods for registering the blood pressure is greatly to be welcomed owing to the extremely great clinical importance of arterial tension. The best-known later instruments are those of Mosso,[3] Hürtle,[4] v. Frey,[5] and v. Basch.[6] The sphygmomanometer of Basch is the only one that could be called a practical clinical instrument, and it has many faults. It consists of a metal manometer connected by rubber tubing with a small cup-like attachment called the pelotte. This instrument is air-tight and filled with air. The pelotte is placed directly upon the radial or temporal artery with sufficient pressure to stop the blood stream. The pressure is slowly reduced until the pulse is felt by a finger placed on the distal side of the pelotte. The instant this is felt the amount of pressure recorded by the manometer should be the amount of arterial blood pressure. The personal error here is liable to be great, as the accuracy depends upon the delicacy of the sense of touch, which we have shown is not always reliable, so that in reality very little is gained from the employment of this apparatus.



Professor Gärtner, who holds the chair of experimental pathology in the University of Vienna, demonstrated last June before the Gesellschaft der Aerzte in Vienna an instrument he had devised to estimate the amount of blood pressure. This instrument he called the tonometer.[7] It consists of a pneumatic ring, mercury manometer, rubber ball, and rubber tubing. The ring is the most essential part of the apparatus. This is made of metal, and is about an inch in diameter and half an inch in height. A hole is bored through one side, in which a small metal tube is inserted, which serves for the attachment of the rubber tubing. The inner surface is covered with a very thin rubber membrane, which is tightly wired above and below on the outer surface of the ring. A piece of rubber covers the outside, and no air can enter or escape save through the small metal tube.

The mercury manometer is very simple, consisting of a glass tube with a bulb filled with quicksilver. A scale is attached to the glass tube, which registers as high as 260 mm. The rubber tubing is T-shaped, with the ring, manometer, and rubber ball attached on the free ends. These parts are separable, and by the use of leather washers the joints are air-tight. Pressure on the ball forces air into the mercury bulb and rubber ring, raising the mercury in the one and distending the membrane in the other. With sufficient pressure the lumen of the pneumatic ring will become obliterated. To regulate slowly the pressure on the ball there is a small wooden press with a thumb-screw attachment, and the ball is placed inside this press.

Professor Gärtner has designed a metal manometer which is more convenient for transportation, and the whole apparatus can be carried in the pocket. As the metal manometer is not always accurate, its reading can easily be corrected by a comparison with the mercury tube. This is done by removing the pneumatic ring, attaching the small manometer, raising the quicksilver to the height of 100 mm. in the tube, and seeing the amount registered by the metal manometer.

To ascertain the amount of arterial tension the pneumatic ring is slipped over the second phalanx of one of the fingers or the first phalanx of the thumb. It must not cover a joint and is so placed that the finger can easily be bent. The end phalanx is then made anæmic by slipping a small rubber band over the finger tip and rolling it down the finger as far as the ring. A pressure is now made upon the rubber ball stronger than the arterial blood pressure. The rubber band is removed and the finger remains anæmic. The pressure on the ball is slowly and evenly released until the finger tip becomes hyperæmic, and the amount of pressure is read on the manometer. The hyperæmia is very easy to recognize, and owing to the compression of the veins the return flow is hindered and the finger tip becomes intensely red.

The principle of the apparatus is as simple as it is ingenious. The digital arteries are so compressed by the pneumatic ring that no blood can pass through. This is shown by the finger tip remaining anæmic. The pressure in the ring is gradually reduced, and the instant the pressure in the ring is equal to or a little less than the pressure in the arterial system the blood will flow through the arteries and the finger tip will become hyperæmic. The manometer records exactly the amount of pressure exerted upon the finger, so when the finger tip becomes red the amount registered by the manometer is approximately the amount of blood pressure in the digital arteries. These arteries are admirably adapted for the purposes of the tonometer. They are close to the surface and near the bone, and so can be completely compressed by the pneumatic ring. The epithelium over the arteries is generally thin and soft, and cases in which the epidermis is thickened enough to interfere with a correct reading are very rare. The great advantage this instrument possesses is in the substitution of the sense of sight for the sense of touch. The instant the finger tip becomes red the patient experiences a marked pulsation and can, if intelligent, control in some measure our sense of sight. I have made many correct determinations upon myself without rendering the finger anæmic, and depended solely on feeling the pulsation.

The ease and rapidity of application and determination make the tonometer a thoroughly practical instrument. The entire process need take but fifteen to thirty seconds. It is very easy to apply on children from earliest infancy. The measurement may be taken with the patient sitting up or in the recumbent position. It is necessary, however, that the hand be on the same level as the heart, for well-known hydraulic reasons. I have found that the difference in blood pressure in my hand between the sitting and standing positions registers nearly 30 mm. This shows the delicacy of the tonometer. The patient must rest quietly during the estimation, because coughing, straining, etc., raise the blood pressure. From a vast number of trials Professor Gärtner has found that the normal blood pressure as registered by the tonometer is between 100 and 130 mm. Anything above or below these figures indicates an abnormal pulse tension. The highest reading obtained as yet by Professor Gärtner is 240 mm. A number of physicians are now working on the blood pressure with the tonometer, and within a few months many articles bearing on this subject will appear in the German periodicals.

My attention was directed to the Gärtner tonometer in the first clinic held by Professor Nothnagel last October, where he demonstrated the use of the tonometer and recommended it very strongly. I subsequently learned that it was employed as a matter of routine in his clinic, in which his assistants warmly indorse its use. It is also used in the medical clinic of Professor Neusser. Before the recent congress in Munich, Professor v. Ziemssen said that the determination of the blood pressure was taken systematically in his clinic, and often was of diagnostic value. Three American physicians who spent some weeks this past summer studying the treatment of heart affections at Nauheim have told me of the regular use of the sphygmomanometer by Professor Schott and his assistants.

The object of this article is to call the attention of the profession in the United States to the Gärtner tonometer, and to point out a few of the conditions in which it could be employed with advantage. Broadbent,[8] in his classical work on the pulse, speaking of high tension, says: "Unduly high pressure in the arterial system or high tension of the pulse is a condition worthy of careful attention and study. It explains many of the forms of failing health at and after middle age through lesions of the brain and heart. It points out tendencies which later result in serious illness or fatal disease, and its recognition often directs us to measures by which ailments may be relieved, and enables us to foresee and sometimes to avert premature death."

A most important condition to recognize early is the so-called idiopathic cardiac hypertrophy. Seitz, of Zurich, was the first to describe this disease, which he found very frequently among the peasants in Switzerland, who are accustomed to climb mountains, carrying heavy loads. If care is not taken, it will finally result in relative valvular lesions and insufficiency of the heart muscle with its accompanying anasarca, ascites, and passive congestions. In the stage of compensation there is always a high-tension pulse. There is little doubt that many of our active college athletes develop this condition. Professor Gärtner[9] has made some interesting experiments upon bicycle riders. A long ride with severe exertion causes only a slight increase in the pulse tension if the rider is in good training. On the other hand, it was found that the riders who were not in training had after a short preliminary rise a prolonged and marked low arterial tension. This opens an important field for further investigations.

In arteriosclerosis we have a loss of elasticity in the vessel walls, and in order to maintain the circulation the left ventricle works harder and hypertrophies, and the blood pressure is greatly raised. The importance of recognizing the amount of pulse tension is well known, and in advanced cases it is impossible to determine it from the radial artery. The tonometer renders great service in these cases, as the digital arteries are so small that even in a high grade of general arteriosclerosis there is no difficulty in making a correct estimation.

In nephritis the increase of tension is constant and forms one of the leading symptoms. Recently in Nothnagel's clinic I saw two cases of chronic contracted kidney which will illustrate the diagnostic value of the tonometer. One was a stout individual who was passing daily from 1,800 to 2,600 c.c. of urine with low specific gravity. A trace of albumin was present, but very faint, while repeated examinations failed to reveal casts. Owing to the extremely thick chest walls the apex could scarcely be felt, the heart dulness was not accurately mapped out, and the heart tones were not distinctly heard. The pulse was small, and the tonometer registered a blood pressure of over 200 mm., and thus confirmed a diagnosis otherwise presenting some difficulties. The other case was similar in many respects, only the heart dulness and sounds were obscured by a marked emphysema. Here the blood pressure was 225 mm. The tonometer may render a diagnosis of chronic nephritis without a microscopical examination of the urine. The great importance of this disease and of its early recognition to life insurance companies suggests the employment of the tonometer as a part of the routine in all their medical examinations.

In chronic lead poisoning there is always a high-tension pulse, and the tonometer may here be of diagnostic value.

An increase in the volume of blood brings about a higher arterial tension, and in such cases a copious bleeding would be beneficial. If this condition continues the left ventricle becomes hypertrophied. Broadbent[10] claims the high tension in acute nephritis is due to an increase in the blood volume caused by retention of the urinary water. This might explain the high tension in the "Munich beer heart," especially when a certain subjective sense of pressure is not frequently relieved by the beer drinkers.

Capillary resistance is a most important cause of increased pulse tension. A lack of oxygen in the red blood cells causes a higher blood pressure. This is the case when carbon dioxide is in excess and accounts for the high tension in cyanosis and dyspnœa. In Professor Neusser's clinic the high-tension pulse in pleurisy with effusion is taken as the indication when to aspirate.

Foster[11] has proved experimentally that many drugs and poisons injected into the blood raise the pressure by increasing the capillary resistance. The products of auto-intoxication and imperfect metabolism circulating in the blood act in the same way, and the origin of some obscure symptoms may possibly be traced by the presence of a high-tension pulse.

The tonometer is useful to control the effects of certain drugs and to indicate the line of remedies required in particular cases. It thus favors a rational use of therapeutic measures. The knowledge obtained by its employment can be utilized in the prophylaxis of many disorders. The value of recognizing high or low arterial tension in the prognosis of certain diseases is too well known to be repeated here.

In conclusion I would say that the state of the pressure in the arterial system plays an important rôle in medicine, and it is not always recognized by the average physician; that in the Gärtner tonometer we have a simple, practical, and accurate clinical instrument to determine the amount of arterial tension; that its value lies not only in scientific investigations, but also in the daily practice of the general practitioner.

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MUCINÆMIA, AND ITS RÔLE IN EXPERIMENTAL THYROPRIVIA.

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It is a well-established fact that an organism deprived of its thyroid, either through disease (myxœdema, cretinism) or through an operative removal of the gland, is suffering from some kind of an auto-intoxication. Some substance, which has either been previously transformed by the cells of the thyroid, or else neutralized by some other substance produced by the gland, accumulates in its absence in the blood and poisons the organism. But what is the nature of the substance or substances? This question has hardly been approached yet experimentally in a direct way. The discovery of an increased amount of mucin in the tissues in myxœdema as well as in thyroidectomied animals led Horsley and others to suppose, *a priori*, that the symptoms of cachexia thyropriva may be due to accumulation in the blood of mucin, which is normally transformed by the thyroid. It seemed to me all the more desirable to test the matter experimentally, as I was unable to find in the literature any physiological or pharmacological study of the influence of mucin on an organism. I shall limit myself here to an epitome of my work. A more detailed account of it, together with the tracings and other experiments bearing on the subject, is now in course of preparation and will appear elsewhere.

In order to study the relation between mucinæmia and the thyroid I availed myself of the fact that rabbits stand thyroidectomy a great deal better than carnivorous animals. Until lately it was universally accepted that thyroidectomy was not fatal to rabbits. Gley in his work endeavors to show that the operation is fatal to rabbits if all the parathyroids are also extirpated. But even with him only a small percentage get an acute cachexia, and these die not later than within three days after operation. The rest either recover entirely or emaciate and die a few months after the operation. I have obtained identical results in my simple thyroidectomies on rabbits. A few of the animals die within twenty-four to forty-eight hours, but by far the greater part survive. Taking this as a basis I did the following experiments: A solution of mucin in one-per-cent. sodium carbonate was injected hypodermically into eight normal and nine thyroidectomied rabbits. The former remained healthy, while of the latter only one survived. Some of the thyroidectomied rabbits died within forty-eight hours after the injection, while they had previously survived the thyroidectomy from eleven to twenty-five days. Further to study the influence of mucin on the nervous system of a normal animal, I examined the influence of an intravenous injection of a mucin solution on the blood pressure of the dog. The experiments showed uniformly a fall of the blood pressure, even after both vagi and the splanchnic nerve were cut. Subsequent stimulation of the splanchnic again increased the blood pressure. The fall was consequently due to the direct depressing action of mucin on the vasomotor centre in the medulla.

The conclusion to be drawn from this work is, that mucin accumulated in or introduced into the blood of a normal organism produces a certain depressive effect upon the central nervous system; that it is not fatal to a normal organism, and is decidedly fatal to one deprived of its thyroid. Mucinæmia then, one may conclude, is the pathological condition of an organism resulting from the absence of the thyroid function; but this conclusion does not exclude the possibility of other abnormalities arising from the same cause.

GONORRHŒA IN ITS RELATIONS TO THE MALE ADNEXA.[1]

By E. WOOD RUGGLES, A.M., M.D.,

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A quarter of a century ago it probably seemed as if the last authoritative word on the subject of gonorrhœa had been said. But just as the discovery of the tubercle bacillus, by Koch, gave a new and almost violent impulse to the study of tuberculosis, simplifying its diagnosis, explaining its symptoms, and giving hopes —alas, not yet realized!—of a successful specific treatment, so the discovery of the gonococcus by Neisser, of Breslau, in 1879, has wonderfully broadened and deepened our knowledge of the character of gonorrhœal processes and led to really remarkable results in their treatment.

For example, many cases, such as were formerly diagnosed as gonorrhœa and supposed to be rapidly cured by some new method of treatment, are now known to be simple urethritis, caused by leucorrhœal contagion, or even by decomposing secretion under a tight foreskin.

On the other hand, the previously unsuspected virulence of the gonorrhœal infection has been clearly established, by the discovery of the gonococcus in suppurating buboes, in inflamed joints, in suppurative epididymitis, in palmar abscess, and recently in the endocardium, in two cases of death from gonorrhœal endocarditis following gonorrhœal rheumatism.

But my subject limits me to the consideration of the effects of gonorrhœa upon the "male adnexa," if I may be permitted thus to christen the testicle, epididymis, vas deferens, ejaculatory duct, seminal vesicle, and prostate gland. Acute inflammation of these organs may occur at any period of the disease, though, as a rule, rather late than early. This is to be explained, not merely by the somewhat later development of posterior urethritis, but more particularly by the minuteness of the ejaculatory and prostatic ducts and their oblique opening into the prostatic urethra, which without doubt causes their occlusion during the hyperæmic stage. As the swollen membrane loses its turgidity, the mouths of the ducts become more patulous and the entrance of germs less difficult. In cases which occur early, imprudence on the part of the patient, such as coitus, bicycle or horseback riding, drinking, etc., are at fault, or else meddlesome treatment—for example, the injection of astringent, non-gonococcicidal remedies, passage of sounds, rectal massage.

Inflammation of the testicle itself caused by gonorrhœa is comparatively rare, or, if it does exist, is of minor importance, compared with the extreme severity of gonorrhœal epididymitis. The symptoms of the latter are what might be expected from the peculiar conditions—the swollen tissues being constricted from without and thus caused to press with double force on the hypersensitive testicle. The literature of epididymitis is easily accessible to all, so I will only pause to consider its most far-reaching consequence, in the tendency to obliteration of the vas deferens at some portion of its lumen. Occurring on one side only, this would matter less, as the diminution in number of the spermatozoa in the semen, oligozoöspermia, rarely causes sterility. But when epididymitis has affected both sides, azoöspermia and absolute sterility are the rule. Finger collected the histories of two hundred and forty-two cases of bilateral epididymitis, in two hundred and seven of which, eighty-five per cent., the semen contained no spermatozoa.

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[1] Read before the Rochester Pathological Society, December 15, 1899.

He also found, in his investigations concerning sterility, that in several cadavers one or both ejaculatory ducts had been obliterated at or near their opening by a posterior gonorrhœal urethritis. When bilateral this condition would, of course, cause sterility. The sharp pain at the instant of ejaculation, which we not infrequently meet, is without doubt in many cases referable to the impingement of the semen upon the mouth of the duct, pathologically narrowed in the same manner. This pain, in some cases, produces a reflex disturbance of the ejaculatory act and its sudden inhibition, so that little or no semen leaves the urethra, and thus may also give rise to sterility.

Funiculitis, or inflammation of the spermatic cord, may cause obliteration of the vas deferens quite independently of epididymitis, and, if bilateral or in connection with epididymitis of the opposite side, also produces sterility.

Acute prostatitis is a much rarer complication of gonorrhœa than epididymitis, though without doubt it is often unrecognized, the symptoms of its milder forms being the same as those of posterior urethritis—frequent micturition, tenesmus, pain at the neck of the bladder, radiating into the scrotum or thighs, dull pain or uneasy feelings in the rectum, etc. With rest in bed, elevation of pelvis, hot rectal douches, and calming suppositories these cases can generally be confined to the follicles of the gland and do not go on to suppuration. If this does occur and breaking down in some direction seems inevitable, it is better to cut down upon the abscess through the perineum, rather than run the risk, however slight, of a rectal or urethral sinus.

Chronic prostatitis is a far more frequent disease than is generally believed. It is my conviction that sixty per cent. of the cases of chronic gonorrhœa which have run for a year or longer (excluding those with pronounced stricture), especially those cases which, seemingly cured, recur after coitus, use of beer, etc., depend upon the prostate for their continuance by obtaining from it a fresh supply of pus and inflammatory bacteria each time that the urethra has been rid of their presence. In my investigations these bacteria have rarely proved to be gonococci; they are far more often the ordinarily non-pathogenic colon bacillus or the diplococcus urethræ, which we may be sure that the most virgin urethra here present is supporting at this moment.

This is a question to which too little study has been given—that of the virulence which some non-pathogenic bacteria develop under certain conditions. The bacteriologist devotes practically his whole attention to the pathogenic bacteria and to newly discovered forms of germ life, and does not interest himself in such problems as the changed life of the colon bacillus; first, when inhabiting the large intestine as a peaceful and probably helpful guest, and again in an acute attack of cholera morbus, or as an inflammatory, pus-producing germ in the urethra, the bladder, the kidney, or the prostate.

The diplococcus urethræ presents the same anomalies. Ordinarily perfectly innocuous to the urethra, it often is the agent which keeps up a post-gonorrhœal discharge for years, and it is a question whether it can ever be completely dislodged from the prostate which it has once invaded.

The pathology of prostatitis has been verified by only a few autopsies. Not being a fatal disease, material could be obtained only by dissecting every prostate in a large number of cadavers. Finger pursued this course for several months at the Rudolf Hospital at Vienna, and from all the autopsies collected only a dozen cases. He found two kinds of lesions. In the one the follicles were cystic and filled with an enormous amount of desquamated proliferating epithelium. In the second group the lesions were similar, with the addition of numerous pus cells. This corresponds to what we should expect from the changed secretion, only I am positive that in the latter group nearly every case would have furnished a fine culture of colon bacilli or diplococci urethræ, or both, had they been bacteriologically examined. In regard to the first group, I must say that, in my experience, in all the cases in which symptoms seemed to be produced by the prostate, its secretion contained numerous pus cells. In my opinion group first consists of cases of true prostatorrhœa and not prostatitis.

The physical diagnosis of prostatitis is not easy without long practice by the finger, and even then it seems as if each observer has a different idea of what the feeling of a normal and of a diseased prostate is. To my finger the normal prostate feels like a smooth, rather resistant, firm, rounded body, ordinarily as large as an average horse-chestnut, with a longitudinal furrow separating its lower surface into two lobes. The alterations which I find associated with disease are principally in the line of loss of firmness, a doughy, boggy feeling, not as a rule general, but forming compressible areas—"Dellen," the Germans call them—between hummocks of normal or hardened tissue, unilateral as a rule, though frequently found in both lobes. Out of these "Dellen" the discharge can often be literally milked. Frequently, however, no change in its contour or firmness is ascertainable, and yet the expressed secretion contains abundant pus and bacteria.

The microscopical finding is then the true arbiter as to the condition of the prostate, and without it no satisfactory results can be accomplished. This is no less true of the diagnosis and treatment of acute and chronic gonorrhœa in general. The indications change with the alterations in, or absence of, bacteria, and there is not the slightest doubt that it would be exactly as just to the patient to treat any febrile disease without the clinical thermometer as to treat gonorrhœa without the frequent, almost daily, use of the microscope. In fact, given the enormous prevalence of the disease and the widespread evils which result from chronic gonorrhœa, including the martyrdom and unsexing of innocent wives, the consequences are perhaps worse. And, after all, the pulse and feel of the patient are far more accurate indications of the presence or absence of fever than are the looks and consistency of a urethral discharge guides as to its bacteriological condition.

The prostatic secretion, if diseased, has lost its fat granules and generally the amyloid bodies, and shows a considerable amount of pus, an increased number of epithelial cells, often of the pear-shaped type, and as a rule motile bacteria.

This fact I have not seen mentioned elsewhere and attribute it to the omission of closely approximating the cover-glass and slide before completing the examination. If this be done, little specks will be seen, about pin-point size, or moving lines which either visibly oscillate, make short excursions, or else show they are in motion only by appearing at one instant as dark specks and then a few seconds later as brilliant, light-refracting points, this being caused by their leaving and approaching the point of exact focal distance. This phenomenon can be seen only by following intently one particular speck. On staining, which is difficult because of the prostatic secretion not adhering well to glass, they generally prove to be diplococci urethræ or colon bacilli, or both.

Following are the abridged histories of several cases in which the prostate gland was the real *corpus delicti*, though not previously recognized.

B. M——, salesman, twenty-six years old; heredity and general health good. His first gonorrhœa, in 1891, lasted four or five months. The second, in 1893, lasted six or eight weeks. The third, in 1896, lasted acutely only three or four weeks, but since that time he has had recurrence of the discharge after each coitus and after violent erections. He has been the whole time under treatment. In November, 1897, a St. Paul physician performed meatotomy so effectually as to produce hypospadias, an error generally committed, even by specialists. No improvement, but increased discharge, followed the operation.

Status præsens, October 12, 1898: The rather scanty, muco-purulent discharge contains pus, epithelium, and a few pus cells enclosing gonococci. Urine, first glass cloudy, second clear. Under treatment with protargol he made good progress for two weeks. Then he suspended treatment for two days and had a nocturnal emission. He returned with a thick, ropy discharge full of pus cells.

After two weeks more of similar history, on November 14th, I examined the prostate and found the right lobe boggy and expressed considerable secretion containing numerous pus and epithelial cells. With massage and irrigations of permanganate the character of the prostatic secretion rapidly improved, till on November 20th there were no pus cells. The night of the 21st he had an emission, and next day the prostatic secretion again showed pus. On the evening of the 30th he drank eight or ten glasses of beer. Next morning there was no discharge, only a slight moisture of the urethra. Removed with platinum loop, it showed some pus, epithelium, and fibrin, no bacteria. The first glass of urine was clear, with few filaments; the second clear, no filaments. He left the city for a business trip of several weeks. While away he sent a slide with specimen of discharge after first intercourse. On staining, it contained principally epithelium and almost no pus. Subsequently he practised coitus repeatedly with no return of discharge at all.

L. I——; health and heredity good. He had gonorrhœa in 1887, 1890, 1893, and the last time in 1894. Since then he has always had a discharge, which diminishes on treatment but never disappears. His wedding-day was set for Thanksgiving, one month hence. With difficulty I persuaded him to postpone it till New Year's, hoping in the mean time to gain his consent to a still longer delay.

Status præsens, October 23, 1898: He has a muco-purulent discharge; it contains pus, epithelium, and fibrin, and is swarming with secondary bacteria; no gonococci. First glass of urine was cloudy, the second clear. Under treatment with bichloride of mercury the bacteria disappeared, and the discharge was aseptic for six days, when unmistakable gonococci appeared, these having been undoubtedly kept isolated in the fundus of the Littré glands or in the prostate by the superior power of resistance of the secondary bacteria. The gonococci not disappearing so speedily as desired, I massaged the prostate and obtained a secretion containing many pus cells and some gonococci. Massage and irrigations got rid of the gonococci in sixteen days. For some time afterward the very slight watery discharge contained extra-cellular diplococci, proven non-gonorrhœal by Gram's stain. With prostatic massage, irrigations of permanganate, and posterior instillations of protargol, this case progressed gradually to perfect recovery.

As a medical curiosity I might mention that, though my patient's fiancée knew of his having gonorrhœa, they both absolutely refused to postpone the wedding later than New Year's, but consented not to practise intercourse till I should permit it. Four weeks after their marriage his condition had so improved that I was able to allow the practice of *coitus condomatus*. He has now for some time abandoned the use of condoms, without infection of his wife, and remains perfectly well himself.

M. W—— was also a candidate for matrimony. He had acquired gonorrhœa for the third time in November, 1898. Status præsens, February 8, 1899: He feels smarting in the urethra, sometimes itching. The lips of the meatus are glued together. The discharge, muco-purulent, contains pus, epithelium, and a few intracellular gonococci. First glass of urine is cloudy and contains filaments; second cloudy. The prostate is boggy and I expressed considerable secretion containing pus and epithelial cells.

Treatment: Massage of prostate, permanganate irrigations, anterior injections and posterior instillations of protargol, gradual dilatation to 34° French during two and one-half months. The patient was married in May. He is perfectly well now, as is also his wife.

A further indirect effect of chronic prostatitis is the production of dead spermatozoa, necrospermia, and consequently sterility. Fürbringer discovered the fact, subsequently confirmed by Burckhardt and Finger, that the spermatozoa in the seminal vesicles are motionless, and that the admixture of the acid prostatic secretion is necessary to impart motility and thus render them capable of fructifying the ovum. In these cases of prostatitis, attended with the formation of pus, the reaction becomes neutral, and with considerable pus alkaline. These patients have necrospermia and are sterile.

Seminal Vesiculitis.—Owing to the length of this paper I must refer my readers for a full description of the etiology, pathology, symptoms, and treatment of this disease to Dr. Eugene Fuller's most excellent work on "Disorders of the Male Sexual Organs," in which he handles the subject in a masterly manner. According to him, gonorrhœa is the cause of almost all the cases. He certainly errs, however, in practically denying the existence of chronic prostatitis and attributing these cases to perivesicular inflammation. In several of my cases the contents of the vesicles, as obtained by massage, were absolutely normal, with no pus cells whatever, and yet the prostatic secretion was frankly purulent.

The histories of two cases, one acute, the other chronic, will serve to give a fair clinical picture of many phases of the disease:

G. H——, twenty years old; heredity and previous health good. His last coitus was on April 3d. He noticed smarting April 7th, and discharge April 9th. Status præsens, April 1, 1899: Small penis, very long foreskin; profuse, thick, yellowish discharge, containing pus, epithelium, and a moderate number of gonococci. Urine, first and second glasses cloudy, third clear. He has great pain on urination, and painful erections. Treatment: irrigation with permanganate 1 : 6,000, protargol injections 1 : 200. Part of the irrigation fluid entered the bladder, though I was trying to confine the irrigation to the anterior urethra. I believe that this atonicity of the external sphincter accounted for the development of posterior urethritis so early in the disease. Under this treatment all the symptoms improved for a few days. During this time he noticed blood on urination, and I found just within the meatus and occupying the lower half of the anterior one-eighth inch of the urethra an ulcerated surface, covered with a thin, whitish membrane. He already had enlarged inguinal glands in both groins, too indolent in character for chancroid, and I believed I had to do with a urethral hard chancre, acquired through a previous coitus. Following the Vienna school, I used no treatment, but awaited the development of secondary lesions. The ulcer healed quickly; no roseola nor other secondary manifestations have occurred. (Recently I have seen another case of acute gonorrhœa with a similar lesion in the urethra, and am awaiting the development of secondary symptoms or the contrary to see if a new symptom of acute gonorrhœa should be described.)

At the end of the first five days of treatment he felt so much better that, contrary to my directions, he took a long bicycle ride. The next day there was an increased discharge, with more gonococci, and both glasses of urine were frankly cloudy. Two days later he had chills and fever, 99.8° F. Also complained of a muscular spasm in the penis, with sudden stoppage of urination. The next day, April 24th, he felt considerable pain after the irrigation, so I instilled ♏ xxx. of a two-per-cent. cocaine solution into the posterior urethra. This seemed to accentuate his distress, and he ejected it immediately, following which came a gush of pus. Microscopical examination showed this to contain a mass of pus cells, some epithelium, and many spermatozoa. The diagnosis was made at once: acute seminal vesiculitis, gonorrhœal in character, for a fair number of these pus cells contained gonococci. The temperature was 99.8° F.; pulse, 94. On gentle rectal palpation the right seminal vesicle proved to be dilated to the size of a small hen's egg, smooth and hot. I put him to bed, elevated the hips, drew the scrotum well over on to the pubes, and gave him urotropin gr. vi. t.i.d., and suppositories of opium, belladonna, and hyoscyamus every four, then every six hours.

April 25th: He feels better. There is no discharge, but the meatus is moist (the discharge generally stops entirely till the acute attack is over). There are less tenesmus and sudden stoppage of urination. Temperature, 101.4° F.; pulse, 98. He was given quinine, gr. viii. at 9 A.M.; gr. vii. at noon daily.

April 26th: Temperature, 9 A.M., 98° F.; 5 P.M., 98.6° F. He feels better and has less pain on urination. The right seminal vesicle is a trifle smaller and is not hot.

April 27th: Temperature, 98.4° F. There is a quite profuse discharge, containing pus, epithelium, fibrin, and numerous diplococci, none intracellular. Both glasses of urine were cloudy.

April 29th: Temperature, 98.2° F. He has no pain except in the glans. The urine is much clearer; it contains pus, epithelium, colon bacilli, and gonococci (many of them extra-cellular, but verified by Gram's staining). The patient is up and around the house part of the day.

April 30th: His condition is the same, save that the seminal vesicle is smaller; it is not larger than the end of the second finger.

May 2d: He has improved considerably. There is some pain in the glans on urinating, with much tickling in the urethra. The seminal vesicle is about the same size. I used some pressure in examination, and at the end of urination there was a considerable gush of grayish, inspissated matter, consisting of pus, some crystals of calcium oxalate, and spermatozoa.

From this time on he gradually improved, a hot rectal douche (with Kemp's tube) assisting greatly in restoring tone to the vesicle, and a little later I employed massage, beginning very gently. The patient was discharged June 24th. He returned for examination August 7th, after a week of beer drinking and furious bicycle riding. There was no discharge; the first and second glasses of urine were clear as crystal and contained no filaments.

Chronic seminal vesiculitis. I shall make only one remark in preface to this interesting case, that the difficulty of recognizing the normal or only slightly altered seminal vesicle at all with the examining finger is as much more pronounced over that of finding the prostate as is the normal ovary more difficult to palpate than the uterus. With large development of adipose tissue it becomes almost impossible.

W. W——, twenty-nine years old. Heredity neurotic; the patient was formerly fairly healthy, though a hypochondriac. He first had gonorrhœa in 1894. The discharge lasted several months; he was then treated by dilatation with sounds, which was followed by epididymitis. He has never been well since, and has morning drop daily.

Status præsens, March 19, 1899: He micturates five or six times between meals, rarely after being abed. When the desire comes, he feels a stinging sensation, and if situated so that he cannot urinate, the pain increases, even to making him faint. He showed several symptoms of general neurasthenia which I will not enumerate. The morning drop contains pus, fibrin, and epithelium, but no bacteria. The urine is slightly alkaline; first glass cloudy with filaments, second slightly cloudy. The centrifuge showed pus, epithelial cells, particularly pear-shaped and active bacteria. The next day he appeared to be suffering from an attack of cystitis. Micturition occurred every half-hour in the forenoon, and every fifteen or twenty minutes in the afternoon, till he was fairly exhausted. As he said, "the urine fairly shoots out," sometimes before he was ready. He has stinging, burning pain in the glans after urination.

Suspecting the seminal vesicles or prostate to be at fault, I examined them gently per rectum and found the right seminal vesicle as large as a small hen's egg and extremely painful. I expressed part of the contents, and had the patient urinate in a conical glass. There appeared a sediment seven-eighths of an inch deep, composed of the characteristic moonstone-like bodies, varying from the size of a pinhead to that of a small pea. Examined microscopically, these consisted principally of pus, motionless spermatozoa, and a few epithelial cells. The massage was followed by instillation of a one-half-per-cent. solution of nitrate of silver into the posterior urethra.

March 22d: He feels considerably better, and urinates less often. The instillation of silver was repeated.

March 24th: He is very much improved, and urinates only once or twice between meals. Last evening he did not urinate from 6:30 till 11 o'clock, and then had no tenesmus. Massage was done, with about the same quantity of moonstones. This was repeated every four, then every six days till April 18th, at which date the amount of moonstones was very much smaller and the bladder irritation had ceased. The patient then went on a business trip for two months. During the first weeks he felt well. After six weeks the irritation returned, and he had a constant desire to urinate by day, but none when abed.

June 21st, at his return: There was a small urethral discharge containing pus, epithelium, and fibrin; no bacteria. Massage resulted in giving one inch of moonstones in the urine. There were much pus and some spermatozoa in them. He received an irrigation of permanganate, 1:6,000.

June 22d: He feels about the same. There is a gush of pus after irrigation, probably from the seminal vesicles, though no spermatozoa were visible. Urine, first and second glasses cloudy, with much pus and many active bacteria. Urotropin, gr. vi. t.i.d., was given.

June 23d: Improvement; he urinates only two or three times between meals.

June 25th: Massage showed a much smaller quantity of moonstones and pus relatively less.

On returning from my vacation (June 28th to July 17th) the patient informed me that he had felt well during the whole time. But very little material could be expressed from the seminal vesicles, and its character was greatly improved. On July 18th, 19th, and 20th he received irrigations, and on July 23d massage and irrigation.

He then went again on a business trip, and wrote me nearly two months later, to say that he had no tenesmus or irritation whatever.

As might be expected, inflammation of the seminal vesicles produces important, yes, vital, changes in the fructifying power of the semen. These organs are not merely storehouses for the semen; they are also glands and supply an intrinsic part thereof, which serves to dilute the testicular product and preserve the viability of the spermatozoa. This is proved by the fact that in both the acute and the chronic form of seminal vesiculitis the spermatozoa in the ejaculated semen are found to be dead, or at least motionless and thus incapable of performing their function.

THE CHEMICAL RELATIONSHIP OF COLLOID, MUCOID, AND AMYLOID SUBSTANCES (A PRELIMINARY COMMUNICATION).[1]

By P. A. LEVENE, M.D.,

NEW YORK.

The morphological study of diseased organs reveals frequently the presence in the cells and tissues of the latter of substances which do not occur in the same places of the normal tissues. The nature of the substances can be detected by microscopical investigation only very rarely. The microscopical technique is inadequate to disclose the chemical nature of most of the "pathological substances," and they are then identified by their physical properties. And yet only a thorough knowledge of their chemical constitution can elucidate the process of their formation and their relationship to the normal cell constituents.

The substance predominating over any other one in the protoplasm, and most peculiar to it, is one of a proteid nature. It is, therefore, natural to expect the most changes in the proteids of the tissues, when the latter are affected by some disease. Such is, in fact, the case. Pathologists have described several forms of pathological transformations of proteids in tissues under the name of coagulational necrosis, amyloid, colloid, mucoid, hyaline substances, etc. Originally but one distinction between the latter substances and the physiological proteids was detected; while the normal proteids were found to be in the tissues in a state of solution, the "pathological" ones were coagulated. In all other respects they were similar to any proteid material. Amyloid, colloid, mucoid, and hyaline substances were for certain physical properties classified under a special group of "colloidal" substances. The studies on mucin and allied substances, however, soon disclosed that the latter were not simple proteids; that the proteid was combined in them with a reducing substance, a "carbihydrate" or "animal gum." Thus mucoid and colloid had to be regarded as substances distinct from the other colloidal substances, amyloid and hyaline.

Later it was discovered that amyloid was also not a simple proteid. As mucin and mucoid, so amyloid contained a substance capable after certain treatment of reducing Fehling's solution. There was, however, a pronounced difference between mucoids and amyloid: while in the former the "animal gum" was supposed to be combined directly with the proteids, it was in the latter combined indirectly by the aid of sulphuric acid—in a word, in amyloid the substance capable of reducing Fehling's solution was described as chondrotin-sulphuric acid.

On the ground of the latter discovery three different forms of colloidal substances had to be established: 1, Mucoid and colloid; 2, amyloid; 3, hyaline. However, certain chemical and tinctorial properties of mucin justified to my mind the supposition that the latter must have contained in its molecule an acid radical. To find the acid radical of mucin was the object of this investigation. The work was begun on tendomucin, and it was soon found that, similarly to amyloid, the mucin was a compound of proteid and of an ethereal sulphuric acid. Further, it was found that, similarly to chondrotin-sulphuric acid, the ethereal sulphuric acid of the mucin was nitrogenous, and that it yielded, similarly to the former, chondrosin. With the same object in view submaxillary mucin and colloid of a colloidal carcinoma were analyzed. These two substances were also found to be compounds of a nitrogenous ethereal sulphuric acid.

Thus it seems that the acid radicals of amyloid, colloid, and mucoid substances are very similar to each other. The investigation into the question whether the substances are only similar or identical is now in progress.

State Revenue from "Patent Medicines" in Great Britain.—According to *Tit-Bits* the popularity of proprietary or patent medicines seems to suffer no diminution. These pay a stamp duty which varies according to the price at which they are sold. In the last financial year a study of the inland revenue accounts brings out the facts that a duty of 3 cents was paid on 27,856,686, bottles or packages of medicine, a duty of 6 cents on 5,076,805; of 12 cents on 856,057; of 25 cents on 108,280; of half a dollar on 11,309; of 75 cents on 5,703. Thus the government stamp on 33,914,840 parcels of these popular medicines yielded to the national exchequer the handsome sum of $1,832,860.

Pain in the Region of the Aorta.—This is frequently referred to as characteristic of aneurism, but I have not found it a valuable or constant indication. The pain of pressure and tension, so often mentioned in the books, is not only often absent, but is almost exactly simulated in many cases of neurasthenia—in fact, in the latter condition it is of frequent occurrence. One of the most prominent physicians of my acquaintance has borne the burden of fear of aneurism for three years on account of the so-called characteristic pain, while a most careful physical examination has failed to find one confirmatory sign. Far more indicative and just as frequent, in aneurism of the arch, is a pain in the region of the fifth or sixth dorsal vertebra. I well remember a case in which this was the only symptom, so far as I could learn, though I had no personal knowledge of the history; the patient, a man forty years of age, died from rupture a few minutes before my arrival. He had been treated by a noted neurologist for spinal irritation, and the autopsy showed vertebral caries from pressure. The pain may also be found in the neurasthenic, but in these cases it is lower, opposite the solar plexus, or, as a point of second selection, about the fifth cervical.—Dr. William Porter, in the *New York Medical Journal*, December 9th.

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[1] Read before the New York Pathological Society, December 13, 1899.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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OUR AMBULANCE SYSTEM.

Our ambulance system and our ambulance surgeons continue to excite from time to time unfavorable criticism in the news columns of the public press, the only channel by which such criticisms can reach the general public. The wide dissemination of these criticisms or attacks makes them worth considering, especially because they are always *ex parte* and made by a more or less excited and inexperienced observer, and because the unfortunate victim of the attack, the ambulance surgeon, has no chance of making an immediate reply of equal prominence to the attack in the paper publishing it. This would introduce an element of fairness which the critics do not want.

There are many things about the ambulance system which the public does not understand, and in many particulars there are things which ought to be done better, but which under the present arrangement cannot be materially changed. The only source of any radical alteration in the methods of management of this department of hospital work is the non-medical board of managers, and if its members could be induced to accept advice from those who know about this particular department, and to spend a little money sometimes where it might not show, much could be done.

The arrangement as now in force in most hospitals in this city is that the whole of the ambulance work shall fall upon the surgical house staff. This is wrong and ought to be changed. A careful analysis of the ambulance statistics for a year in a large hospital in this city has shown that more than one-third of all calls were for individuals suffering from alcoholism with or without some slight injury, and a large number of other cases were of alcoholism combined with some disease or injury in which the alcoholism was of subsidiary importance. Furthermore, there was a very large proportion among the other calls in which the patients were purely medical, in which the element of emergency was rare or non-existent. In hot weather there were many cases of insolation, and in winter exposure and pulmonary diseases were reponsible for many calls. In order to do efficient work a man must not be overworked, and if ambulance duty were evenly divided between the medical and the surgical house staffs, as it ought to be, much would be gained. This is a perfectly fair arrangement, since the figures prove beyond question that any given ambulance call is as likely to be for a medical as a surgical condition. The arrangement would not appeal to medical juniors for obvious reasons, and probably not to boards of managers, whose *vis inertiæ* against change of any kind is always considerable; but it would undoubtedly simplify matters, and by lightening the ambulance surgeon's work make carelessness and inefficiency less likely. Coupled with this change there ought to be a rule, rigidly enforced, that every person for whom the ambulance is summoned should be taken to a hospital, where definite disposition of his case might be made by suitable authority. This rule would protect every one concerned in the matter, and would be really of special advantage to the ambulance surgeon. If he observes it, he need take hardly more responsibility than that of a trained nurse, and he will never have any unpleasant newspaper prominence, unless he is foolish enough to do something objectionable, or apparently objectionable, at the scene of the call.

When possible in large hospitals it might be well to appoint a special ambulance surgeon, perhaps with a small salary, who might be relieved at certain times by a member of the regular staff, and whose whole work should be on the ambulance and in the accident room. The emergencies which are encountered by ambulance surgeons are not such as require profound knowledge and experience, because, as we have noted, the patient has only to be taken at once to a hospital in order to place the responsibility on some officer in the hospital, presuming that the man on the ambulance has acted with ordinary care. We know that ambulance surgeons do not always behave with perfect politeness, circumspection, and good temper, but they are not the only ones who may be found fault with in this regard; and the proper way to correct such things is not to condemn the whole arrangement and all ambulance surgeons. The public is under the impression that the ambulance surgeon is getting valuable professional experience from ambulance work, and a large number of people seem to think that all hospitals receive a generous appropriation of public money for the maintenance of this part of their establishments. The work is the dreariest kind of drudgery, and the only experience in it is in learning self-control and restraint in the matter of temper. Only public hospitals receive enough public money to support their ambulance establishments. Considering the enormous number of calls, we think it remarkable that there are really so few blunders with any evil consequences—evidence, it seems to us, that a high order of skill and knowledge is not required on an ambulance; for the ordinary ambulance surgeon cannot possibly have had experience in making a rapid and intelligent diagnosis of all sorts of conditions, such as he meets continually.

Another source of friction exists in the method of sending calls for an ambulance. Most of the calls come through the police, and, reform and instruct them how we will, there will always be an irreducible residue of gross stupidity to contend with. The charge against hospitals that dying patients are driven long distances to Bellevue Hospital in order to keep down mortality figures is not well founded, as will be evident if we stop to consider that patients dying within twenty-four hours of admission do not influence the general death rate, but are put in a separate classification, "moribund on admission."

The reforms which we should suggest, and should like to see introduced, are: (1) Division of ambulance work equally between surgical and medical internes; (2) appointment, whenever possible, of a special ambulance surgeon; (3) rigid enforcement of the rule that every person for whom an ambulance is summoned should be taken to a hospital; (4) some reform, if possible, in the present method of sending calls, especially "police station calls." The ambulance surgeon himself changes too often to make it worth while suggesting reform for him. However, if he has the instincts of a gentleman, they will be evident on the rear seat of an ambulance as much as anywhere else.

THE MENACE OF THE BARBER SHOP.

In some respects New York is the slowest of American larger cities. Improvements, advances, and reforms are to be noted in many smaller communities long before the necessities of the case have sufficiently impressed themselves upon the minds of our city fathers. Though the Empire City may be late in making beneficial changes, it has usually so far benefited by the experience, and often the mistakes, of other places that, when improvements are inaugurated, they are up to date. New York has been backward in "barber-shop hygiene," which the Medical Record has advocated for a number of years. Paris has continued in the praiseworthy reforms started several years ago, and now only metal combs are allowed, and, so far as it is possible, all instruments have to be made of metal, or some substance which can be readily sterilized along with the towels, while the operator himself is expected to keep his hands reasonably clean. Pennsylvania is to be congratulated upon starting a movement in the proper direction, to secure an improvement in the conditions surrounding the barber and his work. The State board of health has circulated a series of recommendations, which, if followed, would vastly decrease the chances of spread of contagious disease in this way. Doing away with sponges and powder puffs, not using on one customer after another the same piece of alum to stop bleeding, and taking care in the use of cosmetics not to let them serve as media of transmitting disease from one person to another, are all wise suggestions.

Last month Missouri made a stand for scientific and sterile barbering. A board of examiners will see to it that the barber is qualified, among other things, to give a clean shave.

Canada is following in the footsteps of France, Austria, and Germany. The province of Quebec requires the barber, first of all, to be himself a healthy subject, free from transmissible affections. Then he must pass an examination in disinfection, and promise to apply his knowledge for the benefit of his patrons.

In connection with this important subject it is interesting to learn that Huebener, of Breslau, found pyogenic microbes in the beards of physicians eleven times in twenty-six examinations.

Flügge found that in a bearded subject there was a marked increase in the number of colonies when the beard was left uncovered near agar culture plates.

It is not, however, necessary for us to go into the minutiæ of scientific refinement in order to convince the thinking of the necessity for some regulation of the barber's business. In the October number of the *Journal of Cutaneous and Genito-Urinary Diseases* is a report on favus in which we read: "The two children now presented by Dr. Allen were American born, and they exhibited much the same appearances as the girl shown at the previous meeting. Another point was that these boys had never had medical treatment, but had been treated regularly by a barber, the applications being made in his shop. The speaker said that one of the worst cases of favus that he had ever seen in this country had been treated in a barber shop." Would it not be well for us at least to attempt to regulate the practice of medicine and surgery by the barbers of this city, compelling them to confine themselves to non-contagious diseases? For the present it would seem superfluous to tell them that Sabrazès gives in the October number of the *Journal des Maladies Cutanées* a practical method of perfect sterilization for brushes, combs, razors, etc., without injuring them. Three grams of paraform tablets per cubic metre of space are evaporated in a closed space at a temperature of 40° C., the instruments being exposed for four hours, which has been found to rid them entirely of all microbes.

MEDICAL ADVERTISING IN RELIGIOUS JOURNALS.

The decision recently arrived at by the proprietor of *The Christian Herald*, not to permit in future the insertion of any advertisement of a medical character within its pages, is one which will meet with the approbation of all decent-minded persons. The Medical Record has on several occasions called attention to this reprehensible custom. Paragraphs extolling the curative and remedial virtues of drugs for all complaints under the sun are a familiar feature of modern journalistic enterprise. In the ordinary everyday newspaper, so long as the bounds of good taste are not too flauntingly overstepped, and so long as the public is not gulled in too barefaced a manner into paying with good coin for useless and frequently really harmful nostrums, there can be no strong exception taken to this particular form of advertisement. After all, when a rational being has come to the years of discretion the presumption is that he or she should be a fairly competent judge of questions concerning health, and if such an individual prefers to patronize the venders of patent medicines rather than to seek the advice of a duly qualified medical practitioner, no restriction can be placed on this exercise of free will.

Many of these advertisements, however, do not fall within the category of either decency or utility and are unworthy of insertion by any self-respecting editor. Advertisements of this nature may be truly said to befoul the columns of the journal in which they are printed, and it would be matter for universal congratulation were measures enforced to compel their exclusion. It is bad enough when this nauseous literature is permitted a position in the sheets of lay journals, but the case is far and away worse when the readers of a paper devoted solely to religious subjects are *nolens volens* forced to have their eyesight offended by advertisements lauding the qualities of some unfailing remedy for impotence or an absolute specific for all female irregularities. Such a mingling of religion with affairs of so pre-eminently a mundane character is, to use the mildest language possible, in a high degree unseemly.

The question has also its comic side, and must appeal to any one endowed with but a faint sense of humor. Imagine an eloquent exposition of the Scriptures, contributed by the pen of some famous divine, while immediately underneath are to be read words of something to this effect: "Dr. B——, the celebrated specialist on complaints of women, can be consulted daily at his office, and will guarantee a complete cure to all suffering females in a very short time. N. B.: the drugs used are all of vegetable composition and are warranted not to injure the most delicate organization."

The resolution of *The Christian Herald* to bar altogether medical advertisements from its columns reflects the greatest credit on those in control of that journal, and its example should be promptly followed by other papers whose reading matter is of a denominational nature.

OSTEOPATHY IN GEORGIA.

The General Assembly of Georgia, at its recent session, passed a bill legalizing the practice of osteopathy in that State, and at the same time advertised "The American School of Osteopathy, of Kirksville, Missouri," concerning which school the Jefferson circuit court of Kentucky rendered so notable a decision a few weeks ago. Fortunately Georgia possesses in its governor a man endowed with both courage and common sense, and who, although strongly pressed to give his assent to the legalization of osteopathy, refused to do so, but on the contrary, exercised his power of veto.

For this action Governor Candler is entitled not only to the thanks of the medical profession, but also to the applause and respect of all good citizens. In his veto the governor pointed out that there is no need for the creation of another examining-board in Georgia. There are already three of these boards, and any graduate of any "lawfully chartered medical college" may go before either of them, present his diploma, and be examined. If he passes an examination satisfactory to the board, the members of which are selected because of their eminence in the profession and their skill in medical science, he is authorized to practise medicine anywhere in this State, and to apply any treatment he may deem best, including the methods of osteopathy. If he is not a graduate of a reputable medical college and cannot pass a satisfactory examination in the usual branches of medical education, he ought not to be licensed to engage in the practice of medicine.

This pronouncement places the whole question in a nutshell, and is a decision the justice of which can be gainsaid by no sane man. It will also be observed that no unfair discrimination is made against any particular school. The fact was proved to the hilt in the Kentucky suit referred to above, that the Kirksville School of Osteopathy in Missouri was not a reputable school in the proper acceptation of that term, and it is more than questionable whether the course of training considered sufficient there could impart to its graduates the medical knowledge necessary to satisfy the requirements of any of the three Georgia medical examining-boards. It would therefore be manifestly unjust to the medical profession as well as to the general public that incompetent men should be permitted to undertake the treatment of disease. However, the matter is not regarded by every one from this point of view. Indeed a prominent minister of the evangelistic persuasion contributed to the *Atlanta Journal* of December 30th a violent tirade, sharply criticising the public-spirited action of the governor and jeering at the medical profession for standing up for its rights. Some of the remarks of this clerical gentleman are gems of thought and diction. The following paragraph is an example of the manner in which a presumably cultured man may allow himself to be carried away by the force of his feelings:

"The little petty jealousies and envyings among doctors have made them the laughing-stock of intelligent people. A minister of the gospel can advertise in the papers a wonderful work of grace which led three thousand souls to Christ, but the very minute a medical doctor whispers it out that he has done something for suffering humanity he is jumped on for unprofessional conduct and outlawed by his profession. A lawyer can spurt and blow about himself, and his profession tolerates him at least, but wherever and whenever a doctor has spouted and spurted he has spouted and spurted himself to death."

The remainder of the Rev. Sam. T. Jones's discourse is conceived in the same prejudiced strain, which fact very considerably weakens the effect of his arguments. Probably he has a private grudge against the medical profession or is desirous of giving himself a cheap advertisement.

The rebuff to osteopathy in Georgia, following so close on the heels of the yet more decisive one in Kentucky, should go far toward strengthening the position of the medical profession throughout the length and breadth of the land. The methods employed by the emissaries of this "new science" are deserving of the severest reprobation, and must be met by the respectable medical practitioners with the most uncompromising vigor. The temporary check given to osteopathy in Georgia it is to be hoped will not lull its opponents into a state of false security.

News of the Week.

The Chester County Hospital at Westchester, Pa., has been bequeathed $2,500 by the will of the late Samuel Greenwood as a memorial to be known by his name.

Heroic Treatment for Corns.—A man in a Connecticut town—and an Adventist—having been troubled with corns, from which many remedies brought no relief, is reported to have removed the offending members by means of a chisel and mallet.

The Buncombe County (N. C.) Medical Society.—At the recent annual meeting of this society officers for the ensuing year were elected as follows: *President*, Dr. H. L. Bond; *Vice-President*, Dr. T. P. Cheesborough; *Treasurer*, Dr. C. G. Reynolds; *Recording Secretary*, Dr. J. T. Sevier; *Corresponding Secretary*, Dr. E. R. Morris.

The Famine in India.—The Indian officials estimate the cost to the government of the famine relief works, etc., to the end of March will be 40,000,000 rupees. About twenty-two million persons are now affected in British territory, and about twenty-seven million in the native states. About three million two hundred and fifty thousand persons are constantly receiving relief. Not only have the crops failed, but water is becoming very scarce, and many hundred head of cattle have perished.

Philadelphia Neurological Society.—At a stated meeting held January 22d, Dr. A. Ferree Witmer exhibited a case of left hemiplegia, in which, following an injury to the left wrist in consequence of a fall, a condition of over-extension of the proximal phalanges occurred, with flexion of the terminal phalanges. The peculiar claw-like hand resulting was thought to be accidental, and dependent upon the injury received. Dr. F. X. Dercum presented two cases of primary neurotic atrophy, one in a man and the other in a woman. In both the symptoms were present in the upper as well as the lower extremities, were of gradual development and of long standing. In the second case pain was present, while it was absent in the first. In the former no etiological factor could be ascertained, while in the latter there was a history of moderate indulgence in alcohol. Dr. D. J. McCarthy exhibited a case presenting trophic changes following injury of the supra-orbital nerve. The patient was a young woman who had been struck eight years previously upon the top of the head, to the right side of the middle line, suffering an incised wound of the scalp, with division of a branch of the supra-orbital nerve. In the sequence of this accident the outer two-thirds of the eyebrow and a portion of the hair on the corresponding side of the head became gray, while the soft tissues appeared firmer than normal and the bone was somewhat flattened; sweating was absent and sensibility was much impaired in the distribution of the affected nerve. Dr. McCarthy exhibited also a case of paræsthetic meralgia, in which this condition was present upon both sides of the body. It occurred in a man who wore a double truss for the support of bilateral herniæ, and the symptoms were more pronounced upon that side upon which the truss exerted the greater pressure. Dr. W. G. Spiller exhibited a man of advanced years presenting hysterical tremor resembling the tremor of paralysis agitans. Other members of the family had presented a similar tremor. The condition had been present for ten years, and the movements could be varied by suggestion. There was an absence of rigidity, of the characteristic facies, and of the sense of heat often present. In the discussion opinions were expressed that the tremor, while not hysterical, was perhaps one of heretofore unclassified character, and also that it was really that of paralysis agitans. Dr. A. A. Eshner reported a case of rhizomelic spondylosis. The patient was a man, twenty-four years old, who presented marked posterior convexity of the spine, with rigidity, and also stiffness and impaired mobility at the shoulder joints and the hip joints. In addition, the reflexes generally were exaggerated, while sensibility was unaltered. The condition was believed to be one of inflammatory hyperplasia of the vertebræ and their appendages, perhaps associated with meningitis or with inflammation or degeneration of the spinal cord itself. Dr. F. X. Dercum reported a case of cerebral diplegia of childhood with hemianæsthesia. The patient was a girl, upward of twenty years of age, who presented the ordinary phenomena of spastic diplegia dating from early life, but the hemianæsthesia was emphasized as an unusual condition. Dr. W. G. Spiller exhibited photographs and the brain of a boy with extreme contractures, and unilateral internal hydrocephalus. The case was one of cerebral spastic paralysis. Upon post-mortem examination, after the fluid had escaped from the greatly distended lateral ventricle, the corresponding hemisphere was found to be much smaller than its fellow, while the opposite half of the cerebellum likewise was diminished in size. Degenerative changes were found further in the right half of the spinal cord. The following officers were elected for the ensuing year: *President*, Dr. William G. Spiller; *Vice-Presidents*, Drs. J. K. Mitchell and F. S. Pearce; *Secretary*, Dr. A. A. Eshner; *Treasurer*, Dr. Guy Hinsdale.

Philadelphia County Medical Society.—At a stated meeting held January 24th, Dr. E. La Place reported a case of tetanus treated by the subdural injection of antitoxin, with exhibition of the patient. The symptoms of tetanus had developed in the sequence of a nail wound of the foot. An injection of 20 c.c. and subsequently 40 c.c. of tetanus antitoxin had been made beneath the dura mater, through a trephine opening in the parietal region. In addition, injections of carbolic acid were made, ♏v. being given on forty-eight occasions. Dr. Orville Horwitz presented a communication entitled "A Brief Account of a Few Surgical Cases of Unusual Interest." Among the cases reported was one of cyanosis of the arm, apparently due to vascular obstruction, and relieved by surgical intervention, although no obvious cause for the condition could be discovered; one of control of venous hemorrhage in the pelvis, occurring in the course of an operation for appendicitis, by the application of hæmostatic forceps, which were permitted to remain for a week, and another of similar application of forceps to the femoral vein for the control of hemorrhage due to division of the saphena vein at its junction with the femoral; one of incarcerated omental hernia, with beginning gangrene, but unattended with constitutional symptoms; one of rupture of an appendicular abscess into the sac of an inguinal hernia; one of chronic hæmatocele of the vaginal tunic of the testis following traumatism; one of fatal extirpation of spleen for enlargement of the organ; one of suprapubic cystotomy for the removal from the bladder of two hundred and eighty grains of white wax that was introduced into the urethra to prevent insemination; and one of intussusception in an adult, with recurrence requiring a second operation, and death from asthenia. Dr. T. J. Mays read a paper entitled "Notes on the Silver-Nitrate Injections in the Treatment of Phthisis." The treatment consisted of an anæsthetic injection of cocaine followed by the injection of ♏v. of a two-and-a-half-per-cent. solution of silver nitrate into the subcutaneous tissues of the neck over the pneumogastric nerve on the side corresponding to the seat of the disease. It was reported that in a large number of the cases thus treated weight improved, cough diminished, expectoration grew less, physical signs cleared up, night sweats disappeared, dyspnœa lessened, and general improvement took place. Drs. W. W. Moorhead and L. J. Hammond read a paper entitled "Report of Two Cases of Brain Abscess, One Multiple." Both terminated fatally in spite of operative intervention. A resolution was adopted protesting against the enactment of the Gallinger antivivisection bill before Congress.

Pathological Society of Philadelphia.—At a stated meeting on January 25th, a symposium upon typhoid fever was held. Dr. A. C. Abbott discussed the epidemiology. He pointed out that while ordinarily typhoid fever is an autumnal disease, in communities supplied by surface water or polluted subsoil water the greatest prevalence of the disease may occur at varying periods in the year. Dr. J. H. Musser discussed the value of clinical laboratory methods in diagnosis. He pointed out the importance of the Widal test, which can be depended upon in about ninety-eight per cent. of cases, and of the diazo reaction, which can be depended upon in perhaps ninety per cent. of cases; the significance of leucocytosis as indicating the occurrence of an inflammatory or suppurative complication; and the occasional presence of typhoid bacilli in the blood and their detection in the stools. Dr. A. O. J. Kelly summarized the results obtained at the German Hospital in the application of the Widal test. He pointed out the difficulties attending the employment of the dry method, particularly that in obtaining accurate dilution. Dr. Joseph McFarland stated that the personal equation is a not unimportant factor in the decision as to whether the reaction is present or not. Dr. H. W. Cattell reported the results of some observations made at the Woman's Hospital, and pointed out that in rare instances the presence of the Widal reaction might be utilized in distinguishing human from other varieties of blood. Dr. A. C. Abbott stated that in the bacteriological laboratory of the Philadelphia board of health the hæmoglobinometer is used for the purpose of securing a definite and constant and approximately accurate dilution of the blood. Dr. J. D. Steele, in reporting the results of observations made at the Presbyterian Hospital, stated that a satisfactory method of dilution consists in the use of the hæmocytometer, securing a dilution of 1 : 10 and then diluting this with an equal quantity of distilled water. Dr. R. C. Rosenberger reported the results of observations made in the Jefferson Medical College Hospital, showing a high proportion of positive results. Dr. N. B. Gwynn, of Baltimore, referred to the relative frequency with which typhoid bacilli, often in large numbers and in pure culture, are present in the urine, in association with symptoms referable to the urinary tract. A case was related in which typhoid bacilli had been found in the urine seven years previously, the patient recently again coming under observation with symptoms of cystitis and the presence of typhoid bacilli in the urine. Dr. Simon Flexner discussed the subject of typhoid septicæmia. He stated that occasionally the difficulty of making a diagnosis of typhoid fever is as great on post-mortem examination as during life, inasmuch as the disease is in a not inconsiderable number of instances unattended with intestinal lesions. In rare cases, further, the bacteria appear to have no special localization, and not merely circulate but also multiply in the blood, a condition that might be designated typhoid bacteræmia. Dr. T. G. Ashton read a paper entitled "The Duty of the Physician in Preventing the Dissemination of the Disease," in which he pointed out the importance of careful disinfection of all of the discharges from the typhoid patient in order to prevent the spread of the disease from the sick to the well. Dr. Joseph McFarland discussed the present outlook for the serum treatment. He was unable to make a favorable forecast, inasmuch as little is as yet known concerning the toxins of the disease, and there is reason to believe that so much serum would be required for the introduction of the necessary amount of antitoxin as to make such a mode of procedure, for the present at least, impracticable. Personal experiments in an endeavor to immunize horses and secure an effective antitoxin had proved unsuccessful.

Proposed Investigation of the Native Drug Plants of the United States.—One of the good works initiated by the Pan-American Medical Congress is the scientific investigation of the medicinal flora of each country on this continent. This has been carried out further in some countries than in this; in Mexico, for example, the investigation has been almost practically completed by the Instituto Médico Nacional. In his annual report the secretary of agriculture, Hon. James Wilson, states that the committee of the Pan-American Medical Congress for the United States has recently submitted to him a proposition to co-operate with the Department of Agriculture in a technical and statistical investigation and classification of our native drug plants. "By accepting this proposal," he says, "we shall secure, in a research of which we have long felt the need, the cordial assistance and support of an influential association of learned physicians; we shall encourage each of the other American nations, all of which are represented in the Pan-American Medical Congress, to proceed with a similar investigation of their own medical flora; we shall furnish a basis for the remunerative employment of much land and many people, and we shall stimulate the great growth and growing trade in drugs between the countries of North America and South America." He concludes by asking for an appropriation of $10,000 to enable the department to co-operate in this investigation.

Lehigh Valley (Pa.) Medical Association.—At the twelfth winter conversational meeting, held at Allentown on January 25th, papers were read by Dr. J. C. Biddle, of Fountain Spring; Dr. John B. Roberts and Dr. L. Boardman Reed, of Philadelphia; Dr. Edgar Moore Green, of Easton; Dr. A. H. Halberstadt, of Pottsville; Dr. Mary McCay Wenck, of Sunbury; Dr. Charles B. Knapp, of Wyoming; and Dr. Charles Miner, of Wilkesbarre.

Medical Practice in Honduras.—Dr. Francis T. B. Fest, of the Honduras army, writes, in answer to frequent requests for information regarding practice in that country, that every intending practitioner has to appear before a board of examiners to obtain a license. There are no openings; on the contrary, Dr. Fest says that he knows several gentlemen there who would like to hear of an opening somewhere else.

A Colossal Legacy.—Mme. Medvednikova, the widow of a wealthy merchant, died recently on her estate near Moscow, leaving 5,000,000 roubles (about $3,000,000) to charity. Of this sum 1,000,000 roubles is designated to establish a hospital for incurables in Moscow, 600,000 to build an asylum for idiots and epileptics in Moscow, 500,000 to build a hospital for the treatment of chronic diseases in Irkutsk, and smaller sums for various other institutions.

A Bill to Define the Status of Acting Assistant Surgeons in the Army.—Senator Platt, of New York, has introduced "A bill to issue warrants to acting assistant surgeons of the United States army who served as medical officers either in the late Civil War or the Spanish-American war or the Philippine rebellion." The bill provides "that all acting assistant surgeons of the United States navy who served as medical officers, agreeably to army regulations, either in the civil war or the Spanish-American war or the Philippine rebellion, and whose services were honorably terminated, and those acting assistant surgeons of the army who are still serving as medical officers, be issued warrants by the Secretary of War as acting assistant surgeons of the United States army in a similar manner with the warrants issued to the acting assistant surgeons of the United States navy by the Secretary of the Navy, the date of their warrants to be the date of their entry into the service of the United States as medical officers, and the date when their services as medical officers were or will be honorably terminated to be the date of their discharges from the service of the United States: Provided, that no back pay or allowance be made to any such acting assistant surgeon by virtue of this act." Acting assistant surgeons in the navy are commissioned by the Secretary of the Navy, and this bill only provides for similar treatment of acting assistant surgeons in the army.

The Gallant-Allis Ether Inhaler.—Dr. A. Ernest Gallant writes: "As the best means of acknowledging the many kind words of commendation, and in reply to numerous letters of inquiry, allow me to say that the Allis inhaler described in my article on 'Etherization' in the MEDICAL RECORD of December 30, 1899, is for sale by most surgical supply houses. The purchaser should insist on having the rubber cover not less than eight and a half inches deep. The threaded bandage should be cut out, and the gauze diaphragm adjusted, and half a yard of loosely bunched gauze inserted in the empty frame."

Antitoxin in Diphtheria.—Dr. J. Edward Herman writes: "In the table of mortality following tracheotomy in children under two years of age treated without antitoxin, appearing in my article in a recent issue of the MEDICAL RECORD, the rate printed did not represent the deaths but the recoveries. The corrected table should give seventy per cent. mortality for antitoxin-treated cases of tracheotomy in children two years of age and under, and fifty-nine per cent. mortality in the same class of cases which were treated without antitoxin."

An Antivivisection Accusation.—At the seventeenth annual meeting of the American Antivivisection Society, which was held in Philadelphia on January 25th, the corresponding secretary, Mrs. Richard P. White, gave us all away and exposed our wicked practices to the view of a horrified world. Among other temperate remarks this veracious lady is reported by the Philadelphia *Ledger* to have said that the "vivisection of human beings is the legitimate outcome of vivisection of animals. If the practice of torturing and dissecting dumb beasts be permitted to continue, it soon will become a menace to the human individual, not only to patients who lie in the wards of charity hospitals, but to citizens outside of institutions." Then having become thoroughly warmed up to her subject, she continued: "There is no longer any doubt as to the truth of the account that numbers of most atrocious and inhuman experiments have been and are being made upon poor patients in the hospitals of various European cities, and in at least one of our own States. That State is Massachusetts."

Sanatoria for Consumptives in New York State.—Drs. Enoch V. Stoddard and Stephen Smith and Mr. Harvey W. Putnam, constituting the committee on State sanatoria for consumptives, have made their report to the State board of charities. While they recognize that a State hospital in the Adirondacks would work great benefit, yet they do not think that that is the only way in which the disease can be successfully combated and eradicated. A better scheme, they think, would be to establish local sanatoria. This would work well for the poor, who object to going far away from home, especially if they have large families. Another important fact is that the cure will undoubtedly be of greater permanence when it is effected in the same climate in which the persons will always reside. The commissioners, therefore, recommend that the State board of charities advise for the relief of the poor suffering from tuberculosis such legislation as will lead to the establishment of a State system of hospitals on these lines. They say that if tuberculosis is officially recognized as a contagious affection, cases of which must be reported to the health authorities, the local boards of health could protect the community by establishing hospitals for the treatment of the disease to which sufferers could be removed.

Food Poisoning.—Dr. S. S. Bogert, of this city, reports two cases of ptomaine poisoning from eating veal, occurring twenty and twenty-four hours respectively after the ingestion of the meat. The vomiting and purging were severe and the prostration was marked, but both patients recovered.

A Reception in Honor of the "Maine."—The American women resident in Cape Town held a reception on January 23d at the Mount Nelson Hotel, at which Lady Churchill, the staff of the hospital ship *Maine*, the United States consul, and many other Americans were present.

Opposition to Female Nurses.—The London correspondent of the *Commercial Advertiser* says that, according to a private letter from Sir William MacCormac, there is excessive ill feeling between the army medical officers in South Africa and the female nurses at the base hospitals, some of the former urging the sole employment of male orderlies.

A Jewish Physician Honored in Russia.—During the Russo-Turkish war in 1877 an army surgeon, Dr. Grünkrug, distinguished himself for bravery on several occasions, and was rewarded by the bestowal of the cross of St. Vladimir, an order which carries with it promotion to the nobility. The Assembly of Nobility of Smolensk Province recently refused to inscribe Dr. Grünkrug's name on the list of noblemen on the ground that he is a Hebrew, but the College of Heralds reversed the decision, affirming that the physician was a Russian nobleman.

The Health of Havana.—According to the report of the health department of Havana, recently issued, there were, during the year 1899, 8,153 deaths in the city, or at the rate of about 36 per thousand, the estimated population being 225,000. The chief causes of death were: enteritis and dysentery, 1,163; malaria, 822; heart disease, 623; typhoid fever, 240; meningitis, 397; pneumonia, 322; marasmus, 173; cancer, 142; and yellow fever, 103. The mortality decreased progressively from January, with 1,260 deaths, to November, with 493; but in December the number increased to 534. There were in all 284 cases of yellow fever with 103 deaths. Up to August 1st there were but 7 deaths from this disease, and the great increase during the latter part of the year, which continued even through December, is attributed to the influx of unprotected immigrants from Spain and America. Of those who died 58 were Spaniards and 32 Americans. The death rate from yellow fever, in spite of this, was the lowest in the past ten years, the figures for the years 1890–98 being 327, 363, 362, 512, 418, 570, 1,540, 1,056, 162.

The Plague is spreading gradually throughout the islands of the Pacific, having already invaded Japan, Formosa, the Philippines, Australia, New Caledonia, and Hawaii, and not improbably other places from which reports are yet to come. In Honolulu up to January 17th there had been thirty-nine deaths, one of a white woman and the others among natives and Asiatics. The board of health has burned ten blocks of houses in the plague-infected section. A Red Cross society, formed by some of the ladies of Honolulu, has done most effective work, and the local physicians and clergymen have continually gone among the sick and dying, submitting to voluntary isolation in order to minister to the needs of the sick.—In Noumea, New Caledonia, the disease has prevailed since early in December. There were sixteen deaths during the first ten days following the development of the malady. Up to December 23d there had been no deaths among the whites, eight of whom had been infected, but nine Kanakas, two Japanese, and five Tonkinese had died of the disease. The part of the town where the infection first developed has been surrounded with a high galvanized iron fence seven hundred yards long. The principal business houses, official buildings, and the banking and shipping offices are guarded by posses of soldiers. Twenty buildings in the infected quarter of the town were demolished by the health authorities, but, despite all the precautions, the plague has continued to spread, the number of new cases averaging three daily.—At Sydney, New South Wales, general alarm is felt in consequence of the arrival of eleven passengers from Noumea, who landed before news of the plague's presence was received. Extraordinary precautions have been taken throughout Australia and strict quarantine is established. In the case of a wharf laborer in Sydney, who was attacked on January 24th, the inoculation was apparently traced to a flea bite.—In the Argentine Republic the plague is officially announced to exist at Buenos Ayres and Rosario, both of which ports have in consequence been closed.

The Tuberculin Test in Cattle.—An interesting experiment bearing upon the value of the tuberculin test, the details of which we find recorded in the Utica *Herald*, has been conducted at the Storrs Agricultural College in Connecticut. Four cows were subjected to the tuberculin test in March, 1896, and did not respond. In the next October they were tested again and all four responded. They were then placed in a light, airy stable, where it is estimated each cow had fifteen hundred cubic feet of space. They were tested again in January, 1897, and all four again responded. The following April another test brought responses from only two and the other two showed no reaction whatever. In July of the same year still another test was made, and there was no symptom indicating the presence of tuberculosis in any of the four. For two years their milk was fed to eight healthy calves, only one of which contracted the disease, and in that instance it appeared six months after it had stopped drinking the experimental milk, so that in all probability tuberculosis came from some other cause.

Antidote to Carbolic Acid.—A correspondent, referring to a paragraph on the treatment of carbolic-acid poisoning in a recent issue, recalls the use of cider vinegar or acetic acid in equivalent strength as an efficient antidote.

Influenza is prevalent to an alarming degree in Italy, Turin and Rome being especially afflicted, although few cities are free. There are estimated to be over thirty thousand persons ill with the disease in the peninsula, and the pope has ordered general prayers for the abatement of the epidemic. The disease prevails also in Spain, where in Barcelona alone one hundred and twenty-four deaths were attributed to it on January 26th.

Heat in Australia.—We suffer occasionally from warm summer days and nights in this part of the world, but the inhabitants of parts of Australia would be glad to put up with the worst that we have to endure. Almost every winter we have reports of excessive heat, and this year is no exception. It is stated that on New Year's Day in Melbourne the thermometer indicated 114° F. in the shade at five o'clock in the afternoon, and in the sun during the middle of the day it stood at 156°. There were five deaths from heat stroke.

An Insane Physician Kills a Child.—The newspapers recently reported a horrible case from an Iowa town. It is said that a physician of that State was in a friend's office when a ten-months-old child was brought in for examination. The doctor being called to attend an urgent case asked the visitor to examine the child. He did so and took the child in his arms, handling it so roughly that the parents protested. Suddenly he crushed the child's head between his hands, and then seized it by one foot and swung it around his head. The physician was apprehended and sent to the State hospital for the insane.

A State Home for the Aged.—A bill has been introduced into the New York legislature by Assemblyman Harburger, providing for the establishment of a home for the aged of both sexes, residents of New York, Kings, Queens, Suffolk, Richmond, Westchester, Nassau, and Rockland counties. Dependents over sixty years old shall be eligible for entrance. An appropriation of $100,000 is made for the purchase of land, erection and equipment of buildings, and temporary maintenance of the inmates.

Dr. D. A. Carmichael of the Marine-Hospital service, until recently in Honolulu, has been appointed chief quarantine officer at Manila, and is now on his way thither.

The Cuban Medical Congress.—The executive committee charged with the organization of the second Cuban Medical Congress has determined upon the following subjects for formal discussion: Local anthropology, medical topography and statistics, yellow fever, malaria, blackwater fever, chronic enteritis of warm countries, and atypical febrile states in infancy.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending January 27, 1900. January 24th.—Surgeon H. N. T. Harris ordered to the *Albany* via the *Prairie*. Passed Assistant Surgeon L. L. Von Wedekind ordered to duty on the *Richmond*. January 25th (changes by cable from Asiatic station).—Assistant Surgeon R. C. Holcomb detached from the *Solace* and ordered to the *Helena*.

The Late Dr. Mulhall.—The following resolutions were adopted at a recent meeting of the Beaumont Hospital Medical College of St. Louis:

"*Whereas*, In the loss we have sustained by the decease of our respected friend and esteemed associate, Dr. Joseph C. Mulhall, we, the faculty of the Beaumont Hospital Medical College, are desirous of testifying our respect for our departed member, and of expressing our earnest and sincere sympathy with the family in their great bereavement, and with the medical profession in the loss of one of their ablest and most enlightened fellow; therefore, be it

"*Resolved*, That we express our sincere condolence to the family of our deceased *confrère* in this, their hour of affliction.

"*Resolved*, That the Beaumont Hospital Medical College has lost one of its most valued and efficient teachers.

"*Resolved*, That the entire medical profession, of which our departed fellow was a shining light, has sustained an irreparable loss.

"*Resolved*, That these sentiments be duly inscribed in the records of the college, and that an engrossed copy thereof be presented to the family of the deceased."

Obituary Notes.—Dr. William S. House died at his home in Haverstraw, N. Y., on January 27th, at the age of sixty-two years. The cause of death was apoplexy. He was a graduate of the New York University Medical School in 1859.

Dr. L. H. Lawall died at Bethlehem, Pa., on January 24th, as the result of an apoplectic attack, at the age of seventy years. He was a graduate of the medical department of the University of Pennsylvania.

Dr. M. A. Booth, of Newport, Del., died at Washington, on January 24th, at the age of eighty-four years.

Dr. E. Eugene Weston died at West Pittston, Pa., at the age of forty-eight years. He was a graduate of the Baltimore Medical College.

Progress of Medical Science.

Journal of the American Medical Assoc., Jan. 27, 1900.

The Treatment of Aneurisms by Subcutaneous Gelatin Injections.—Thomas B. Futcher reports cases of aneurisms treated by gelatin, and draws the following conclusions from his experience: (1) In no case was the aneurism cured, although in one case of abdominal aneurism still under treatment there has been considerable diminution in size; (2) in seven cases out of nine there was an appreciable diminution of subjective symptoms; (3) it seems certain that the subcutaneous injection of gelatin does increase the coagulability of the blood; (4) the injections are frequently very painful; (5) the injections were often followed by rise of temperature, although Lancereaux states the contrary from his experience; (6) although in no case has a cure yet been obtained, the author is convinced that the method has some merit and deserves further trial.

Evidences that Bovine Tuberculosis is Communicable to Man by Direct Contact, or by Food Infection.—John A. Robison, after a wide review of the literature of this subject, concludes that we have not sufficient evidence of the intertransmission of bovine and human tuberculosis, yet we must admit that there may be danger in tuberculous milk. The danger is sufficient to call for laws insuring pure milk and food products on general principles, but until the exact danger attending the use of tuberculous milk can be proven, it is better to turn the attention of the public to other, and better proven, exciting causes of the disease.

An Intestinal Suture.—Raymond Custer Turck presents diagrams of a modified form of the Halsted suture. The writer says that this new suture might properly be called a "lock stitch," because each loop is locked through the adjacent ones, and stitch leakage is rendered impossible. An exhaustive series of experiments with this stitch are being conducted at the Post-Graduate Laboratory of Anatomy and Operative Surgery, the results of which will be given later and at length.

Contagion in Leprosy as Observed in San Francisco.—Douglas W. Montgomery says that from his observations the Pacific coast is not merely a temporary abiding-place for a few lepers who have come by accident, but that the disease may be contracted there, thus rendering this part of the United States a veritable leper focus. The writer draws these deductions from cases of leprosy in aliens occurring in his own experience, and adds that the remedy must be in the segregation or deportation of the lepers already there and the more stringent examination of immigrants from leper countries.

Probable Brain Tumor with Recovery.—In this case, reported by W. A. Jones, although the diagnosis was a matter of extreme difficulty, the general symptoms of headache, vertigo, vomiting, ocular palsy, left-sided paralysis, with ankle-clonus and increased knee-jerk, subnormal temperature and pulse, together with extreme irritability, all pointed to a tumor as the probable explanation. The treatment was mainly experimental, consisting in calomel and saline for the bowels, morphine for the pain, hypodermics of strychnine for the slow and irregular pulse, and iodides by inunction. After a slow convalescence recovery was complete.

Influenza.—G. E. Crawford, discussing influenza, says that every case should be regarded as serious and the patient put to bed until active symptoms disappear. The following prescription has been of service to the writer:

℞ Acetanilid	gr. ij.
Caffeine	gr. ss.
Camphor monobromide	gr. i.
Capsicum	gr. ss.

Some Questions Relative to the Diagnosis of Anæsthetic Leprosy.—J. G. McDougal discusses the case of two sisters, natives of Ohio, who manifested appearances of anæsthetic leprosy. Although the true nature of these cases has been questioned, the author does not think that any other diagnosis thus far advanced, can be considered tenable.

Syphilis from Dental Instruments.—William L. Baum quotes several cases, and says that the dentist should personally supervise the disinfection of instruments by boiling, and immersion in formalin or creolin solutions.

May We Not Frequently do Great Harm, Rather than Any Good, by Office Treatment of Female Generative Organs?—Milo Buel Ward thinks that this question may be answered affirmatively in a great majority of cases.

Syphilis of the Nervous System and the Use and Abuse of Mercury and Iodine in its Treatment.—By William M. Leszynsky. See MEDICAL RECORD, vol. lvii., p. 38.

Physical Standard of National Guardsmen.—By Gen. J. Francis Calef.

New York Medical Journal, January 27, 1900.

Flexion or Bent-Knee Marching.—E. H. Bradford analyzes and illustrates by diagrams the ordinary straight-leg gait of the civilian and of the conventional military parade, and shows its inferiority to the bent-knee gait when it comes to the matter of getting soldiers or pedestrians rapidly over uneven ground. This latter resembles a run except that both feet are never off the ground at the same time. It is described as follows: "The knees must be always bent; the feet lifted no higher than necessary to clear the inequalities of the ground; the advancing foot must be placed flat on the ground, the step being made neither by the toe nor by the heel. The footfall should be noiseless, and the steps at first short and frequent. The body must lean well forward, the back must be straight and the head erect, the chest open and shoulders low."

Staphylitis and Elongated Uvula.—T. W. Kilmer describes acute and chronic inflammation and elongation of the uvula together with the technics of uvulotomy. Special stress is laid upon the necessity of severing the offending portion with one cut of the scissors, as a smooth surface is the ideal one in surgery of the nose and throat.

Remarks on Intranasal Operations.—For the removal of spurs when small and anterior, the use of the annular knife is recommended. For intranasal splints the Barnays sponge is preferred. For splints embracing the full width of the septum a special form is devised, consisting of two hollow plates, one for each side, connected by a spring. The hollow plates carry an additional plate so arranged that after introduction the posterior end is elevated after the shape of a fan.

The Study of Inhibition.—The following theory of inhibition is proposed by J. Y. Gonzales: Every vital organ exhibiting inhibitory phenomena constantly receives two currents of nervous vibrations in opposite directions, and as these are partly neutralized there remains a resultant working in the direction of functional activity as ordinarily manifested by the organs.

A Treatment for Acute Serous Synovitis Permitting of Joint Functions.—P. Hoffmann extols the compression treatment, which consists of filling all the depressions about the joint with cotton and the subsequent application of strips of rubber plaster in such a way as completely to encircle the joint and several inches of the limb above and below it so as to make firm and equable compression.

Pony, Montana, as a Resort for Cases of Pulmonary Tuberculosis.—The advantages of the locality are set forth by J. C. Schapps. Patients often do better here, he says, than in Colorado. The winters are cold and dry, the altitude is sufficient, and sunshine is prevalent.

Antitoxin Results and Definitions.—A. Rupp does not believe that all the problems of diphtheria have been solved, and again expresses his doubts regarding the value of antitoxin in this disease.

Clinical Memoranda on Otitis Media Chronica Suppurativa.—J. F. Oaks summarizes the usual therapeutic measures in the different stages of this affection.

Medical News, January 27, 1900.

Experimental Researches on the Effects of Increased Barometric Pressure and of Foreign Bodies in the Pharynx, Œsophagus, Trachea, and Larynx.—George W. Crile gives a description of his experiments, with tracings showing the changes in blood pressure. He says that experiments with increased barometric pressure, as well as those on drowning, show that a sufficient increase in the intrapulmonary pressure may produce a collapse of the circulation. It robs the left heart directly of blood, and therefore causes a greater collapse than can be produced by severing either the superior or the inferior vena cava alone. The symptoms produced by foreign bodies of considerable size lodged in the pharynx and certain portions of the œsophagus closely resemble those caused by foreign bodies in certain parts of the respiratory tract. Choking produces symptoms of reflex inhibition, partly through the superior laryngeal and partly through the trunk of the vagus. In a given case of threatened asphyxia, if operation is to be undertaken for dislodgment of a foreign body, it would be well to give a preliminary dose of atropine to prevent a great collapse or possible death.

Hernia in Pregnancy and Pregnancy in Hernia, with Note on Umbilical Hernia.—Thomas H. Manley's experience has been that groin ruptures, generally, are neither produced nor aggravated by child-bearing, but navel ruptures often greatly augment in volume during pregnancy, if they are not sometimes produced by it, and with repeated confinements may attain enormous proportions. Cases are reported of the impregnation of the uterus lodged in the sac of an umbilical, ventral, femoral, or inguinal hernia. Umbilical herniæ of large size are rarely seen except in child-bearing women. There is no evidence that the gravid uterus is ever a cause of strangulation.

Pruritus Ani.—By J. P. Tuttle. See MEDICAL RECORD, vol. lvi., p. 66.

The Great Drainage Canal at Chicago.—J. A. Stewart describes this canal, which is an open channel one hundred and sixty feet wide at the bottom and thirty-eight feet deep. Its purpose is to unite the south branch of the Chicago River to the Desplaines at Lockport, Ill., whence it will flow to the Mississippi River.

Boston Medical and Surgical Journal, January 25, 1900.

The Value of X-Ray Examinations in the Less Frequent Diseases of the Chest, Illustrated by their Use in Those Cases in which Aneurism is Present or Suspected.—Francis H. Williams concludes that *x*-ray examinations should be made with both fluorescent screen and *x*-ray photograph. Normal outlines in the upper part of the chest give us the best assurance that an aneurism of the aorta is not present. *X*-ray examinations enable us to determine the extent of an existing aneurism, whether or not it is increasing, and in some cases to make a diagnosis before there are physical signs.

Sixteen Years' Experience in Food and Drug Inspection.—Samuel W. Abbott reports the work of the State board of health of Massachusetts in this line, and urges the general establishment of such work. States that have no such system of inspection, he says, have an inferior food supply, so far as relates to articles liable to adulteration. The system is now in force in almost every large city on the continent of Europe as well as in Great Britain.

A Sterilizer and Equipment for Confinement Cases.—Frank A. Higgins describes a convenient outfit of his devising to be carried in the physician's obstetric bag.

On the High Operation for Diseases within the Scrotum.—J. G. Mumford believes that this useful procedure may be employed in most cases of disease in this region.

Ptomain Poisoning.—W. P. Coues reports a severe case, in which treatment by heat, strychnine gr. $\frac{1}{15}$, tincture of digitalis ♏ xv., and morphine gr. $\frac{1}{8}$ was followed by recovery.

A Rhode Island Philosopher (Elisha Bartlett).—By William Osler. Concluded from a previous number.

Philadelphia Medical Journal, January 27, 1900.

A Case of Multilocular Pseudo-Mucinous Cystadenoma of the Right Ovary Associated with Pronounced Symptoms of Diabetes.—Henry D. Beyea reports a case of this description occurring in a woman fifty-three years of age. The tumor was removed by operation; the patient recovered, and the glycosuria and other diabetic symptoms disappeared.

Athetosis and Kindred Affections.—Frank Fischer reports a case of athetosis in a boy, aged twelve years, following an attack of rheumatism. He discusses the nature of athetosis, chorea, and epilepsy, and suggests that in these affections the lesion is frequently located in the sensory tract, and that the disorders are therefore largely reflex.

Diet as a Method of Diagnosis.—C. D. Spivak advocates putting patients with gastro-enteric troubles on special diets for a day or two at a time, noting the symptoms felt while on each.

New Staining-Forceps.—F. J. Kalteyer describes and pictures an ingenious forceps devised by himself. It is made of nickel-plated steel wire, and by means of it a cover glass can be held immersed in staining fluid in a Stender dish, the forceps supporting itself on the table.

Medical Societies in this Country Founded Prior to the Year 1787.—Francis R. Packard presents an historical sketch of nine medical societies founded before the College of Physicians of Philadelphia. Of these, three—the New Jersey, the Massachusetts, and the New Haven medical societies—still exist.

Selections from the Lane Lectures.—Clifford Allbutt describes in this lecture, delivered in San Francisco in 1898, the physics of the heart.

Medical Press and Circular, January 17, 1900.

Excision of the Vesiculæ Seminales for Tuberculous Disease.—Mansell Moullin gives two cases in which he has removed the vesicles, dividing the vas deferens as high up as possible. He had previously removed one seminal vesicle in another patient for chronic inflammation following gonorrhœa. He employs the Zuckerkandl incision, slightly modified. The vesicles were found filled with caseous masses. Few instances are recorded in literature and none in that of England. The patient is placed in the lithotomy position, but lying upon the side. The operation is useless when the disease has extended beyond the vesiculæ.

Notes on Recent Cases of Enteroptosis.—A. A. Symons Eccles relates four out of the twenty-two histories recorded in 1899. In all there were neurasthenic symptoms and failing health, in some depression, gloom, and prostration. One was a typical instance of Glénard's disease with gastritis, dyspepsia, enterostenosis, nervous and muscular prostration. In all there was eructation upon taking food and generally constipation with flatulent distention. Two were treated by rest, uplifting diet, and manipulation with subsequent wearing of the belt. In the others a belt was ordered which gave relief from the local discomfort. Diagrams are given of the stomach's position.

Tabetic Ophthalmoplegia.—Leonard Guthrie records the clinical features of a case and draws attention to the frequent occurrence of paralysis of ocular muscles as a pre-ataxic symptom. The paralysis is frequently cured by the ophthalmic surgeon or spontaneously subsides, and perhaps years afterward other signs of tabes appear.

Diphtheria.—By William R. Smith, the second of the Harben lectures.

The Lancet, January 20, 1900.

On the Feasibility of Carrying Out the Open-Air Treatment of Consumption at the Patient's Home.—T. A. Somerville and E. S. Yonge report the case of a man aged thirty years with acute tuberculous broncho-pneumonia, who was unable to leave home and so was put on creosote, maltine, and an inhalant, and advised to spend as much time as possible in the open air near his own house. Subsequently, over-feeding and graduated exercise were added to the régime. On one day in a week he was allowed to go to his office for a few hours. On other days he spent seven hours out-doors or in wet weather sat in a sheltered summer-house facing the south. The windows of his sitting-room and bed-room were kept widely open. Under this mode of living he gradually improved, and in two months appeared perfectly well. The writers believe that this plan of treatment is worthy of a much wider application than it has yet received.

On Some Points in the Natural History of Uterine Fibroids.—F. H. Champneys answers four questions: 1. Frequency. Of 40,615 gynæcological out-patients, fibroids were diagnosed and treated in two and one-half per cent.; of 5,875 in-patients, in nine and four-tenths per cent. 2. Their symptoms are due to pressure and weight, bleeding, pain, and uterine catarrh. 3. The mortality from operation is seventeen per cent., while that apart from operation is represented by the figures 0.000138 per cent.; in other words, deaths from fibroids apart from operation are excessively rare. 4. He discusses the ethics of operations, basing his statistics in this and other respects on the records of St. Bartholomew's Hospital.

Tubercle Bacilli in Milk, Butter, and Margarin.—H. E. Annett's experiments show that bacilli are found in samples of milk in English cities in from three to thirty per cent., the test being inoculability in animals. They have been found in butter by other observers in from ten to forty-seven per cent., but there is some doubt whether the germs described by these other observers have been the true bacilli of Koch. Tubercle bacilli keep their virulence in butter for twelve days. Out of twenty-eight samples of margarin, only one proved to contain the germ of true tuberculosis.

Case of Perforated Gastric Ulcer on the Posterior Surface of the Stomach; Operation, Recovery.—The patient, a woman aged thirty years, was seen by S. Davy and operated upon by F. Eve. Symptoms which had occurred suddenly were those of collapse. In six or seven hours she had rallied sufficiently to justify operation. The perforation was on the posterior surface close to the lesser curvature and attachment of the lesser omentum.

A Note on Some Further Experience of Operations under Local Analgesia Produced by Eucaine B.—A. E. Barker enumerates fifty-three various operations done under the conditions specified. He says that at first the surgeon suffers from the feeling that he may be causing the patient pain, and that makes him hesitate. Practice in the method, however, soon removes this.

Tetanus following Nephropexy.—H. Thompson operated on a woman aged forty-seven years with a loose right kidney. On the eighth day initial symptoms of tetanus set in, gradually increased, and caused death on the fourteenth day. No antitoxin was used. The author discusses the possible relation of mental shock to the affection.

Some Facts Gathered from Experience Respecting Miscible Black Carbolic Disinfecting Fluid and Carbolic Disinfecting Powder.—F. W. Alexander calls attention to the varying results of analyses of these compounds and the confusion caused thereby. He advocates the necessity of adopting uniform standards of testing.

Plague in Relation to Singapore.—M. F. Simon gives some statistics from the official health records of that city. Details are given in brief of some ten individual cases.

Results which Have Been Obtained by Antityphoid Inoculations.—By A. E. Wright. See MEDICAL RECORD, vol. lvii., p. 199.

British Medical Journal, January 20, 1900.

Results which Have Been Obtained by the Antityphoid Inoculations.—A. E. Wright and W. B. Leishman summarize the more important results which have been obtained up to date by the application of the antityphoid inoculations which were inaugurated at Netley in July, 1896, among the troops in the Indian service. The men under observation numbered 11,295, of whom 2,835 had been inoculated. The number of cases among the inoculated was 27, or 0.95 per cent., and among the uninoculated 213, or 2.5 per cent. The number of deaths was 5, or 0.2 per cent., among the inoculated, and 23, or 0.34 per cent., among the unprotected. Assuming that these figures would be the same relatively if applied to the entire army, the authors estimate that general inoculation would effect a saving of one thousand cases of typhoid fever and nearly two hundred lives. A detailed account is given of the methods which had been employed in the preparation of the vaccine.

The Bromide Sleep; A New Departure in the Treatment of Acute Mania.—Neil Macleod presents notes of cases he has treated by means of "the bromide sleep," which he explains to mean a condition induced by large doses of bromide lasting from five to nine days, in which the subject sleeps day and night and from which he cannot be roused. The writer claims that during this period the higher nerve centres are rested to an extent that cannot be reached in any other way. In his experiment with nine cases the results were satisfactory with one exception, a case of morphine and cocaine habit, in which a double pneumonia supervened with fatal result.

The Insane and their Treatment.—J. B. Spence contrasts the present humane and scientific treatment of the insane with older methods. He also touches upon the duty which the general practitioner owes to the insane in the early identification of functional and curable phases of mental disease. In this connection the writer deprecates the consignment to asylums of those cases of drink madness which in many instances might just as well be cared for elsewhere, thus avoiding the stigma which is incurred, in the eyes of the public, by residence in an insane asylum of however short duration.

A Case in which Three Hundred Grains of Sulphonal Were Taken in Two Doses.—R. Percy Smith reports this case. The patient was promptly treated by apomorphine hypodermically and a purgative by the mouth, and no toxic effects of the sulphonal followed except drowsiness. This case illustrates the ease with which the laity can obtain large doses of drugs which are toxic if taken in sufficient quantities.

Case of Brain Tumor Simulating Myxœdema.—David Sommerville reports this case, in which all the symptoms pointed to myxœdema. There was no evidence of syphilis, and the patient improved somewhat under thyroid treatment. The necropsy revealed a large glioma in the right occipital lobe. The thyroid gland was normal. The author points out the uselessness of the thyroid extract as a therapeutic test.

A Criticism of the Mechanical Hypothesis of the Origin of Carcinoma.—Samuel G. Shattock exhibits a specimen of "spontaneous" carcinoma of the uterus in a rabbit, which he thinks argues against the experiment upon which Lambert Lack bases his theory of the mechanical origin of cancer.

Spasmodic Closure of the Larynx during the Administration of Ether.—W. J. McCardie reports a case illustrating the fact that some patients with compensated mitral stenosis are unable to take ether as an anæsthetic.

Formic Acid and the Inhalation of Formalin.—J. Lardner Green reports good results from this treatment as a preparation for and aid to the open-air treatment of phthisis.

A Case of Jacksonian Epilepsy Cured by Operation.—This case is reported by H. Drinkwater as being of interest because the patient is now, more than four and a half years since operation, in perfect health and working regularly.

A Case of Imperforate Vagina. — Stephen M. Laurence reports this case, in which, with an apparently complete absence of uterus and vagina, there is yet a perfectly normal development of vulva, mons veneris, and mammæ, leading to the supposition that a light thickening felt at the sides may possibly be ovaries.

Twin Pregnancy with Central Placenta Prævia.—Collingwood Fenwick reports a case of this condition occurring in a twin pregnancy. There were two placentæ, one lying across the outlet and the other attached to the lower segment of the uterus.

Imperforate Anus.—F. Ormrod reports a case of imperforate anus in a male child. Fecal matter was passed through the urethra. The bowel was cut into with some difficulty, and the child made a good recovery.

Ulcer of the Stomach.—A clinical lecture by Robert Saundby.

Berliner klinische Wochenschrift, January 8, 1900.

Contribution to the Pathology of Lead Paralysis.—M. Bernhardt describes the various types of this affection as set forth by different observers since the time of Duchenne, and then records two interesting cases of isolated paralysis of the small muscles of the hand occurring in two painters of the ages of nineteen and forty-one years respectively. In both instances the extensors of the hand and finger, which generally are most constantly and the earliest affected, remained intact throughout. M. Bernhardt regards this grouping of symptoms as very unusual.

Psoriasis and Glycosuria.—F. Nagelschmidt alludes to the rare association of these two affections and gives an account of some experiments made to determine whether psoriasis patients are more disposed to alimentary glycosuria than are healthy persons. Out of twenty-five persons with the skin affection, eight showed evidences of alimentary glycosuria when fed on grape sugar, a certain quantity being given each morning. But the author admits that persons with other cutaneous affections are also liable to this form of glycosuria, and is not willing to admit that there is any special predilection thereto among patients with psoriasis.

A New Method of Treating Syphilis by Inhalation.—R. Kutner has used with success the following procedure: Mercurial ointment is carefully rubbed over the inside of a box by means of a special device which the patient can use himself. The latter breathes the vapor of mercury given off from the rubbed surface, by means of a mask attached to a tube leading from the box. A heating device can be employed to keep the interior of the box at the proper temperature for the volatilization of the mercury.

Leprosy Hospitals Past and Present.—M. Kirchner alludes to the various institutions throughout the world, and describes a model house for the care of this disease, situated at Memel in Germany.

Munchener medicinische Wochenschrift, Jan. 2, 1900.

Clinical Experiments in Regard to the Influence of Irrigation of the Vagina during Labor on the Puerperium.—Krönig submits the following statistics which are based upon the results of his experiments. Of 515 patients in whom irrigation was performed the rectal temperature was above 38° C. in the puerperium in 235, or 45.6 per cent.; above 38.5° in 121, or 23.5 per cent.; 39° in 75, or 14.5 per cent.; 39.5° in 41, or 7.96 per cent.; and 40° in 17, or 3.3 per cent. One patient died of sepsis, giving a mortality of 0.19 per cent. Of 465 patients in whom irrigation was not carried out the rectal temperature was above 38° C. in the puerperium in 177, or 38 per cent.; 38.5° in 86, or 18 per cent.; 39° in 45, or 9.6 per cent.; 39.5° in 25, or 5.1 per cent.; and 40° in 12, or 2.5 per cent. One patient died of sepsis—a mortality of 0.21 per cent.

A Peculiar Influenzal Eruption on the Skin.—Rieger describes a skin eruption which was followed by marked swelling of the head and face, and which he attributed to the retained poison of influenza. The ordinary symptoms of influenza were present in the patients, and Rieger, suffering from the malady himself, concludes that the organism though an energetic reaction sought to destroy the stored-up poison, and through a kind of scalding drowned the poison in the heated exudate, for after subsidence of the swelling perfect health was restored. Other analogous cases have been noted, but according to Rieger have been incorrectly diagnosed as erysipelas.

The Influence of Fluorescent Material on Infusoria.—H. v. Tappeiner states that light causes acridin, phenylacridin, eosin, and quinine in solution to have a very baneful influence on paramecia, while in the dark these substances are not at all, or at least very slightly, poisonous. This injurious effect is dependent on the excitation of fluorescence.

Diagnosis and Therapy of Suppuration of the Eyes in the New-Born.—Von Ammon gives the results of the bacterial examination of many affected eyes, and finds that gonorrhœal infection at birth is relatively infrequent compared to the later infection. Therapy in the beginning of eye suppuration must not be of an irritating nature.

A New Guaiacol Preparation.—Alfred Einhorn calls this new preparation the hydrochlorate of diethyl-glycocol-guaiacol. It is easily soluble, and is split up into guaiacol in the organism. It is entirely non-poisonous, is non-corrosive, is easily absorbed, is anæsthetic, antiseptic, and deodorant.

Blue-Blindness in Contracted Kidney.—C. Gerhardt gives some interesting observations on this subject. In the cases he has noted all blue objects appeared black.

Wiener klinische Rundschau, January 6, 1900.

Contribution to the Knowledge of Pemphigus Vegetans.—Neumann states that this affection used to be regarded as syphilis. The prognosis is always gloomy. In Neumann's first cases the average duration of the disease before death was three-quarters of a year. Kaposi and Hebra have reported cases of ten years' duration. As to treatment, tincture of iodine and trichloride of iodine have given temporary relief. The best results are obtained from surgical treatment because by excision of the growths the exuding surface is diminished and the loss of the body juices decreased.

A Rare Combination of a Bullous Eruption of the Skin (Epidermolysis Bullosa) with Hydrops Hypostrophos.—Max Wilheim gives Schlesinger's characterization of this affection as a recurrent, œdematous, often extensive swelling of the skin, mucous membranes, and other parts. It is not inflammatory, neither is it painful. The etiology is not settled. Quincke thinks it depends upon an angioneurosis. It may be that auto-intoxication plays an important rôle in this disease. An interesting feature in a case quoted is that an acute nervous œdema is established by the influence of a local injury.

Mathematical Talent.—P. J. Möbius divides mathematical talent into four grades. In the lowest he places most women and not a few men. The second he designates as normal and includes in that those who can understand what is taught in high schools. In the third belong engineers, seafaring men, and physicists. The fourth comprises those who can grasp the whole subject of mathematics. He also adds that a fifth class might be made for mathematical geniuses—those who contribute original work to the subject. In examination of the brains of mathematicians an excessive development of the convolutions has been found, but the skull has never been described.

Wiener klinische Wochenschrift, January 4, 1900.

The Clinical Significance of a Displaced Kidney.—J. Hochenegg reports a case operated on by him of a kidney which was found in the pelvic cavity. The patient, a woman fifty-two years of age, had for years suffered from constipation with its well-known train of evils. The nervous expression of her trouble had grown so severe that the symptoms were hysterical. It was found necessary to extirpate the kidney, which was abnormally formed, being round in shape like a cake, still retaining the embryological lobes, and having a hilus which looked forward. Otherwise it was normal. This was undoubtedly a congenital malposition having no connection with the wandering kidney. Although, as a rule, there are no special clinical symptoms in this affection, when they do occur it is from pressure on neighboring organs, as in this case on the intestine. Anuria from compression of the ureter has been reported, also different forms of nephritis. The progress of labor has been affected—one case of rupture of the uterus being recorded.

Some Unusual Concretions in the Human Urinary System.—O. Zuckerkandl states that urethral stones are infrequent as compared with bladder concretions. He describes three of the former, giving illustrations. The first was almost as large as a cherry and ovoid. The second, walnut-shaped, measured 28 mm. by 12 mm. The third was like a bean. He next presents three preputial stones. Two were flat ovoid and the third was fashioned with two facets. They were the size of grape-seeds. Three more concretions were ureteral and were each composed of two parts united by a very narrow neck.

Contribution to the Knowledge of the Origin of Urinary Casts.—Ernst v. Czyhlarz believes that many hyaline casts are found in urine with no albumin; that granular casts are composed chiefly of detritus, and that desquamation of epithelium occurs mostly in the collecting tubules.

A New Cystoscope for Catheterization of the Ureters.—M. Schlifka describes, with an illustration, a new cystoscope which he thinks will prove more convenient than earlier instruments.

French Journals.

Bilateral Intermittent Ranula.—André says the exact anatomical origin of ranula has not been definitely established in spite of the great amount of attention given the subject. He relates an observation on a woman, twenty-two years of age, in which a double or bilateral ranula of intermittent character took its origin in the dilated canal of Wharton. This is a rare condition which has not been mentioned in books. The permeable orifices on both sides made it possible to enter into a fairly large pouch, but in spite of the permeability of the duct the fluid contents reached a point interfering with deglutition and phonation. To effect a cure the tumor is to be emptied every morning by dilating the canal with a lead probe of gradually increasing size.—*Le Bulletin Médical*, January 10, 1900.

Pott's Disease of the Cervical Region with Brachial Paraplegia.—Broca observed, for several months, a boy, six years old, with cervical Pott's disease and Goll's paraplegia. After a few months he had difficulty in the use of the left arm, and paralysis quickly followed. Continuous extension was carried out, both to the hip and lower extremities, and marked amelioration followed. Pain came on early, extending to the arm even before there was stiffness of the neck. It was pointed out that, contrary to the rule, there were no subsequent motor disturbances in the lower limbs.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, January 11, 1900.

Cinnamate of Sodium in Pulmonary Tuberculosis.—A. Mann treats tuberculosis by the intravenous injection of an aqueous solution of cinnamate of sodium which, he says, can be used without the least danger. An increase of leucocytes is to be made out shortly after the injection; granulations begin to form and the necrosed tuberculous masses are absorbed. A solution of one to five per cent. of an active substance is used. One or two minims of the weaker solution is injected and gradually increased in strength, being repeated every forty-eight hours. The median basilic or cephalic vein is chosen for the injection, and an antiseptic bandage is applied.—*Journal de Médecine de Paris*, January 14, 1900.

Expression of the Fœtus by the Abdominal Method.—G. Keim describes his method of aiding the expulsion of the child by manual pressure causing uterine contraction and expression. He confines himself to the delivery of the fœtus at or near term. He finds that these manipulations are without danger for the fœtus, and that they do not cause the phenomena of asphyxia or fatal compression. There is, however, a possibility of meningeal or medullary hemorrhage in certain cases. These facts, added to the harmlessness to the mother and the possibility of its application without asepsis, make it valuable, but it is not intended to exclude entirely the use of forceps and other operative measures.—*La Presse Médicale*, January 13, 1900.

The Cardiac Complications during Convalescence from Typhoid Fever.—J. Mollard has made fifty-two observations bearing on this question, and concludes that in four-fifths of the cases cardiac troubles are found, in about one-half of which there is a true syndrome having the following features: (1) Effacement or attenuation of the precordial impulse, slight displacement of the apex in cases in which it can be localized; (2) disturbances of rhythm; tachycardia, embryocardia, arrhythmia; (3) change in the sounds of the heart, medio-cardiac systolic souffle, *bruit de galop*, enfeeblement of the first sound or both sounds together.—*La Presse Médicale*, January 10, 1900.

Periodical Vomiting in Infancy and its Treatment.—R. Romme says that periodical vomiting is observed almost exclusively in large children in whose history, either hereditary or personal, a neuro-arthritic source is found. This gives us a therapeutical indication of the first order and our efforts must be directed toward the diathesis itself. The child's temperament must be changed by hygiene, proper alimentation, etc. Constipation must be obviated, and an occasional purgative be given containing jalap and scammony. In the attack itself there should be freedom from all excitement, and a very rigid diet.—*La Presse Médicale*, January 10, 1900.

The Treatment of Psoriasis.—Hallopeau and Leredde review the internal and external treatment of psoriasis. The external is considered the most important and quickest way of ridding the surface of scaly lesions. After this come chrysarobic acid, pyrogallic acid, eugallol, anthrarobin, oil of cade, tar, calomel, and beta-naphthol. Among the water cures Lonesche, Uriage, and Bourboule are recommended. Sulphur baths are given as an after-treatment.—*Bulletin Général de Thérapeutique*, January 8, 1900.

The Technique of Total Abdominal Hysterectomy in Suppuration of the Adnexa.—J. L. Faure says it is better to take away the uterus at the same time that the adnexa are removed, because it is always infected and can serve only to keep up pain and various troubles. The abdominal route is preferred for every case attended with severe suppuration and those that are acute and virulent. He goes on to describe his technique.—*Journal des Praticiens*, January 13, 1900.

The Mechanical Treatment of Sciatica.—Paul Frétin gives, with illustrative drawings, the technique he employs, including frictions, massage, vibrations of the nerve trunk itself, passive extension of the sciatic nerve, and gymnastic movements of the lower extremities and trunk.—*Journal de Médecine de Paris*, January 14, 1900.

The Reduction of Fractures by the Aid of the Radiograph.—Th. Tuffier gives, with numerous drawings, the employment of the *x*-rays before, during, and after the treatment of various fractures, especially of the arm and about the shoulder.—*La Presse Médicale*, January 10, 1900.

Revue de Chirurgie, January 10, 1900.

Endothelioma of the Bones.—Paul Berger reports a case of tumor of the humerus with spontaneous fracture; and disarticulation of the shoulder, performed by the author to remove the growth, was shortly followed by the appearance of tumors in the orbital and frontal region, on the thigh with fracture of the femur, and in the spine. A histological examination of the tumor showed that it could not be classed with the epitheliomata. The form of the cells and the arrangement of the capillaries excluded sarcomata. It was evidently of a class of neoplasms which have been called endotheliomata or peritheliomata.

The Surgical Treatment of Genital Tuberculosis in Men.—L. Longuet considers that castration as an operation of predilection is a mistake, as is preservation of the organ by abstention. The truth lies between these two extremes, and the proper treatment consists in a variety of operations, adapted to individual cases. In some instances a portion of the organ must be removed, in others the whole, but there must be conservatism in the surgical procedures.

Accidents due to Epileptic Attacks.—Charles Féré writes of the disastrous results of the tonic contractions of muscles during an epileptic attack which are liable to occur. Such are asphyxia from spasm of the neck and chest muscles, rupture of heart, liver, or diaphragm, section of the tongue and wounds of the cheek from contraction of the masseters, luxation of the jaw, fracture of bones, abdominal hernia, and even muscular hernia of the leg. The author reports a case of the last-named lesion.

Appendicitis.—F. Terrier gives it as his opinion that there is no such thing as medical treatment of appendicitis. The diagnosis once made, prompt surgical intervention is the only logical sequel.

Anæsthesia.—Oscar Bloch urges the more frequent use of chloride of ethyl even in major operations. "Psychic pain" can be dispelled by a few preliminary whiffs of chloroform.

Revue Hebd. de Laryngologie, etc., Dec. 9 and 16, 1899.

A Case of Complete Anosmia occurred in the practice of P. Jaques in the person of a man aged forty-five years when first seen. He had not the slightest recollection whatever of ever having had an olfactory sensation. The superposition of sensorial anæsthesia and a notable diminution of tactile sensibility led Jacques to conclude that the condition was due to a previous alteration of the mucosa by a suppurative inflammation rather than to a paralysis by either destruction or compression of the olfactory nerves.

Diagnosis and Treatment of Sinus Affections.—O. Seifert has adopted for the diagnosis of this class of nasal troubles a procedure which he styles "negative politerization." After cleansing and cocainizing the nasal fossæ, he introduces into one naris a compressed air-bag and then as the patient swallows a mouthful of water he slowly allows the bag to distend. This negative suction draws the sinus contents out into the nostril. He claims that this procedure will cure even chronic cases.

Giornale Internazionale delle Scienze Med., Dec. 15, 1899.

The Prophylaxis of Tuberculosis in Children.—Olimpio Cozzolino says that it is easier to treat children than adults, because, being subject to parental guidance, they are more tractable. Infectious diseases often lead to pulmonary tuberculosis, and children predisposed to phthisis should be especially guarded from infection. Every hygienic precaution should be observed, and an open-air life insisted upon, with due regard to cold, rain, and wind. A carefully graded course of cold bathing is excellent. Antisepsis of the air passages and care of the teeth are of especial importance. Milk, fats, honey, cocoa, are valuable foods.

The Curve of Fatigue with the Natural Rhythm.—Luigi Simonelli gives the graphic results of studies upon healthy individuals, whose muscles were contracted rapidly and without artificial periods of rest between the contractions.

International Medical Magazine, January, 1900.

On the Treatment of Acute and Curable Forms of Melancholia.—Warren L. Babcock classifies, for the purposes of treatment, curable forms of melancholia as acute, agitated, and stuporous cases. In acute cases, the first indication is to combat sleeplessness. The second is to keep the patient well nourished. When auto-intoxication is present, the use of saline laxatives, mineral water, and intestinal antiseptics is indicated. Suicidal tendencies should be carefully guarded against. In agitated melancholia, forced feeding and hypnotics are generally necessary. In stuporous cases, Weir Mitchell's rest cure has met with excellent results, as has also the administration of thyroid extract.

Nervous Manifestations in the Diseases of Children.—John Madison Taylor declares that two influences stand prominent in forming the lessened resistance in infancy and childhood—cellular instability and the incomplete development of the nervous system. Hereditary transmutations, inheritance peculiarities, and the degenerative neuroses should be considered. The subject of nutrition neuroses would have here a practical bearing. Fatigue states merging into exhaustion neuroses deserve attention. The child should be observed while entirely naked. Spasmodic states are often of the gravest significance. The existence of paralyses is frequently difficult to determine in early life. The pupils and fundus of the eye should be studied. Disturbances of speech should be noted. The knee-jerk is a variable phenomenon in children.

What Are the Doctor's Duties to Pregnant Women Before Labor?—Edward A. Ayers gives the cardinal rules of gestation as follows: frequent but never prolonged out-door exercise, alternating with brief rests recumbent, with low-heeled shoes and shoulder-strap support to the skirts, the corsets being laid aside; a sensible diet that avoids an excess of meat; regulation of the bowels. Careful pelvic and abdominal examinations should be made. At least one vaginal examination should be made a few weeks before labor time. The urine should be carefully watched. The nipples should be examined a month before labor; milk scabs, abrasions, and fissures should be treated, and depressed nipples elongated by traction daily.

Nervous Dyspepsia (Gastric Neurasthenia).—Boardman Reed thinks that in more than half of the cases of so-called nervous dyspepsia the trouble is dependent upon actual disease somewhere in the gastro-intestinal tract, and he prefers to limit the term strictly to forms of indigestion or gastric symptoms which cannot be traced to any organic lesion, and are not the manifest results of even any well-known functional affection.

Some Ocular Inflammations of the Newly Born and their Treatment.—Frederick Krauss states that the two diseases which are most frequent in the new-born are a simple catarrh of the conjunctiva, and ophthalmia neonatorum or purulent conjunctivitis.

Clinical Report of a Case of Myxœdema.—Henry Beates, Jr., reports a case of myxœdema in a child brought to him at the age of two years, which has apparently been cured by the administration of the exsiccated thyroid gland.

The Medical Chronicle, January, 1900.

Typhoid Affections of the Larynx.—R. W. Marsden reports four cases, three of which required tracheotomy. In one case the laryngeal affection came on at the end of the seventh week, and the inflammatory process left such thickening that the patient has to wear a permanent tracheotomy tube. In the second case the inflammation began at the end of the fourth week; in the third there were hoarseness and laryngeal obstruction in the fourth week. The fourth case was really one of superimposed diphtheritic inflammation, to which typhoid patients are specially predisposed.

The Treatment of Nephrolithiasis with Glycerin.—A. Hermann has given this remedy in one hundred and fifteen cases. In sixty per cent. it was efficacious either by removing concretions or by removing the pains accompanying the disease. He gives the glycerin in accordance with the weight and age of the patient, keeping within the limit of from one to four ounces (by weight.) The remedy was dissolved in an equal amount of water and always taken at one dose between two meals, and repeated two or three times in an interval of several days. Larger doses sometimes caused headache in nervous people or diarrhœa in dyspeptics.

Administrations of a Mixture of Ether and Chloroform in Gynæcological Operations.—F. McFarlane Fellows considers that a mixture of two parts pure ether to one of freshly prepared chloroform possesses the advantages of safety and convenience.

A Case where Torsion of the Pedicle of an Ovarian Cyst Gave Rise to Attacks Simulating those of Recurrent Appendicitis.—F. A. Southam reports such a case.

The Present Aspect of the Antitoxin Treatment of Diphtheria.—F. Villy reviews the statistics of the subject, which are all in favor of the remedy.

Journ. of Laryngology, December, 1899, and Jan., 1900.

A Case of Nasal Hydrorrhœa.—U. Melzi reports a case of this kind occurring in a woman aged forty years and having lasted six years. Chemical analysis of the fluid seemed to exclude the possibility of a cerebrospinal source. It seemed more nearly to approach the lacrymal fluid, but no affection of the lacrymal apparatus could be found. Sense of smell was apparently unchanged. Translumination of sinuses gave negative results. All therapeutic measures, including vibratory massage, atropine, and protargol, were without effect.

The Contagiousness of Acute Suppurative Inflammation of the Middle Ear.—M. Lermoyez, while not asserting that all suppurations of the middle ear are contagious, firmly believes that such inflammation often has no other cause. A series of cases is narrated in which the element of direct contagion seems to have been present. He therefore lays down the rule that we should isolate patients, especially children, with acute median otitis.

A Case of Retropharyngeal Abscess of Auricular Origin.—Dr. Urbano Melzi has been able to find recorded only twenty-two cases of retropharyngeal abscess due to chronic suppuration of the middle ear. He adds a third case occurring in a child aged two years. Pus from the ear and the abscess contained the same bacteria.

Bulletin of the Johns Hopkins Hospital, December, 1899.

The Recognition of the Poisonous Serpents of North America.—Howard A. Kelly states that the poisonous species of snakes are few in number. Those indigenous to this country, with the exception of the little harlequin snake (Elaps) of Florida and the South, belong to the "pit viper" group, *i.e.*, they have a conspicuous blind depression over the upper lip between the eye and the nostril in the loral region. Another differential point is the triangular head with massive maxillary development. They have fewer large scales on the head and a greatly increased number of small scales giving the head a warty appearance. The snake is thicker in proportion to its length and has a shorter tail. The dorsal surface is rough. The pupil is elliptical. There are two sets of teeth, upper and lower. Just outside of the upper teeth, under the lip, are two long mucous folds hanging over the principal fangs, while a number of smaller reserve fangs are found behind. Kelly describes the copperhead, the water moccasin, and the rattlesnake, and then speaks of the harmless snakes, the Colubers.

On the Chemistry, Toxicology, and Therapy of Snake Poisoning.—Thomas R. Brown declares that the whole question of the exact position of the various constituents of venom in the proteid family must be left *in statu quo* until a more definite and scientific means of differentiation of the various members is possible. In treating snake bite, a tight ligature should be applied above the wound if it is on an extremity. The poison should be removed by scarification, cauterization, excision, cupping, or sucking. About the wound should be injected some substance destructive to the venom. The internal remedies most used have been alcohol, ammonia, and strychnine. Brown then speaks of experiments with antivenomous serum, reports of which make it probable that a real antidote to snake poison has at last been found.

The Mensuration and Capacity of the Female Bladder.—Guy L. Hunner and Irving P. Lyon review their experiments on this subject. All measurements were made on living women, generally with healthy bladders. The women were all in the knee-breast posture, with the rectum, vagina, and bladder all (with few exceptions), dilated with air. The following results were obtained:

Atmospheric capacity: With anæsthesia, 306.7 c.c. (average 17 cases); without anæsthesia, 295 c.c. (average 8 cases); total, 303 c.c. (average 25 cases). Fluid capacity: With anæsthesia, 449.6 cc. (average 15 cases); without anæsthesia, 387.1 c.c. (average 7 cases); total, 429.7 c.c. (average 22 cases).

The average measurements obtained for the four following points were: To vertex, 7.14 cm.; posterior wall, 5.77 cm.; left lateral wall, 6.70 cm.; right lateral wall, 5.92 cm.

Treatment, January 11, 1900.

Acute Rheumatism.—H. W. Syers writes of the connection between rheumatism, pneumonia, and pleurisy. It would seem that subjects showing rheumatic tendencies but not necessarily sufferers from acute rheumatism may, after sufficient exposure, manifest symptoms of ordinary pneumonia and pleurisy, and these maladies may run their course with but little indication of the rheumatic tendency which has certainly had much to do with their causation. Often there is no rheumatic history, no heart affection, and the rheumatic alliance is shown only by the presence of profuse acid sweating, by pain and swelling of joints, or by both these signs in association.

On the Biliousness Sometimes Induced by Sea Air.—F. Parkes Weber says that gouty patients, fat and plethoric persons, and those who have recently led very sedentary lives, in fact those in whom the special metabolic functions of the liver and the functions of the excretory viscera are carried out only sufficiently to satisfy the ordinary demands made upon them, are specially liable to be affected with biliousness at the seaside. Tissue catabolism is more rapid than in inland towns, and this throws extra work on the excretory organs. When these are relatively inactive, biliousness ensues.

The Treatment of Leprosy by Injection of Calmette's Serum Antivenomieux.—R. S. Woodson reports a case in which improvement was wonderful, with a prospect of future recovery.

Revue de Médecine, January 10, 1900.

Intermittent Hysterical Ptosis.—Jean Abadie reports two cases of neuropathic patients, who as a result of emotional shock were affected by visual disorder, characterized by attacks of bilateral occlusion of the eyelids. The attacks were usually of short duration and induced by some psychical disturbance. Bilateral compression of the pre-auricular region, whenever applied, was able to overcome the trouble in one case, and gave partial success in the other. During the attacks there was no physical or mental disturbance, absolutely the only phenomena present being inertia and complete flaccidity of the upper lids.

Direct Communication between the Portal Veins and the Supra-Hepatic Veins in the Human Liver.—Charles Sabourin, judging from this anatomical condition found in the course of many researches, thinks it possible that there may be two portal circulations, one for the state of rest in especial, and the other for the period of activity. This he thinks would account for the rapidity of elimination by the kidneys of liquids taken between meals, and for the prompt and energetic action of the medicines, poisons, or alcohol taken at that time, and for the remarkable rapidity with which the supra-hepatic veins become filled with coloring-matter when this is injected through the portal vein.

Tolerance of the Bromides in Epileptics of Advanced Age.—Ch. Féré reports a number of cases to show that the bromides are sometimes very well borne by epileptics over sixty years of age. He says that renal insufficiency offers a contraindication to the use of this remedy, but this condition is not peculiar to advanced age. In many cases of seeming intolerance success may be obtained by beginning with very moderate doses and increasing gradually.

Lesions and Rôle of the Lymph Glands in Epithelioma.—By Maurice Soupault and Marcel Labbé. A continued article.

Functions of the Thyroid Gland.—By Gabriel Gauthier. A continued article.

Finska Läkaresällskapets Handlingar, December, 1899.

Syphilis and Life Insurance.—J. V. Runeberg presents a statistical study of mortality among the policy holders of the Kaleva Life Insurance Company of Helsingfors. The total number of deaths among the insured from 1875 to 1897 was seven hundred and thirty-four, and of this number eighty-four, or 11.4 per cent., were due to affections of syphilitic origin. But the influence of syphilis is greater than these figures would indicate, the author believes, for there were many deaths from other causes which were undoubtedly hastened by the fact that syphilis had lowered the resisting-powers of the organism.

Uterine Fibroids in Members of the Same Family.—Otto Engström has observed five hundred and thirty cases of fibroid tumors of the uterus, and among them has seen the affection in two or three sisters in thirteen families. He thinks this coincidence is not an accidental one.

Fibro-Sarcoma of the Broad Ligament.—Axel R. Limnell reports two cases of fibro-sarcoma of the broad ligament occurring in women aged thirty-five and fifty-one years respectively. The patients were alive and in good health four and three years after the removal of the growths. In both cases the neighboring organs were healthy.

Vesico-Vaginal Fistula with Atresia of the Urethra.—L. Gratschoff reports a case in which a vesico-vaginal fistula was situated 3 cm. above the external orifice of the urethra, and this canal was occluded by a thick membrane. The author pierced this membrane and inserted a catheter, and then repaired the fistula. The operation was successful.

Society Reports.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Ninety-Fourth Annual Meeting, Held in the City Hall, Albany, January 30 and 31 and February 1, 1900.

WILLIS G. MACDONALD, M.D., OF ALBANY,
PRESIDENT.

First Day—Tuesday, January 30th.

President's Inaugural Address.—The session was opened by the delivery of the presidential inaugural address by Dr. Willis G. Macdonald, of Albany. He alluded to the present popularity of Christian Science, osteopathy, and similar sects in medicine, and expressed the belief that the cause was to be found in an inadequate legal definition of the term "practice of medicine." The efforts of the society's committee and of the New York Bar Association to improve the status of medical expert testimony had unfortunately resulted in nothing more than a better general understanding of the intricate problems involved. In the opinion of the speaker the legal profession is responsible for the present order of things. Presiding judges could readily remedy existing abuses by excluding medical advocates from the witness box. A voluntary society of men doing expert work could do much to regulate the condition. On the topic of State control of such chronic diseases as tuberculosis and syphilis, the speaker stated that the tendency at present was toward such State control and isolation in sanatoria. The plan had been put in operation in Germany and in Massachusetts, but was still in the experimental stage. This society had endeavored to secure legislation in favor of the organization of State hospitals for tuberculous persons. But, while working in this direction, one should carefully consider whether all our resources for the local control of this malady had been exhausted. What had been done to prevent the herding of people in crowded tenements, and to improve the food supply of these people? The address then dealt with the subject of the long-standing schism between the Medical Society of New York and the American Medical Association. The speaker stated that after a critical personal examination of the subject he could find no difference in the ethical behavior of the members of the two societies, and it seemed to many that honesty and good manners were not matters for legislation or codes, but rather the results of home training. The present medical law of the State of New York, possibly somewhat modified and with some additional safeguards, constituted what might be called the code of ethics of the Medical Society of the State of New York, and practically unified the profession in this State. The address concluded with a reference to the odious and mischievous antivivisection bill for the District of Columbia, and to the necessity for the medical profession going to the assistance of the medical corps of the army, and making Congress feel the need for prompt and favorable action on the reorganization and expansion of that body.

Report of the Committee on Hygiene.—The report was presented by Dr. Henry R. Hopkins, of Buffalo, and, after tracing the movement of public opinion regarding tuberculosis since the time of the announcement of Koch's discovery, the committee unreservedly recommended State care of consumptives.

Report of the Committee on Legislation.—DR. FRANK VAN FLEET presented this report. He said that two hundred and sixty-five bills of a medical nature had claimed the attention of the committee during the four months' session of the last legislature.

Committee on State Board of Medical Examiners.—Dr. M. J. Lewi, the secretary, presented this report. He stated that in the coming year four licensing examinations only would be held instead of five as heretofore. The total number of rejections in the past year had been one hundred and sixty-five, or 19.73 per cent. Before the committee of the State society seven hundred and thirty-eight candidates had appeared for examination, and of this number 18.69 per cent. had been rejected.

Committee on the United States Pharmacopœia.—Dr. Reynold W. Wilcox presented this report, which favored the establishment of a bureau of materia medica for the disinterested investigation into the character and value of new drugs, the bureau to be under the authority of the dicennial convention of 1900, subject to the provision that this bureau should report annually. The society formally indorsed this recommendation.

Appropriation for Pathological Laboratory of State Insane Asylums.—Dr. A. Jacobi, of New York, moved, and Dr. D. B. St. John Roosa heartily seconded the adoption of a resolution, instructing the committee on legislation to take immediate steps to secure from the legislature a continuance of the appropriation for the support of this laboratory. Both gentlemen, however, made clear their disapproval of the fact that this laboratory had deviated in its work from that originally intended, and did not hesitate to state that the resulting absence of immediate and practical results explained the disinclination of the State to continue its appropriation.

The resolution was adopted.

Carcinoma of the Stomach, with Report of Cases Showing Increased Hydrochloric Acid. — Dr. A. MacFarlane, of Albany, read this paper. He stated that the symptomatology of carcinoma of the stomach varied with the diffuseness of the growth, the presence of ulceration, and whether or not the growth was primary in the stomach. Special attention was directed to a series of sixteen cases in which the symptom generally thought to be most characteristic—*i.e.*, the absence of hydrochloric acid in the gastric juice—had not been present. Undoubtedly the absence of hydrochloric acid was of the highest diagnostic significance, yet many excellent observers had reported cases showing that the presence of hydrochloric acid was not inconsistent with the diagnosis of gastric cancer. In twelve of the sixteen cases reported in the paper the diagnosis had been confirmed by operation or by autopsy. In six the history had been suggestive of a preceding ulcer. Hydrochloric acid had been continuously present in thirteen of the cases, while in three it had been present for a time, and was afterward replaced by lactic acid. The latter acid had appeared late in the disease in four cases, and in one it had been associated with the presence of hydrochloric acid. All of the patients had suffered greatly from vomiting. Retention of food, emaciation, and prostration had been marked in every instance. In nine cases the gastric symptoms had been present for less than one year; in seven they had existed for a number of years. In seven cases pain had been the prominent symptom. Eleven of the patients had been men and five women. Their ages had varied from thirty to seventy-two years.

Dr. Samuel Lloyd, of New York, remarked that in several cases of carcinoma of the stomach that had come under his observation, in which the new growth had been in the posterior wall, and the gastric mucous membrane had not been involved, hydrochloric acid had been found present after each test meal.

Age, Sex, and Season as Factors in Nervous Disorders.—Dr. William C. Krauss, of Buffalo, read a paper with this title. He divided the life history of the individual into six epochs, viz.: (1) infancy, or up to the second year; (2) childhood or from the beginning of the third year to the seventh or eighth year; (3) boyhood and girlhood, from the seventh year to the fifteenth or eighteenth; (4) adolescence, from puberty to the twenty-fourth year in the male and the twentieth in the female; (5) manhood and womanhood, reaching to the fiftieth year in the man, and the forty-fifth or fiftieth in the woman; (6) old age, embracing the years of decline and senility. Each period of life had its own disturbances, dependent upon nerve-cell perturbations occurring during the evolution of the nerve centres. Many acute infectious processes seemed to have a predilection for the early years of life. During childhood the nervous system underwent a transformation. The period of adolescence was one of increased reflex irritability—a time when the passions and appetites were at their zenith. It might well be called the emotional period of life. Of course, there were diseases peculiar to no period of life, but affecting all alike.

Strabismus.—Dr. D. B. St. John Roosa, of New York, read a brief summary of his paper on this subject. He stated that at the time of presenting his communication on this subject last year he had done only six operations by Panas' method, but now he had performed it twenty-four times, and his colleagues in the hospital had done it twenty-two times. This gave a total of forty-six operations, but of this number only two still required further operation. This operation made it possible, in almost every instance, to cure completely strabismus at one operation. The operation consisted essentially in stretching the muscles to be divided, before dividing them. The other important features consisted in doing the operation at one sitting, and in insisting that the operation should not be done on ambulant cases, but only at the hospital or at the patient's home. He now felt that he could confidently recommend this operation of Panas in both convergent and divergent squint with the assurance that in ninety-five per cent. of the cases the correction of the strabismus could be secured at one operation.

Non-Operative Treatment of Strabismus; its Possibilities.—Dr. A. Edward Davis read this paper. The author's principal points were: (1) Hypermetropia and hypermetropic astigmatism were the causes of convergent strabismus in the majority of cases; (2) as contributory causes might be mentioned, (*a*) difference in acuteness of vision, either congenital or acquired, but usually the latter, and due to an unequal state of refraction in the two eyes, and (*b*) anything that interfered with the acuteness of vision, such as opacities on the cornea and in the vitreous or lens; (3) faulty structure, insertion, or innervation of the extrinsic muscles of the eye may cause convergent strabismus; (4) the amblyopia present in most cases of convergent strabismus he believed to be functional and acquired, and not congenital except rarely; (5) the non-operative treatment of strabismus (the use of atropine, the exclusion pad, and, in patients old enough, glasses and the use of the stereoscope) should be begun as soon as the squint is observed. Just as soon as the non-operative treatment ceased to improve the condition of the squint, it was time to operate. Delay in operating after this time was not only useless but harmful, because the habit of suppressing the image in the squinting eye became fixed, and the amblyopia was made worse. After the eyes had been operated on, the use of the stereoscope, bar reading, the pad and glasses were of the utmost value in completing the treatment by maintaining parallelism and establishing single binocular vision. The rational treatment of strabismus meant its early treatment.

The Differentiation and Treatment of Ocular Affections Commonly Met with in Family Practice.—Dr. Frank Van Fleet, of New York, read a paper with this title. He divided cases of conjunctivitis into four classes, viz.: (1) Simple; (2) gonorrhœal; (3) trachomatous; (4) traumatic. All of these varieties were purulent and contagious unless it might be the traumatic form, in which the conjunctivitis was mild, and in which only a soothing eye lotion would be required; in the more severe ones a solution of nitrate of silver would be needed, and possibly also the application of iced cloths. Nitrate-of-silver solution was best applied on a cotton-wrapped applicator, and, if the conjunctivitis was mild, it was better not to exceed a strength of five grains to the ounce. In gonorrhœal conjunctivitis Dr. Van Fleet said he made use of a solution of the strength of twenty to forty grains to the ounce, applied as early as possible and followed by the use of iced cloths. In trachomatous and follicular conjunctivitis expression shortened the duration of the disease. After the acute stage sulphate of copper should be applied. Nitrate of silver, alum, and sulphate of copper all gave good results, but should not be used continuously for too long a time, as they then aggravated the trouble. In chronic cases he recommended the alternate use of alum and sulphate of copper. As to the diagnosis, the speaker said that conjunctivitis was most likely to be confounded with keratitis, iritis, scleritis, and glaucoma. In conjunctivitis the discharge of pus was characteristic, and, as distinguished from keratitis, there were, in addition, swelling and redness. In keratitis there was a loss of brilliancy of the cornea which was not observed in conjunctivitis, and in the majority of cases of keratitis there was an opacity of the cornea. In differentiating from glaucoma the size of the pupil was an important guide; in keratitis the pupil was contracted, while in glaucoma it was dilated. In keratitis the irritation temporarily disappeared under cocaine, whereas in iritis cocaine had little or no effect. The pain was generally more pronounced in iritis and glaucoma than in keratitis. The increased tension of the eyeball in glaucoma was also a characteristic sign. In conjunctivitis ice applications gave relief, in keratitis and iritis hot applications were generally more grateful to the patient. Episcleritis and scleritis were often met with in private practice as accompaniments of rheumatism and gout, and they were best treated by the use of atropine and hot water locally, and by the internal administration of salicylate of sodium, cathartics, and alkaline waters.

Teaching of Therapeutics to Undergraduates.—DR. ELI H. LONG, of Buffalo, presented a brief abstract of his communication on this subject. He advocated teaching therapeutics by beginning with a description of the physiological action of drugs, and adopting what is knowns as "the conference method" of teaching. It was possible to do this in a most interesting way.

Teaching of Therapeutics to Post-Graduates.—DR. REYNOLD W. WILCOX, of New York, read this paper. He expressed the belief that post-graduate instruction, to be effective, must be intensely practical.

The Significance of Earache in Children.—DR. T. H. HALSTED, of Syracuse, presented this communication. He said that there were two principal varieties of earache in children, viz., (1) the neuralgic; (2) the pain accompanying inflammation. The former was usually caused by disease external to, and perhaps quite remote from, the ear. If with the acute pain in the ear there were no tinnitus, no deafness, and no redness or swelling of the drum, it was probable that the pain was neuralgic. Earache in children was usually caused by inflammation of the middle ear. When an infant was in pain, without evident cause, the physician should at once think of otitis media. Purulent otitis media was nearly always present in acute infectious diseases of the gastro-intestinal and respiratory tracts of young children, especially in gastro-enteritis and broncho-pneumonia. In many of the acute infectious diseases and in gastro-enteric disorders death was the result of an unrecognized abscess of the middle ear. When children had recurrent attacks of deafness, it was almost certain that the cause was the presence of adenoids in the pharynx.

DR. WENDELL C. PHILLIPS, of New York, emphasized the importance of keeping the nasal passages clean in the acute infectious diseases. If properly treated acute suppuration of the middle ear should never become chronic. Pharyngeal adenoids were certainly responsible for many cases of chronic suppuration of the middle ear.

DR. A. JACOBI, of New York, said that as prevention was better than cure, he favored the daily washing out of the nasal passages in all children. It should not be done with a syringe, but by the use of the nasal cup.

DR. WILLIAM S. ELY, of Rochester, said that when an infant was suffering from pain of obscure origin, the mother should be directed to place her little finger first in one ear of the baby and then in the other. If either ear was painful and tender, it would be shown by the child shrinking when the finger was inserted into the affected ear. If the physician personally made this test he might be led astray by the child shrinking from fear rather than because of pain.

Weil's Disease, with a Pathological Study.—DR. HARLOW BROOKS, of New York, presented a paper with this title. He stated that acute infectious icterus, or Weil's disease, was characterlzed by a sudden onset, the prodromata being those usually observed in typhoid fever. Within eight or ten days the temperature usually fell by lysis, but relapses were common. The disease was often epidemic, though it did not seem to be contagious. It generally attacked young adults, most frequently healthy males. Nearly all the reported cases had been those of Germans, French, and Russians. He had been able to find only three cases reported in America. The disease was undoubtedly an infection, the source being almost certainly putrid animal flesh. For this reason butchers were specially subject to this disease, as were also those persons subsisting largely on sausage and other uncooked meats. This probably explained the comparative rarity of the disease in this country. Both clinically and pathologically there was a close resemblance between Weil's disease and acute yellow atrophy of the liver.

Treatment of Temperatures and Heart Failure.—DR. A. JACOBI, of New York, in this communication dwelt upon the possible value of Credé's colloid silver. His own experience with this method of dealing with temperature in disease was limited to a few cases of phlebitis, puerperal fever, and pyæmia.

Pathogenesis and Treatment of Acute Croupous Pneumonia in the Light of the Newer Pathology.—DR. JAMES K. CROOK, of New York, read a paper with this title. He stated that the pneumococci were not invariably present in pneumonia, nor did they invariably cause pneumonia. Fraenkel's microbe appeared to be present in all conditions, yet was not invariably present in one. On the other hand, it had been demonstrated that pulmonary hepatization might be produced by the colon bacillus, the Loeffler bacillus, and the bacilli of typhoid fever and of erysipelas. He was not disposed, therefore, to place much reliance on the pneumococcus either as the cause of acute lobar pneumonia or as a basis for treatment. It had been proved that the serum from the blood of animals suffering from pneumonia conferred temporary immunity upon animals into which it had been injected. Although various remedies had been recommended as effective in pneumonia, there was still no proof that any of these agents influenced the pneumococcus in the body in any way.

Dr. Andrew H. Smith, of New York, said that he wished he could sufficiently emphasize the importance, to a correct conception of pneumonia, of the double circulation in the lung. A fact well known to every first-year medical student had heretofore been entirely overlooked in its relation to the one disease in which it afforded the indispensable condition upon which the disease depended. Like all other organs the lung had a circulation by which its structure was nourished, and which derived its blood from the left side of the heart, but in addition it had an entirely independent circulation for functional purposes, which received its blood supply from the right side of the heart. This latter circulation was not interested in maintaining the structural integrity of the lung. This circulation might be entirely suppressed without structural damage, as when the lung was compressed by intrapleural effusion. It was his belief that the essence of a true lobar pneumonia was the infection of the air cells with the pneumococcus—the specific parasite. Other organisms might participate in the infection, but in proportion as they did so the case would not be typical. The one clinical feature that, in his opinion, always indicated the predominance of the pneumococcus as the causal factor was the defervescence by crisis. When this occurred, he believed one might always be sure that the infection was chiefly by the pneumococcus. When the defervescence was by lysis, one might suspect that other germs were taking a prominent part. It could, however, only be suspected, for lysis might occur with pneumococcic infection if the local process spread slowly, and one portion after the other of the lung kept up the supply of toxin. The pneumococcus was present in the upper air passages and, to some extent, in the large bronchial tubes of most persons in health. It did not grow rapidly in these localities, only individual bacilli being found ordinarily. It grew freely, however, on serous or synovial membranes. With the former might be classed the lining membrane of the air cells. If the pneumococcus penetrated this far, a colony was started, and the irritation so produced caused an exudation, in which the growth continued until the medium became too much contaminated to serve longer as such, and then the process was stayed. This organism was peculiarly sensitive to acid, and the pneumonic process seemed to increase the acidity of the lung. The speaker then contrasted pneumonia with diphtheritic infection, more particularly as regards the direct action of the pneumococcus and its toxin, and the fact that while in diphtheria the microbe grew in the tissue itself, in pneumonia it grew on an exudate that was poured into the air cells and was not a part of the pulmonary structure.

Dr. Henry R. Hopkins, of Buffalo, insisted most emphatically on the necessity of supplying an abundance of pure air to the pneumonia patient.

Classification of Infectious Diseases.—Dr. William H. Thomson, of New York, presented a communication on this subject, in which he dwelt upon the important, and often disastrous, results from the careless use or misuse of the terms "contagious" and "infectious." We had fortunately got rid of that nightmare "miasm," or a deadly gas. The following classification was recommended: All diseases due to the presence of their specific living micro-organisms in the body were "infectious"; hence, all infectious diseases were communicable from the sick to the well. They were divisible into three classes, *i.e.*, (1) the contagious; (2) the non-contagious; (3) the inoculable. The contagious communicable diseases were those in which simple proximity to the infected was sufficient to communicate the infection to those susceptible to it. The non-contagious communicable diseases were those in which the communication was not by simple proximity to the sick, but through intermediate means of communication. The inoculable diseases were those which gained entrance through wounds, as in hydrophobia. All infectious diseases could be prevented by measures of disinfection applicable to each. Dr. Thomson suggested that the foregoing facts be summarized and presented to the public.

Discussion on Prophylaxis in Gynæcology: the Etiology and Prevention of Uterine Disease Before Pregnancy.—Dr. W. Gill Wylie, of New York, opened this discussion, taking up the special topic indicated. He said that for a young girl to develop well into a healthy young woman she must have a surplus of strength; otherwise the generative organs were almost sure to suffer. Up to the age of about ten years girls and boys should be allowed the same freedom, and should be prevented from undue use of the brain and the excitement incident to frequent association with older ones. He believed that the large number of women of the better class, having poorly developed generative organs, owed their defective condition very largely to the pernicious custom in this country of encouraging education and precocious maturity in young girls. The disastrous effect of such unwise early training on parturition and on the subsequent life of these individuals was clearly pointed out. Next in importance was the avoidance of habitual constipation. The deleterious influence of the customary dress of women and the tendency to a sedentary life also received attention. He advised rest during the menstrual period only when pain and other symptoms indicated that this function was not strictly normal. An exception was made in the case of young girls in whom this function had not been thoroughly established. Dysmenorrhœa and profuse menstruation might be successfully treated in many instances solely by removing these young girls from school, and encouraging a free out-door life and association with those younger than themselves.

Prophylaxis After Marriage.—Dr. Ralph Waldo, of New York, discussed this topic, touching more especially on the results of early venereal infection, of prevention of conception, and on the Credé method of preventing ophthalmia neonatorum. The speaker stated that most of the cases of pyosalpinx coming under his observation were the result, not of gonorrhœa, but of septic endometritis following abortion, usually intentionally induced.

Dr. M. D. Mann, of Buffalo, said that in the first year of menstrual life girls should be kept away from school and quietly at home during the menstrual period. Some mothers applied a small corset to their girls when they were yet very young, and made them wear the same size for a number of years. In this way all of the evils of tight lacing were produced almost unconsciously to the wearer of the corset. All abortions should receive careful treatment, for nature had never intended that they should occur and had consequently made poor provision for them.

State Care of Tuberculous Patients.—The evening session was held in the assembly chamber of the State capitol, and members of the legislature and the general public were invited to be present. The topic for discussion was "The State Care of Tuberculous Patients."

The Attitude of the State and Municipality in the Care of Pulmonary Tuberculosis among the Poor.—Dr. Edward O. Otis, of Boston, Mass., opened the discussion with a paper on this subject. He said that pulmonary tuberculosis was the cause of about one-seventh of all deaths. It went almost everywhere that man went, and was worse where human beings were crowded together. Three-fourths of its victims were stricken at the most valuable period of life. The disease was curable in its early stages, but such treatment was expensive and beyond the means of the poor. The latter were a constant menace to those immediately about them, and also to the public, through their ignorance and carelessness regarding the proper care of their sputa. On the ground of economy, prophylaxis, humanity, treatment and care should be given the poor consumptive. The city and State had already assumed that it was their duty to provide treatment and care for the unfortunate poor suffering from other diseases and defects. For the defective class the State had established insane asylums and institutions for dipsomaniacs and for the feeble-minded. There was, however, an enormous mass of consumptives for which no provision had been made. The curable cases lost their chance for cure, and the more advanced ones must go to the poorhouse. The interval of time between the inception of the disease and the manifestation of symptoms was so long that the cause was often forgotten. Only recently had it been shown that the old theory of hereditary transmission was inadequate. When the public once awakened to a realization of these facts, it would rise and demand State and municipal care. To this end he suggested that the crusade against tuberculosis should be made a popular one; if need be, a fashionable one. In England the daily press had been a powerful factor in moulding public opinion. In the speaker's opinion, two sets of institutions would be required, viz., (1) hospitals for consumptives in or near the city, for the reception of poor consumptives in all stages of the disease, erected and maintained by the municipality; (2) several State sanatoria favorably situated climatically and not too far from the city, which would furnish the majority of its clientèle. These sanatoria should receive only the incipient cases. Undoubtedly other hospitals for consumptives would be erected and supported by private charity, but the initiative must come from the State. A portion of the expense could be collected in some cases from the patient or his friends, or from the city or town from which he came. Of course the entire maintenance could be provided for by a per-capita tax. As a matter of fact, the State and the municipality must ultimately provide for the poor consumptive if the early and more effective provision recommended should be withheld. By reducing the number of consumptives by this enlightened method there would result a yearly saving of lives, having a distinct money value to the community. Knowledge ever brought responsibility, and in this instance certainly we should not shrink from it. The probable expense per capita would be $300 or $450 annually. Undoubtedly favorable sites would be found in the central and western parts of the State. The great desideratum was pure air. Proper treatment could not often be obtained at home. The modern treatment of consumption was an exacting, long, and expensive one, and was entirely beyond the grasp of the poor. Hardly a single European country at the present time was without one or more sanatoria for consumptives. England had seventeen hospitals, homes, and sanatoria of this kind, and it was probable that before long such sanatoria would be scattered thickly all over Europe, just as at one time leper-houses were to be found all over that continent. The physician was the one who must properly mould public opinion on this important matter.

Remarks upon the Work Accomplished at the State Hospital for Consumptives at Rutland, Mass.—Dr. Vincent Y. Bowditch, of Boston, read this paper. The patients, he said, had been first admitted to this hospital in October, 1898, and at first the more advanced cases had not been excluded; hence, it was probable that still better results would be shown at the end of the second year. The number of patients coming upon his service there was 212. Of these, 126 had been discharged. Of this number, 35 had been "arrested"; 37 much improved; 17 moderately improved; and 24 not improved at all. One patient had died, and one had had only a bronchitis. Of the 35 "arrested" cases, 27 should be considered as incipient at the time of their admission, and 8 had presented evidences of rather advanced disease in both lungs. Founded upon this experience certain suggestions were offered. The ravenous appetites engendered by out-door life required a large supply of nourishing food, particularly an abundance of milk and eggs. The fact that in every such sanatorium amusement must be provided should be kept steadfastly in mind. It had been very properly suggested that an effort be made to give the patients light occupations consistent with their state of health. One very important result of the establishment of such sanatoria was the educational part which they played. It was, perhaps, well to caution against an excess of enthusiasm, for there was a strong temptation to exaggerate in connection with any subject which had caught the popular fancy.

Similar Results of the Climatic and Sanatorium Treatment of Tuberculosis in the Adirondacks.—Dr. Edwin R. Baldwin, of Saranac Lake, read this paper. Great efforts had been made to trace the patients, he said, who had been discharged in fifteen years. During this period 1,200 patients had been cared for, exactly three-fourths of whom were recorded as being "advanced." This left only one-fourth really "incipient." During the last two years, however, one-third of the new cases had been incipient. Of the whole number, 277, or twenty-three per cent., had been discharged apparently cured; 669, or fifty-six per cent., with the disease arrested; 230, or nineteen per cent., were in a stationary or improved condition; 24, or two per cent., had died at the institution. By "apparent cure" was meant cases in which the rational signs of phthisis and the bacilli in the expectoration had been absent for at least three months, or who had no expectoration at all, any abnormal physical signs being interpreted as indicative of a healed lesion. "Arrested cases" were those in which cough, expectoration, and bacilli were still present, but in whom active signs had been absent for about three months. One-fourth of the whole number, or four hundred cases, were perfectly well, or believed to be. Of the incipient class, sixty-eight per cent. had been discharged apparently cured, while only eleven per cent. of the advanced ones had recovered. It should also be noted that only two hundred are known or believed to be living, who still had cough or expectoration, who were otherwise well. All of the remainder were known to be or believed to be dead. Present experience showed that only one out of fifteen applicants to the institution was in the incipient stage, or was favorable for recovery. But these figures did not take cognizance of the large number of persons who had been saved from infection with tuberculosis. Out of two hundred and forty-eight perfect recoveries recorded up to 1898, two hundred and fifteen, or twenty-two per cent., of all those discharged up to that time were known to be, or believed to be, perfectly well at present. A period of two years had been, in their experience, a fair test of permanency, but it had been clearly shown to be dependent upon the habits, occupation, intelligence, and vicissitudes of life of the individual rather than an inherent tendency of the disease to relapse after having been healed for so long a time. Indeed, the results would be better if the patients could remain longer in the institution. The patients were drawn from a fairly intelligent class of people The cost to the patient per week was only $5. The administration expenses had been so slight that the cost of maintenance had been only $7 per week. Dr. Trudeau received no salary for his services.

Infectious Character of Tuberculosis, and the Prognosis of Incipient Pulmonary Consumption.—Dr. George Blumer, of Albany, read this paper. He stated that the disease now known as tuberculosis had existed as a separate clinical entity for a comparatively short time. It was not until after the middle of the nineteenth century that its infectious character had been clearly recognized. In 1865 had come the first announcement of the infectious nature of the disease, as proved by inoculation experiments on animals. In 1882 Koch had published his celebrated observations on the tubercle bacillus, in which he showed that this organism was always associated with tuberculosis, that it could be cultivated outside of the body, and that even after many generations of cultivation the bacilli were capable of reproducing the disease when inoculated into susceptible animals. The claim that the mortality from tuberculosis in the first year of life was twenty-three per ten thousand gave some color to the theory that at times the disease might have a prenatal origin. Experiments had shown that when the sputum was received into spit-cups and the room was absolutely clean, the air of the room was free from tubercle bacilli. Strauss had found tubercle bacilli in the nasal passages of nine out of twenty-nine healthy physicians and nurses in hospital. In confirmation of the belief in air infection were the relatively numerous cases in which previously healthy individuals had developed pulmonary tuberculosis after living in rooms formerly occupied by tuberculous individuals. The researches of Flick regarding infected houses were interesting as showing that only ten per cent. of the tuberculous houses in Philadelphia were isolated houses. It was also shown that the distribution of tuberculosis corresponded almost exactly to that of the other more acute infectious diseases. Other confirmatory evidence of air transmission was to be found in the sudden outbreak of many cases of tuberculosis in small towns following the introduction of one or two cases into the community. Experiment had shown that individuals in coughing and speaking threw off spray containing tubercle bacilli. The rarity of primary intestinal tuberculosis in adults was shown by the fact that in one thousand autopsies at Munich there had been but one of primary intestinal tuberculosis. Northrup, in one hundred and twenty-five post-mortem examinations on children, found only three of tuberculosis of the mesenteric glands alone. Cheese, whey, and particularly butter, had been found to contain tubercle bacilli in many instances. In Berlin, Robinowitch found fourteen per cent. of the butter examined to be infected with the tubercle bacilli. The weight of evidence was against the flesh of animals being a source of infection, largely, no doubt, because it was usually cooked before being eaten. Various methods of skin infection had been reported. Primary infection through the genito-urinary tract was probably exceedingly rare; both in men and women the deeper rather than the superficial portions were the first attacked. As to prognosis, the speaker said that no other chronic disease showed a greater tendency to heal. Clinically there was good evidence that, taken in its incipiency, pulmonary tuberculosis was very amenable to treatment. The report of the Loomis Sanatorium for 1898 showed about fourteen per cent. of cures, and the cures at the Falkenstein Sanatorium in Germany are said to be about fifteen per cent.

Legislation concerning Tuberculosis; Past, Present, and Future.—Senator Horace White, of Syracuse, spoke on this topic, reviewing the evidence that had been presented by the medical profession, and predicting enthusiastically and positively that the desired establishment of sanatoria could not fail of speedy accomplishment as soon as the public had grasped the problem, and appreciated the vital interests at stake.

The Policy of the State Relative to the Spread of Tuberculosis.—Dr. Enoch V. Stoddard, of Rochester, read this paper. He said that the sanitary welfare of the community had been for a long period a source of solicitous attention, and there had thus grown up a department of public health. One of the common causes of pauperism was the prevalence of disease. It was well known that the annual death rate from pulmonary tuberculosis in this State was about fourteen thousand, and that the incipient and advanced cases made a total of nearly sixty thousand. Comparatively few recalled the fact that the State was contributing in a greater or less extent to the maintenance of one in every two hundred and fifty-one of its population. It would seem, therefore, that the province of the State was not so much to assume the direct and total care of such patients as to establish such a system, by well-advised legislation, as would enable the several communities of the State to bear their part in this care. The great desideratum was to educate the patients and the public in general in the means of prevention as well as of cure. The province of the State should be, therefore, mainly educational, and only custodial so far as might be necessary to insure those object lessons in care that might be required by a few communities. It was well known that consumptives were exceedingly averse to being removed to any great distance from their homes, and hence the importance of what might be termed "home sanatoria." The State of New York presented suitable sites for such sanatoria within easy distance of almost every large centre of population within its borders. It had been found that the cure of pulmonary tuberculosis in a home sanatorium was less likely to be followed by relapse than in the more distant sanatoria. Moreover, such home sanatoria possessed a great educational value. The chronic cases should be cared for by the municipalities in which such cases occurred. The State already possessed a well-organized system of protecting the public health. The enactment of a law along the lines just indicated would lead to the establishment of a system of local sanatoria for both incipient and advanced cases.

Taxation with Relation to State Care of Consumptives.—Hon. Otto Kelsey, of Geneseo, spoke on this topic. He pointed out the enormous expense now borne by the State, and, as a member of the legislature, expressed his belief that it was unwise at the present time to make the large appropriation asked for. It was not only the sum asked for now, but the indefinite and probably very large appropriations that would be demanded for this work in the future.

Dr. John H. Pryor, of Buffalo, made a most vigorous and telling speech in advocacy of State care of consumptives. He showed the fallacy involved in the oft-repeated assertion that consumption was decreasing among us. Michigan had seen fit, six years ago, to adopt a plan of State care, and already it was evident that tuberculosis was decreasing in that State more rapidly than elsewhere. What was asked for was that the consumptives be taken care of at the right place and the right time until they were well, and not to take care of them at the wrong place and at the wrong time until they were dead. We had just been told that the State could not afford to make the appropriation asked for because of the large sum needed for the canal system, but it seemed to him that the saving of human life was more important than the canals.

Dr. Daniel Lewis, of New York, argued that the movement under discussion should be begun by providing for the advanced cases, as they were a great menace to public health.

Dr. Arthur G. Root, of Albany, spoke of the educational value of consumptive sanatoria, and the economic aspects as shown by the desire of organized charity to co-operate with the medical profession in this movement.

Dr. Samuel B. Ward, of Albany, pointed out that the legislature had not been asked to take care of the sixty thousand consumptives in the State, but only to make provision, as an object-lesson, for a few of these persons.

Dr. George R. Fowler, of New York, commented upon the encouraging change of opinion on this subject that had recently taken place in the medical profession.

Dr. Henry R. Hopkins, of Buffalo, urged immediate action on the ground that delay meant to thousands a cruel and unnecessary fate. When thousands were marching to the grave, and it was in our power to save them, how could an enlightened and humane profession withhold this succor?

Dr. Brush, of Brooklyn, discussed further the economic side of the problem, and pointed out the small beginning made last winter in the passage of the Henry law.

Dr. Nelson H. Henry, of New York, a member of the assembly, commented upon the general lack of information and wide differences of opinion among physicians on this subject. He advised being contented with a small appropriation, if more could not be obtained.

Dr. Z. Taylor Emory, of Brooklyn, deprecated the lack of enthusiasm and co-operation evinced by the medical members of the legislature.

Second Day—Wednesday, January 31st.

The greater part of the morning was given up to a personal inspection of the new Albany Hospital, and to an interesting clinic at that institution.

Human and Bovine Anthrax.—Dr. Frank W. Ross, of Elmira, in this paper detailed an interesting experience with this disease. Regarding the diagnosis, he said that the typical lesion could hardly be mistaken for anything else, although it was true that there was a somewhat striking resemblance to vaccination. Cattle dying in virulent epidemics sometimes showed no gross lesions at first. The advantages claimed from vaccination for this disease by the Pasteur method were certainly noteworthy. In the preparation of the serum the absolute destruction of the anthrax spores must be assured by experiment. The wonderful results secured from this serum certainly justified its use in man. Dogs, pigs, and rats were practically immune. Excision, curetting, and cauterization of the pustules were justifiable in any stage. The virulent systemic poisoning should be overcome by symptomatic treatment.

Bovine Tuberculosis.—Dr. James Law, of Ithaca, discussed this topic. He stated that experience with the tuberculin test showed that in most herds tuberculous generalization was not observed. The average bacillus of bovine origin habitually failed to produce a rapid extension and generalization of the disease. The tubercle bacilli of cattle were thicker and shorter than tubercle bacilli in man, but they often presented almost exactly the same morphological characteristics. Our neighboring States demanded that the tuberculin test be applied to cattle, and, as a result, the tuberculous animals, as determined by this test, were sorted out and sent into New York State, there being at present no law preventing ths.

The Preparation of Tuberculin; its Value as a Diagnostic Agent, and Remarks on the Human and Bovine Tubercle Bacilli.—Dr. V. A. Moore, of Ithaca, presented a résumé of his paper on this subject. He said that properly prepared tuberculin could not possibly contain living tubercle bacilli, because it was twice raised to a temperature which killed these germs. It was usually prepared from sputum bacilli. The tuberculin reaction consisted simply in a temporary rise of temperature on the part of the tuberculous animal; it produced absolutely no effect on the healthy animal, as shown by the thousands of tests already made. This presupposed that one was familiar with the normal variations of temperatures. This was especially important in cattle, because in them there was often a normal variation of three or more degrees. Excitement, food, variations in surroundings, and the application of cold water all produced marked changes in temperature which might last for three or four hours.

Dr. James K. Crook, of New York, spoke of his experience with the tuberculin in several cases of suspected tuberculosis, and expressed the opinion that it afforded but little aid to diagnosis in the human subject.

Dr. F. W. Ross, of Elmira, said that seventy-two cattle affected with tuberculosis all gave the tuberculin reaction, and in seventy of these the gross lesions were apparent at post-mortem examination. The old cattle were infected through the lungs, and the young cattle through the intestinal tract, showing that the latter had become infected secondarily from the sputum.

The Medical Examiner for Life Insurance and His Responsibilities.—Dr. S. Oakley Vander Poel, of New York, read a paper with this title. He said that formerly all life insurance companies were obliged to decline from twelve to fifteen per cent. of their applicants, in consequence of some impairment of family record or physical disability. Of late the most progressive American company had studied all its declined applications between the years 1875 and 1890, and had ascertained the outcome of each individual; if alive, the condition of health, and if dead, the cause of death. From the data thus obtained it had been able to differentiate and collect aggregated groups of persons suffering from the same disorder, which had supplied a basis by which to adjudicate upon a special case under consideration. Now, practically all of this fifteen per cent., who had been formerly declined, were accepted on a sub-standard basis, provided they were not acutely ill, or there was no moral hazard. This company now required its examiners to present all the facts in the case; or, in other words, to give a pen picture of the applicant, upon which the home office of the company based the insurance value of the risk. The examiners were relieved from the embarrassment of declining an individual, but their responsibility toward the company remained the same. The company was still as conservative as heretofore, as an applicant, to obtain a standard policy, must still possess the same degree of physical excellence as formerly; the standard was simply separated from the sub-standard with the same care as when insurance was denied the latter class. The medical examiner should remember the difference in the mental state of the patient and the applicant for insurance. The latter was nervous, fearing the development of some hidden ailment, and, if young, the examination might induce, as it were, a mild form of shock. The patient concealed nothing from his physician; his attitude was one of unreserved co-operation. The memory of the insurance candidate was less acute, and his state of mind was one of antagonism. The skilled examiner had learned this lesson. The company now insured under-average as well as selected lives, offering insurance to practically all who apply. In each case it adjusted the plan of insurance to the insurance value of the risk. The medical examiner's report served as a basis of valuation, and determined the plan upon which the insurance was offered.

Experience with the Angiotribe.—Dr. J. Riddle Goffe, of New York, read this paper. He used the latest and best modification of the instrument in sixteen cases, fifteen of which were hysterectomies. He had found that the use of this instrument shortened the operation, facilitated convalescence, and made the treatment more convenient.

Dr. W. S. Stone, of Washington, D. C., said that he had used the same angiotribe about twenty-five times, for the most part in abdominal hysterectomy, and in no instance had he experienced any trouble from hemorrhage. The use of the angiotribe, he believed, avoided both hemorrhage and suppuration in pelvic surgery.

The Importance of Early Recognition of Acute Inflammation of the Middle Ear by the General Practitioner.—Dr. Edward B. Dench, of New York, after calling attention to high temperature in young children, otherwise unaccounted for, as good ground for suspecting inflammation of the ear, described in detail the mode of examination. In the treatment, early and free incision of the drum was advised, and the use of such "ear drops" as oil and laudanum was characterized as worthy of being made a criminal offence.

Dr. James F. McKernon, of New York, took exception to this wholesale condemnation of "ear drops," claiming that the instillation of a warm four-per-cent. solution of cocaine in camphor water was often beneficial.

Uterine Fibroids Complicated by Pregnancy.—Dr. W. F. Ford, of Utica, presented a paper on this subject in connection with photographs and histories of several illustrative cases. The dangers from this complication were chiefly overdistention or rupture of the uterus, interference with a normal first stage of labor, and sepsis resulting from infection after delivery. When the lower third of the cervix and the entire uterus were free from neoplasm, nothing need be done. If, however, the neoplasm was large enough to block the birth canal, the obstetrician was called upon to decide between Cæsarean section and hysterectomy. If the tumor was in the anterior wall, Cæsarean section could not well be done.

Anniversary Address by the President: "The Relation of the Clinical Laboratory to Modern Surgery."—Dr. Willis G. Macdonald, of Albany, delivered this address. He recommended the practice of taking at irregular intervals, and without notice, specimens of surgical dressings, ligature and suture material, and from the skin of the patient. Each new lot of catgut or other similar material should be tested in the laboratory before being accepted and used. The speaker said that delayed shock and fat embolism had been a very acceptable refuge in many cases of overwhelming sepsis. The use of the antistreptococcus serum in cases of surgical sepsis, he declared, had proved sadly disappointing, but further study of the streptococci might quite possibly change these results. Tetanus serum certainly possessed antidotal properties. When given in suitable quantities he had seen improvement invariably follow. Modern surgery demanded that urinary examinations before operations should include an estimation of the total solids for twenty-four hours, together with examination for indol, peptone, and similar abnormal ingredients. Routine examination of the blood was also very important. The determination of the percentage of hæmoglobin often afforded the surgeon valuable information. Microscopical examination of the blood was a valuable aid in making a differential diagnosis between chills due to nervousness, to malaria, to sepsis, and to other causes

New Rectal Instruments.—Dr. Samuel G. Gant, of New York, exhibited several new rectal instruments, including a convenient rectal speculum, and a pile clamp having parallel blades, thus greatly diminishing the chance of hemorrhage.

A Unique Case in Obstetrics.—Dr. F. H. Parker, of Auburn, reported a case in which he had extracted a small macerated fœtus from a woman, and a few days later had delivered her of a fully developed and healthy child. The history of the case seemed to indicate that the dead fœtus had been carried for upward of two years. There was nothing unusual in the appearance of the secundines.

Further Investigations into the Cause of Cancer.—Dr. Roswell Parker, of Buffalo, presented a communication on this subject. He stated that the conclusions presented by him last year had been unexpectedly sustained and corroborated by other observers, both at home and abroad. The speaker reiterated his assertion that cancer was undoubtedly on the increase, and added that this could not be wholly explained by the improved methods of diagnosis. It should be remembered that just in proportion as methods of diagnosis were improved, the number of deaths would be reduced. It was probable that we must assume a certain predisposition of the tissues, either inherited or acquired, before cancer formation was possible. Cancer was virtually never seen on the back, save in points within easy reach of the hands. It appeared on the face chiefly in those who did not use soap. It did not occur, as a rule, on the lips of women because they did not smoke. Cancer of the ear usually began on the upper and outer border, *i.e.*, the least resisting part. Dr. Parker presented a list of cases collected by him, bearing upon the age at which cancer most frequently developed. In two of these cases, carcinoma of the uterus was present in infants of two years of age. In conclusion, the speaker asserted that he saw in the work of the State cancer laboratory constantly increasing evidence in support of his belief in the parasitic nature of cancer. The experience in the State laboratory showed that histology alone would not give the necessary information concerning certain bodies that had been found in the course of the study of carcinoma.

The Curability of Leprosy.—Dr. George H. Fox, of New York, presented this paper. He stated that in the large proportion of cases leprosy terminated fatally, but exceptionally all traces of the disease disappeared, and the patient probably became immune to it thereafter. A change in habitation, a cheerful prognosis, and a resort to certain drugs were characterized as important factors in securing a cure. The number of reported cures was certainly very small. When these individuals were removed from the locality in which the disease was contracted, and transferred to a region in which leprosy was not endemic, an improvement, often temporary, was very commonly noted. He had found chaulmoogra oil a valuable remedy. In some instances it caused a degree of nausea that was prohibitive; in others, large doses would be tolerated for a long time. Cases could be cited in which tubercular leprosy had subsided under treatment, and the individuals had been apparently cured completely. He attributed much of his success in this disease not only to the use of chaulmoogra oil but to the cheerful prognosis given.

Some Questions about the Care of the Hair.—Dr. George Thomas Jackson, of New York, read this paper. He said that in serious illness, especially in fevers, nothing could be done to prevent the fall of the hair, because this was the result of temporary interference with its nutrition. The physician should vigorously oppose cutting off the hair, particularly in women, as the advantages were slight and the risk of unpleasant consequences was great. The hair should be combed and brushed daily, unmindful of the amount of hair falling out, and once in a week or two the hair should be washed. The most convenient soap was the ordinary tincture of green soap. At short intervals it was well to rub into the scalp a pomade of precipitated sulphur of the strength of one drachm to the ounce. He now believed that the present custom of abandoning the use of pomades and wetting the hair was responsible for much of the prevalent baldness. If the head was rubbed night and morning, and a little pomade, not liable to become rancid, was rubbed in, he felt sure there would be less baldness. It was not wise to have the hair of a girl cut after the age of ten or twelve years, as this rendered it less silky. Of all the present customs of caring for the hair, perhaps the most ridiculous was that of hair-syringing, a procedure founded on antiquated and erroneous notions.

Some Remarks on Surgery of the Nasal Septum.—Dr. Robert C. Myles, of New York, said in this connection that Bosworth's operation was to be recommended for that very large class of cases in which large formations were present along the natural line of the bone. In properly selected cases brilliant results had followed resort to the modified Asch operation. The most marked relief had been afforded in those cases in which there had been pressure against the fossa of the superior maxillary bone.

Address: "Education and the Profession of Medicine."—A. V. V. Raymond, D.D., LL.D., president of Union University, delivered this address. He began by asking the question, "Was the great aim of education to give one an ability for a certain occupation or profession?" and answered it emphatically in the negative. The true theory of education, he declared, comprehended the development of all the powers belonging to the individual as a man; he was to be educated because he was a man, not because he was to be a merchant, or a machinist, or a lawyer. The speaker then discoursed upon the comparative value of such studies as mathematics and languages in the preparatory school. By a reorganization of our whole system of primary and secondary school instruction it was possible, he believed, to give a man a good school and collegiate training, a full course in the medical school and a service in hospital, and still allow him to enter upon the practice of medicine at about the age of twenty-five. The speaker predicted that this change was sure to come here, as it had already occurred in other countries.

Address: "Rational Therapeutics versus Christian Science and Similar Superstitions."—James M. Bulkley, D.D., LL.D., of New York, editor of the *Christian Advocate*, delivered this address. He stated that anti-medicine faith-healing was based on the proposition that disease was always the work of the devil, and that a special kind of faith was requisite, and that if that special faith was exercised the disease would disappear. The speaker declared that it was a sad fact that a large part of the medical profession firmly believed that there was no distinction between anti-medicine faith-healing and Christian Science, whereas, as a matter of fact, there was only one point of similarity, *i.e.*, they both refused to use medicine. Christian Science was more subtle. He had been familiar with the evolution of the high priestess of that so-called science. He possessed the only complete copies in existence of all that Mrs. Eddy had set forth. If the theory of the Christian Scientists was true, food would not be necessary to life, but, according to Mother Eddy, it would be foolish to stop eating until we were able to get a fuller comprehension of the living God! Mrs. Eddy claimed that she discovered the great truths of Christian Science by experiments made by her while she was practising homœopathy. The discovery of the effect of the mind over disease had been impressed upon her by the results obtained with medicine "attenuated until not a trace of the original remedy was left." In conclusion the speaker declared that Christian Science, as a system of therapeutics, would have died ere this if it had not been put forward as a religion; and it would have died as a religion if it had not been put forward as a system of therapeutics. He predicted that the forces which had raised this intellectual balloon would in time be the means of its final destruction.

A Contribution to the Surgery of the Stomach.—Dr. H. Beeckman Delatour, of Brooklyn, presented in this report the histories of several illustrative cases, and particularly reports of a case of gastrotomy, and one of gastrectomy for adeno-carcinoma. In the latter case, after recovery from operation, the woman became pregnant, and at full term was delivered of a healthy child. After delivery there had been uncontrollable nausea and vomiting, and an exploratory incision had revealed a recurrence—then twenty months after the gastrectomy. He raised the question as to whether this recurrence might have been prevented by terminating pregnancy some months earlier.

The Management of Puerperal Infection.—Dr. L. W. Seers, of Syracuse, presented this communication. He stated that Dr. Bacon, of Chicago, had shown that seventy per cent. of all the deaths from childbirth were due to sepsis, and that two hundred persons die annually in that city from that cause. He advised against delaying treatment for the results of a bacteriological examination, and against the use of the curette until it was evident that intra-uterine irrigations were impotent to control the affection. Curettage should then be done cautiously, and the cavity of the uterus be packed lightly with gauze. True septic infection he considered a contraindication to the use of the curette.

(To be concluded.)

THE PRACTITIONERS' SOCIETY.

One Hundred and Fifty-first Regular Meeting, Held on Friday, December 8, 1899.

A. Alexander Smith, M.D., President, in the Chair.

A Case of Acromegaly.—Dr. F. P. Kinnicutt reported in brief a case of acromegaly. The patient, a man, twenty-nine years old, was admitted to the Presbyterian Hospital in November, 1899. His family history was negative, his personal history unimportant previous to the onset of his present illness, six years ago. At about this date he began to suffer from headache of an intermittent character confined to the left supraorbital region and the left side of the head. The headache, which was very severe, continued to be intermittent in character until two years ago. Since this date it had been almost continuous during his waking hours, and had often prevented sleep. Three years ago his friends first noticed that his face was growing larger, and this enlargement had gradually increased up to the present time. The hands and feet had also gradually increased in size, the lips and tongue had become thicker, and the nose more prominent. Three years ago he wore a six and seven-eighths hat; the size he now required was seven and a half. Aside from his headache he had suffered from few if any subjective symptoms. On admission to hospital the patient presented a characteristic appearance.

The following notes were made by Dr. Kinnicutt: The face was without expression. The head was enlarged as a whole, the increased size being especially marked in the face. The malar prominences were much exaggerated. Both maxillæ were greatly enlarged, the inferior to a greater degree than the superior. The enlargement was next marked at the symphysis. There was only slight prognathism. The lips were thick; the mucous membrane was everted, that of the lower lip especially so. The tongue was greatly increased in volume. The alveolar processes were hypertrophied; the teeth of the lower jaw were separated. The nose was greatly enlarged, particularly toward its tip; the alæ were much thickened, and the anterior nasal passages dilated. The frontal eminences were enormously exaggerated and the orbital ridges enlarged. The forehead above the frontal eminences was retreating. The ears appeared to be normal in size. The hands were massive, the increase in size being in their width and thickness. The fingers apparently were not increased in length, but greatly in width and thickness. The enlargement appeared to be chiefly in the soft structures. The skin was moist. The distal ends of the radius and ulna were enlarged; the muscles of the arm and forearm were flabby and diminished in volume. Similar changes were present in the lower extremities. The increase in the volume of the soft structures of the feet was even more marked than in the hands. The increase in the size of the feet was in their width and thickness; the great toe was especially large; the heels were covered with enormous fleshy pads. The distal ends of the tibia and fibula were but slightly if at all enlarged. The clavicles were greatly increased in size and their curvature was exaggerated. The ribs were massive; their width was especially increased. An antero-posterior curvature of the cervical and dorsal regions was present. The heart was not enlarged and no murmurs were appreciable. The areas of liver and splenic dulness were not increased, and the edge of neither liver nor spleen was palpable below the costal arch. The lungs gave only negative signs. The abdomen was normal in appearance and on palpation. The thyroid gland was not increased in size. The superficial glands were everywhere slightly enlarged. The pulse did not show increased tension, and the vessel-walls were not appreciably thickened. The temperature was slightly subnormal. The daily quantity of urine was 2,850 c.c.; specific gravity, 1.011 (the patient's normal weight is about two hundred pounds). There was a faint trace of albumin and a trace of glucose by the phenyl-hydrazin test. There were a few granular, hyaline, and epithelial casts. The urea execretion was 23.05 gm.; the uric-acid excretion, 0.910 gm. The ophthalmoscopic examination by Dr. Stedman Bull showed the media to be clear. There were no hemorrhages in the fundus. The optic discs were slightly pale, and the arteries reduced in calibre. There was no pulsation. There was no disturbance of the motor apparatus. There was no sign of atrophy of discs. The examination of blood showed: Red cells, 5,109,000; white cells, 8,000; polymorphonuclear neutrophiles, fifty-eight per cent.; large mononucleated, thirty-six per cent.; small mononucleated, five per cent.; eosinophiles, one per cent.

The patient complained of intense and constant pain over the left supra-orbital region and over the left side of the head as far back as the ear. It was sufficiently acute to prevent sleep. During the two months of residence in the hospital many drugs had been used to control the pain. The pituitary and thyroid extracts had also been employed. No relief had been obtained except by the use of large doses of morphine. A typical reaction to the tuberculin test was obtained; a single milligram was used for the injection.

A Case of Acromegaly.—This case was reported by **Dr. M. Allen Starr.** The patient was a man who had been under his observation since 1892. The case was a typical one of acromegaly, and the chief symptom complained of, as in Dr. Kinnicutt's case, was headache, which was constant over the forehead and back of the eyes, and was very agonizing and distressing. It prevented his sleeping at times, and had given his face an expression of suffering that was really pathetic. In his case, Dr. Starr said, all the bones in the body, as well as the soft parts, were enlarged. The hands and feet were enormously enlarged, and the soft portions of the skin were thickened. In addition to the general features of acromegaly, the patient had a progressive diminution in his visual fields, with beginning atrophy of both optic nerves and gradually increasing blindness. His vision was now $\frac{20}{60}$, whereas when he first came under observation it was $\frac{20}{20}$. The treatment with thyroid extract had apparently proved beneficial in this case. The value of this method of treatment was shown by the following measurements, which were made on the middle phalanx of the middle finger: In October, 1894, when the patient was first put upon the thyroid extract, the circumference of this phalanx in the left hand was 7.2 cm., and in the right hand 7.6 cm.; under the influence of this remedy the fingers gradually decreased in size until the circumference of the phalanx in both hands was 6.5 cm., a corresponding reduction in size occurring in the other fingers and in the hands themselves. The size of the hands was decreased by 1.5 cm. In addition to this the thyroid extract had given him much relief from his headaches. If he intermitted the treatment for a month or two he felt worse and his headaches became more severe. Dr. Starr said that his experiments with thyroid extract in this case had convinced him that the various preparations on the market differed very much in strength.

Dr. W. Gilman Thompson said he had seen four cases of acromegaly. The one reported by Dr. Kinnicutt was remarkable because of the enormous increase in size of the soft parts, as well as the bones—especially of the lips and tongue. In a case which the speaker saw last summer the development of the disease was very slow, and the bones attained considerable size without giving rise to much inconvenience. The patient was a clergyman: he noticed that his bones were growing larger, and he found it necessary repeatedly to buy hats and gloves of larger size. He was able to continue his preaching, although he was far from being a well man. He suffered chiefly from dyspepsia and was easily fatigued. His jaws were very much increased in size, producing separation of the teeth. His family had long noticed his changed appearance, but they were desirous of keeping his true condition from him, and on this account a very thorough examination was impracticable. Acromegaly, Dr. Thompson said, should not be confounded with pulmonary hypertrophic osteo-arthritis; in the latter disease the longitudinal diameter of the bones was increased rather than the transverse, and the bones of the extremities were affected, not those of the face, head, and thorax as well.

Dr. J. W. Brannan asked Dr. Kinnicutt if he attached any significance to the reaction to the tuberculin test in the case he had reported.

Dr. Kinnicutt said he had regarded it merely as interesting and possibly suggestive. In thirty-four recorded cases of acromegaly, with full autopsy, a microscopic lesion of the pituitary body had been found in every instance, and in the majority of the cases it proved to be either a simple hyperplasia or a tumor growth of some kind.

Dr. Kinnicutt said that as a rule a typical tuberculin reaction was obtained only in persons who have some tuberculous focus in the body. Of course such a focus might be located anywhere, but in the present case it had been impossible to locate such a focus by physical examination.

Dr. Charles L. Dana said that Brooks, in his recent pathological work in connection with this subject, came to the conclusion that the trouble was probably due to a cellular hyperplasia of the granular elements of the pituitary body; that unless this existed we might have a tumor or a destructive lesion or even enlargement of the glands without the symptoms of acromegaly. It was, of course, possible that a tuberculous or other variety of growth might irritate the gland and produce this peculiar form of cellular hyperplasia.

Dr. T. Mitchell Prudden said that the hypothesis advocated by Brooks in his admirable paper on acromegaly, namely, that the disease was dependent upon a glandular hyperplasia or adenoma of the pituitary, while most plausible and ably set forth, might still wisely be held *sub judice* until more data were at hand for proof. The Brooks hypothesis was closely bound to the wider conception of the close dependence of connective-tissue growth upon the stimulus of an hypophysis secretion. Even should this be true, it might be wise to consider carefully whether we were justified from the analogy of other organs in assuming that glandular hyperplasia or adenoma was always, or was likely to be, coincident with hypersecretion.

Dr. Beverley Robinson referred to an article on the subject of acromegaly by Drs. Walton and Cheney in the current number (December 7, 1899) of the *Boston Medical and Surgical Journal*, which contained a summary of the more recent investigations in the pathology of this disease. He said that in the earlier years of his practice he could recall cases which were probably examples of acromegaly, but which he had failed to recognize as such. The speaker said he was not aware that tuberculous changes in the pituitary body had been found in any of the cases on record: at least he had seen no reference to it in recent works on the subject.

Dr. Kinnicutt said that he had employed the extract of the pituitary gland made by an English firm in the treatment of the case of acromegaly related by him, without producing any effect up to the present date. The two-grain tablets were given, the dose being gradually increased until gr. xx. were taken in twenty-four hours. In fifteen recorded cases of acromegaly which he had collected, in which the pituitary extract was used, it had produced some amelioration of the symptoms, particularly of the headache and neuralgic pains, in about half the cases.

Dr. Dana said he had used the pituitary extract in the treatment of many diseases, but he usually gave as much as gr. lx. daily before getting any effect. It gave no results in acromegaly.

Dr. Starr said he had given as much as gr. xx. daily for some time without effect.

Dr. Robinson referred to the obscure relationship which seemed to exist between acromegaly and myxœdema. He called attention to the fact that thyroid extract, the use of which was indicated in the latter disease, had also proved beneficial in the former.

The Significance of Intraocular Hemorrhage as to Prognosis of Life.—This paper was read by Dr. Charles Stedman Bull (see page 177).

Dr. E. G. Janeway said that in former years, when he met with a case of chronic nephritis with retinal hemorrhages, especially with neuro-retinitis, his prognosis was that the patient would not live over two years. Since then, however, he had met with several cases which had induced him to be less positive upon this point. He recalled one such case in which a distinguished oculist made that prognosis, and the patient was alive seven years later. Another similar case came under his observation more recently. Dr. Janeway also referred to the intraocular hemorrhages occurring in pernicious anæmia, which were formerly regarded as very significant. A case had been reported, however, in which all the symptoms of pernicious anæmia, including hemorrhages into the retina, promptly disappeared after the expulsion of a tapeworm: so-called pernicious anæmia from tapeworm.

Dr. Robinson said he was recently called to see a patient, who in addition to retinal hemorrhages complained of intense headache. The question arose whether the case was one of brain tumor or chronic nephritis. The urine contained neither albumin nor casts, but its specific gravity was low. The ophthalmoscopic examination seemed to be in favor of changes in the kidney, which later developed. The speaker called attention to the fact that retinal hemorrhages might occur without interfering to any extent with vision, and that they might escape detection unless the examiner was skilled in the use of the ophthalmoscope.

Dr. Janeway reported the case of a lady who lost the sight of one eye through a hemorrhage into the vitreous, with glaucoma. She was told that she had nephritis, but the speaker said he was able to find only evidences of a calculous pyelitis of one kidney. The urine contained pus and uric acid, but he had not found albumin or casts to such extent as to prove the implication of both kidneys, although previous to that time some one else had found albumin and casts and had in consequence considered the case as nephritis of both kidneys. There was a plentiful secretion of urea. This case was still under observation. We should not be too apt, Dr. Janeway said, to attribute these eye lesions to nephritis. In one case of neuro-retinitis which he recalled the patient's urine had been collected for twenty-four hours, and its sediment was found to contain a trace of albumin and a few hyaline casts. The neuro-retinitis was thereupon attributed to advanced nephritis, and a bad prognosis was given by the oculist. The oculist himself had been dead for ten years, while the patient was still alive. The true cause of these eye lesions could not always be made out. In another case which the speaker recalled the patient had a neuro-retinitis and was treated for nephritis. The true cause of the loss of sight proved to be a syphilitic meningitis, which disappeared under treatment.

Dr. A. Alexander Smith reported the following case: A lady, while visiting in Paris, was stricken with partial blindness while seated at dinner. She was immediately afterward seen by an oculist, who regarded the case as one of probable nephritis. A distinguished French physician later found a trace of albumin and some hyaline casts in her urine, and her husband was informed that she was likely to die at any moment. Her condition was regarded so serious that a physician was requested to accompany her to this country. Since her arrival her urine had been repeatedly examined; it at first contained a trace of albumin, which soon disappeared. No casts were found. She passed sufficient urea. Her loss of sight was due to a retinal hemorrhage, from which condition she gradually improved. Previous to her visit to Paris she had spent the summer in Mexico, at an elevation of eight thousand feet, where she became somewhat anæmic, and while she was there she had a very slight retinal hemorrhage. The second hemorrhage occurred in Paris, and a third one, also slight, during a second visit to Mexico. She had since returned to New York and was still under observation. Her health was steadily improving, and Dr. Smith said he was inclined to doubt that a sufficient degree of nephritis existed to justify the hopeless prognosis given by the oculists who saw her. He thought the retinal hemorrhages could perhaps be explained on the basis that there was a moderate amount of degeneration of the blood-vessels, and that the blood-pressure at a high elevation had caused them to rupture.

Correspondence.

THE MEDICAL ASPECTS OF THE WAR IN SOUTH AFRICA.

We publish a continuation of our special correspondent's summary of the medical events of the South African war, which will enable our readers to understand what has been done by the British up to the second week in January for their sick and wounded. Of the Boer's military medical service our correspondent says: "Little is known for certain, but enough to show that in hospital and ambulance matters, as in all their other arrangement for this war, the Boers have been underrated. They have a good ambulance service and competent medical men, chiefly German by birth. I shall send you information upon the matter when there is any that is reliable. At present certain English journals give one view and certain continental journals give another, but in neither case are the accounts founded upon facts."

(From our Own Correspondent.)

The Medical Arrangements of the Field Forces.—The general arrangements of the Medical Division of the War Office, made for the first army corps despatched to South Africa, were followed in subsequent reinforcements. The equipment is in accordance with a pattern which was drawn up as recently as 1898, and to its modernity must be attributed the highly pleasing fact to all medical men that it has been found completely satisfactory. It includes, along with all ordinary surgical paraphernalia, such extra articles as acetylene lamps, Japanese air cushions, anæsthetics, antiseptics, antiseptic cases, creolin, folding darkrooms for *x*-ray work; antiseptic dressings, various; inhalers for ether, and Clover's; Murphy's anastomosis buttons (in sets); platinum studs for *x*-ray coil; anti-streptococcic serum and syringes; anti-tetanic serum and syringes; aseptic absorbent sponges (three sizes); Schimmelbusch's sterilizers.

Ten sets of Roentgen-ray apparatus were provided, since which as many more sets through private generosity have been placed at the disposal of the Royal Army Medical Corps or its voluntary auxiliaries. Two portable disinfectors, of the pattern made and patented by Dr. J. C. Thresh, the medical officer of health for the county of Essex, were sent out, one to be stationed at Durban and one at Capetown, while there were added to the ordnance equipment a large number of approved apparatus for the filtering of water and the sterilizing of milk.

The two hospital ships, the *Spartan* and the *Trojan*, were supplied with, over and above the army rations, the following additional articles: Arrowroot, cornflour, oatmeal, pearl barley, ground rice, sago, cocoatina (tins), condensed milk (sweetened), condensed milk (unsweetened), calves' feet jelly, bovril (in four-ounce tins), Liebig's extract of meat (in four-ounce pots), Brand's essence of beef, Brand's essence of chicken, Brand's essence of mutton, mutton broth, chicken broth, solidified soup, Stower's Cordial lime juice, refined sugar, pickles (various), Hennessy's three-star brandy, Scotch and Irish whiskey, champagne (in pint bottles), port wine, sherry wine, claret, Burgundy, Australian, Emu, and Hermitage, Bass' or Allsopp's beer, lager beer, Guinness' stout. The *Spartan* was provided with a full *x*-ray plant by the Duke of Newcastle, an enthusiastic photographer, and an anonymous donor did the same for the *Trojan*.

The Central British Red Cross Committee.—The relations of the Red Cross Society to the medical service of the army in Great Britain are very intimate, and during the war the work of the society in behalf of the sick and wounded soldiers has relieved incalculable misery. The British army medical service makes but little provision for the after-care of the sick and wounded, but has always been wont to depend upon the efforts of volunteers for much of the nursing, when the invalids have been deported to the base. Immediately after war broke out the Central British Red Cross Committee—the British branch of the International Red Cross Society—was placed in the pleasing position of being able to announce that the application for employment from medical men and laymen, and the offers of contribution of ambulance material, were so varied and numerous that "for the present, ample provision has been made in the direction of supplementary aid to the army medical service in the field." Colonel J. S. Young was at once sent to South Africa, amply provided with funds and material, to co-operate with the principal medical officer of the British field force (Surgeon-General W. D. Wilson) as to the best way of providing for the sick and wounded, not only of the British army, but also of the two Boer republics. The equipment of a hospital train was despatched to Durban, where Sir George White's movements foreshadowed the earliest struggles; a hospital ship was placed in preparation; nurses, over a hundred in number and all highly trained, were obtained; while arrangements were made with the St. John Ambulance Brigade to meet any requirements in connection with a supply of ambulance officers and hospital orderlies. Besides all this, the Red Cross committee took over the work of organizing all the numerous private offers of assistance to make them effective. In this way they have the responsibility of the volunteer hospital ships—the *Princess of Wales*, directly equipped by the committee, H. R. H. the Princess of Wales providing £10,000 toward the cost, and the *Maine*, equipped by the generosity of American ladies in London; and the volunteer field hospitals, viz., the Portland Hospital, the Langman Hospital, the Sivewright Hospital, and the Imperial Yeomanry's Hospital. The *Princess of Wales* started from London at the beginning of December, and took a month to get to the Cape, as an unfortunate breakdown at the beginning of the voyage detained her some days in the Thames. Major A. Hickman-Morgan, D.S.O., a retired member of the Royal Army Medical Corps, went out on the *Princess of Wales* as senior medical officer, having under him one military and three civilian surgeons. The ship contained about one hundred beds all told, and was staffed in addition by four nursing sisters, seventeen privates of the Royal Army Medical Corps, and twenty-three members of the St. John Ambulance Brigade—to act as ward orderlies, compounders, storekeepers, etc. The *Maine*, which followed three weeks later, contained provision for two hundred and twenty patients, the Royal Army Medical Corps and the St. John Ambulance Brigade supplying the service. Colonel Hensman, R.A.M.C., sailed on the *Maine* to represent the War Office, while Surgeon-Major Cabell directs the medical services of Dr. George Eugene Dodge, Dr. Harry H. Hodman, and Dr. Charles H. Weber.

The Size of the British Medical Force at the War.—The size of the medical establishment sent out by Great Britain becomes of particular interest because it has been able to cope with disasters which were clearly not expected by the British War Office. Had the campaign proved the pleasant saunter to Pretoria which some amiable officials seem to have believed that it would, the number of medical men, bearers, and Army Service Corps sent would have appeared unnecessary, but, as circumstances fell out, all were wanted. With the original force there were sent, all told, two hundred and eighty-two medical officers of the Royal Army Medical Corps, sixty-eight civilian surgeons, fifty-six nursing sisters, twenty-eight quartermasters (R.A.M.C.), and twenty-eight hundred and fifty Army Service Corps for transports and nursing duty, making a total of thirty-two hundred and eighty-four. The very small number of female nurses is accounted for by the fact that the War Office will not allow women to assist in the field hospitals. This force was afterward increased by one hundred medical officers and about fifty civilians, while the private field hospitals have contributed some twenty more medical men with a due quantum of lay assistants. The complete total is now over thirty-five hundred, and more are going out.

The General Hospitals.—The first general hospital arranged at the base was at Wynberg. Wynberg is a beautiful suburb eight miles from Capetown, and the large permanent barracks were requisitioned as a hospital to accommodate five hundred persons. The building stands upon an ideal site overlooking a lovely country interspersed with fine residences. The medical officers, thirty-six in number, are put up in the vacant married men's quarters of the barracks, while the officers' quarters are occupied by the nursing staff. Lieutenant-Colonel Hodson, R.A.M.C., was placed in charge of the surgical side, and Major Barnes, R.A.M.C., of the medical side, the whole being under Surgeon-General Wilson. Completely equipped operating-rooms were soon in readiness, while Sir George White's early operations provided patients almost as quickly. The Wynberg Hospital is in communication with the Cape Town forces under Methuen, Gatacre, and French by the railway, upon which a hospital train service was immediately established; and with the Natal forces under White and Buller, by a service of transports from Durban. The first batch of wounded to arrive in the hospital were brought by the transport *Jelunga* from Durban, and consisted of ninety-five men who had been engaged in the battles of Glencoe and Dundee in the third week of October, and who reached Wynberg at the beginning of November. Almost immediately afterward the *Sumatra* arrived at Cape Town from Durban, bringing two hundred more wounded. Most of the first wounds were of a trivial nature, wounds of the forearm and thigh predominating; but had not the Royal Army Medical Corps, within the short space of four days from the arrival of the plant at Capetown, organized to its completest detail a general hospital, undoubtedly some of these cases, which under prompt treatment recovered immediately, would have gone to the bad. The *x*-ray apparatus proved invaluable for the detection of bullets, and only one amputation was necessary in the first lot of patients; and in a great number of cases the ordinary field dressing proved sufficient to bring about complete healing. By the first week in December No. 1 General Hospital was full, for Lord Methuen's advance northward to the relief of Kimberley was signalized by three battles in one week, all of them frontal attacks. In the first two the British were successful with considerable losses, though an insufficiency of cavalry (and some say, openly, an iniefficiency of tactics) prevented them from utilizing their victories. In the third, the fight at Modder River, the relieving force was checked with great slaughter. Certain Highland regiments lost thirteen per cent. of their strength, and hospital trains brought relays of terribly wounded soldiers down to Wynberg. The medical staff here were by this time reinforced by nine civilian surgeons, mostly fresh from the best class of hospital work; and the plant for No. 2 General Hospital having arrived, accommodation was quickly provided for twelve hundred sick and wounded. At the same time the *Spartan* brought more wounded round from Natal.

Modern Bullet Wounds.—The surgical lesson to be learned from the war became clear as soon as the general hospitals at Wynberg, as well as the stationary hospitals behind the fighting columns, became full of seriously wounded men. The lesson is that the modern bullet, with its small calibre and enormous velocity, does not leave behind it the after-effects of the old-fashioned French chassepôt, or the Martini-Henry. The wounds of both the Mauser bullet used by the Boers, and the Lee-Metford used by the British, have generally small entrances and exits, while their tendency is to heal like clean cuts by first intention. Truly wonderful stories, vouched for by Sir William MacCormac, president of the English Royal College of Surgeons, and serving in the Cape as chief surgical adviser to the army, as well as by the surgeons of the Royal Army Medical Corps, have already been published. Men shot through the brain have been only temporarily inconvenienced; the abdomen has been pierced from before backward and from side to side, and recoveries have ensued; the bladder and the stomach have been traversed and the men have continued to charge! It is abundantly clear that in a long campaign a man might be shot half a dozen times, and half a dozen times return to duty as good a man as ever.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE WAR—INCREASE OF INFLUENZA—THE REGISTRAR GENERAL'S OFFICE—EXCISION OF VESICULÆ SEMINALES—HYSTERECTOMY FOR FIBROIDS—RUPTURE OF THE UTERUS—SOME RECENT DEATHS.

LONDON, January 12, 1900.

THE war is naturally the most absorbing topic. Amid our many errors and shortcomings the one bright spot has been the medical department, which has done nobly at the front and at the base. Its devotion ought to go far to abolish the mischievous military jealousy which might have paralyzed it—did in one sense, for the War Office has been obliged to engage large numbers of "brave civilians" to take places rendered vacant by its own fault. It is the old story—unready in every department while the authorities were studying braid and buttons. The anger of the country is but feebly expressed in the newspapers, severe as are their criticisms. A clean sweep of the War Office is hoped for.

More consulting surgeons have gone out, and further surgical aid is being scratched together. Nothing could well be more condemnatory of the authorities, who ought to have been prepared with the full complement of army surgeons for the work, whereas they had numerous vacancies in the staff, which was known to be too small, and so were obliged to ask for civilians' help.

Among the numerous kindly efforts to succor the sufferers is the undertaking of doctors at home to attend gratuitously the families of soldiers on service. It is not likely any such would have had any difficulty in obtaining all they might need, but I cannot feel sure that it is wise for the British Medical Association to endeavor to organize such assistance, and at the time when so many complaints are made as to the encroachments of the public on medical service. The profession has always been too ready to extend its charity, and might have been trusted to act in such cases without any organized arrangement to do so.

The epidemic of influenza steadily increases and looks like lasting longer. From the royal household as from the most crowded slums the news is the same—the "flue" prevails. The deaths last week in London rose to three hundred and sixteen and the deaths from the class of respiratory diseases to twelve hundred and twenty-one. In the epidemic of 1892 the highest number in a week reached five hundred and six. In 1895 it was four hundred and seventy-three. The London total mortality for last week exceeded the average for ten years by more than eleven hundred. From the country come similar reports. Ireland, Scotland, and Wales are suffering too. Nottingham is very heavily stricken, eight thousand cases being said to be down in the town yesterday. At Northampton half the factory hands are absent, and the same tale comes from other places, showing that the epidemic is very widespread.

As the registrar-general's office will shortly become vacant, there is much speculation as to whether the government will have the courage to appoint the superintendent of statistics to succeed him. The latter is a medical man. Probably you may be under the impression that the chief is also. Not at all; his post has been the best paid, but with little to do except to indorse his subordinate's statements. I hope the sinecure will be abolished and the medical man promoted to continue his valuable work with the honor of the chief office.

On Monday, at the Medical Society, Mr. M. Moullin related two cases of young men with tuberculous disease of the epididymis extending upward, for which he had removed the vesiculæ seminales, and he advocated the operation in all cases in which the vesiculæ could be felt per rectum. Very little hemorrhage occurred in either case. In one a small urinary fistula remained for several months. Mr. Edwards and Mr. Wallis considered the operation less simple than had been represented, and a modification of Kraske's operation was suggested.

Dr. Gow then reported his results in hysterectomy for fibroids, showing a mortality of about two per cent. —one death in forty-seven cases. With so low a rate, Dr. Blacker said, many operations might be undertaken, but when adhesions existed the cases were more serious. He described a case in which he had been unable to remove the tumor on account of extensive adhesions. Mr. Wallis complimented Dr. Gow on his results, which he thought largely due to the simplicity of his procedure.

Rupture of the uterus was the subject of some discussion at the Obstetrical Society on the 3d inst. Dr. H. Spencer began it by relating four cases which he had successfully treated by packing the tear per vaginam with iodoform gauze. These four cases are the only ones he had thus treated, and the only cases he had known to result in recovery. He had seen about eight others, and they ended fatally, either from shock and hemorrhage or later from sepsis. In two cases he performed abdominal hysterectomy. By way of bringing out the views of others he formulated his views thus: (1) Abdominal section is rarely required, and that almost solely when the fœtus has passed partly or completely into the peritoneal cavity. (1) Abdominal hysterectomy is hardly ever necessary; when the broad ligaments are so much damaged as to endanger the vitality of the uterus, vaginal hysterectomy should be performed. (3) All incomplete tears implicating the broad ligament, also most complete tears, should be treated by packing the rupture per vaginam with iodoform gauze, after removing clots and fluid blood.

The president, Mr. A. Doran, remarked that absorption of iodoform might produce a very rapid pulse, leading to a suspicion of sepsis, a point to remember in these cases, as well as when the gauze drainage is used after ovariotomy.

Dr. Horrocks said that rupture confined to the cervix and broad ligament was much less serious than when the peritoneal cavity was opened. In one he put in two stitches and packed with sal-alembroth gauze, which was renewea under anæsthesia every twelve hours for three days, then once a day. In another case he opened the abdomen and stitched the tear. In aseptic cases he saw no objection to sewing up the wound. He did not think hysterectomy was ever advisable, and he thought sterilized gauze as good as the iodoformed.

Dr. Lewers had a case in which the rupture extended through the posterior wall into the peritoneum. He packed with iodoform gauze. The patient recovered after a very critical time. He had used the gauze often in abdominal sections and observed the rapid pulse from absorption. He attributed it to an extra percentage of iodoform in some samples. He found carbolic gauze as good.

Dr. Handfield-Jones said much depended on whether rupture was complete. In thirteen cases lately reported from Vienna packed with iodoform gauze eight were complete and all were fatal; five incomplete and all recovered. Lateral tears into the broad ligament generally recovered whether treated by packing or simple aseptic douching.

Dr. Herman advocated packing for most cases, but if the packing could not be passed right up to the top of the rent the uterus should be removed through the vagina. Dr. Spencer had given the useful suggestion to pass a large tube through the rent in order to evacuate the blood in the peritoneal cavity.

Dr. Drummond Robinson had packed two cases; one patient died; the other recovered and had since borne a child. In another case he intended to pack an incomplete rent, but on going next day to do so the patient was so much better that he did not, and she recovered.

Dr. Spencer, in his reply, said most of the cases were, he believed, incomplete. He did not approve of repacking every twelve hours—the gauze should be left for three or even six days. He did not think aseptic gauze would remain sweet, and he therefore considered it not so good as iodoform gauze.

Among recent deaths are the following:

Dr. Gardner Dudley, consulting physician to the Metropolitan Hospital and the North London Consumption Hospital, died on the 2d inst., aged seventy-two years. He was a Cambridge M.D. and M.A., a cultured gentleman, and it was a pleasure to meet him.

Mr. George Taylor, justice of the peace for Norfolk, who had for some years retired from active work, died on the 6th inst., aged eighty-two years.

Mr. Henry Thompson, surgeon to the Hull Infirmary, died on the 28th ult., aged only forty-nine years.

Dr. Gimson died suddenly at the bedside of a patient, from the rupture of an aneurism of the aorta.

Dr. George Elder, one of the younger teachers in the Edinburgh School, only thirty years of age, died on the 6th inst., from influenza. He was joint author with Dr. Fowler of a "Manual of Diseases of Children."

Surgeon-Major Alexander Grant, honorary surgeon to the Queen, died at the age of eighty-two years. He was retired since 1869, after an honorable Indian career.

Deputy Surgeon-General David Cullen, who also saw service in India, as well as in the Crimea, being present at the taking of Sebastopol and Lucknow, died on the 4th inst., aged sixty-seven years.

Dr. W. J. Belcher, of Bandon, died on the 29th ult., aged sixty-two years, from the effects of carbolic acid put in mistake into a draught he mixed for himself. Medical friends hastily summoned reached him only to find him dead.

Dr. Robert Robinson, physician to the City and Consumption Hospitals, died at Liverpool, aged fifty-eight years.

HOSPITAL AND DISPENSARY WORK IN KOREA.

To the Editor of the Medical Record.

Sir: The main difference in the practice of medicine and surgery out here in Asia, and in America or Europe as I have had to do with it in all these places, consists mainly in the very small financial outlay we are allowed to work on. I am writing of what is essentially charity work and carried on as an acknowledgment of the obligation, which is one of the general results of Christianity, to provide systematically for the sick, the sorrowing, and the very poor. This obligation, however, doesn't press very heavily when it comes to people in America or Europe providing for the natives of Africa or Asia, and so $500 a year is a big sum to expect, for my average for the past three years from the United States has been but $400. And with this, all expenses but my own salary, which is excepted, must be met, and of course we have to bring our little dispensaries and hospitals down to a standard of which this is the basis. But even with this, much can be done. One's surgical work is limited only by his ability, which the natives soon recognize, and by the appliances and facilities provided. This is my experience based on thirty thousand patients.

The lack of money drove me into eye surgery as a sort of specialty, for I found that the easiest, cheapest, happiest, and most effective branch I could turn to. During a cholera epidemic I turned specialist on that, but since then eye surgery has taken my best efforts, though the plague is threatening these shores, and, if it comes in, I'll have to neglect my eye work and see what there is to be learned clinically in that.

Taking a few notes, somewhat at random, from the past year's work, we find that in December, 1898, nine cataract operations were done. In one the lens became dislocated, and after several ineffectual attempts to get it out with the wire loop the eye was bandaged and the patient allowed to rest. Next day on removing the dressings we found that spontaneous expulsion had taken place, for there lay the lens in the dressing. In another of these cases the same thing happened, but we got the lens easily with the loop. In yet another very excessive bleeding, with gaping of the incision and loss of the aqueous, took place. Everything appeared normal and the operation seemed all right, but a few hours after severe pain and excessive hemorrhage took place. What made it more marked was that exactly the same result followed the operation in the other eye; thus showing a peculiarity in that patient. Notwithstanding all this, good results were obtained in all nine cases.

I amputated the forearm of a man aged sixty-three years, and very nearly lost him by the accident of the ligature slipping off the artery. It was discovered by feeling for the pulse in the remaining arm, and finding none. The patient had not been taken off the table, but the stump had been bandaged. The saturated dressings were hurriedly jerked off, the wound was opened, and the spouting artery secured. A pint of saline solution was injected into the abdominal tissues, and considerably more into the rectum. A prompt reaction followed, though three weeks afterward (the man had other diseases and was in the hospital a month) a cold abscess developed at the site of the injection into the abdominal wall. Very careful precautions had been taken, and this was the result. This hypodermoclysis was used recklessly in many cases of cholera, during an epidemic, and trouble followed in but one instance, and in that the injection was into the thigh instead of the abdominal tissues.

As to the number of patients, twelve thousand a year is about the average, which includes dispensary patients, medicine buyers, and in-patients, the latter numbering two hundred and fifty last year. The total expense last year, which includes salaries for natives, support for indigent patients, drugs, fuel, and everything else, was $539.03. During the three years just past, there have been sixty-four cataract operations, one hundred and twelve iridectomies, and corresponding numbers of other such work. A medical class of seven young men is under instruction, and this is one of my important duties. It is absurd to think of making modern doctors out of them, versed as we ought to be in all the allied medical sciences; so I aim simply, after three or four years, to make fairly good druggists, expecting them to prescribe and treat cases, as must necessarily be the case in the evolution of the natives into "doctors."

The main object of these little institutions, however, is not charity, but in the eyes of those who have much to do with the voting of funds, etc., they are "philanthropic institutions limited by the possibility of their evangelistic utilization and influence"—a sentiment expressed by the words, "A small development of such work contributing powerfully in the direction indicated is better than a large development of but feeble or indirect evangelistic influence."

This is the *sine qua non* which we work on, though there was nothing of that spirit shown by the Good Samaritan when he picked up the man who had fallen among thieves.

The economic value of the services rendered to the natives here, last year, which was made possible by the $539.03 from the United States of America, was, estimating on a minimum basis, over $100,000.

J. Hunter Wells, M.D.

Pyengyang, Korea.

Medical Items.

Quarantine Regulations to Insure Safe Scientific Passenger Traffic from an Infected Locality to a Non-Infected One.—The following rules are suggested by Dr. Edmond Souchon (*New Orleans Medical and Surgical Journal*) for the successful conducting of passenger traffic in epidemics, especially yellow fever: 1. Persons from an infected locality wishing to go to non-infected localities shall send to the railroad depot, eight hours previous to the departure of the train, a suit of clothes and their baggage, which shall be disinfected by the officers of the United States Marine Hospital Service. 2. They shall be present at the railroad depot one hour before the hour of departure, to change the clothes they have on for the suit disinfected under the supervision of the said officers. 3. They shall be given a certificate to that effect. 4. They shall then be admitted to a seat in a disinfected coach. 5. The baggage shall be checked and placed in a disinfected baggage-car. 6. The health officer of the locality to which they are going shall be informed of their coming by telegraph. 7. Upon their arrival at the point of destination they shall be met by the health officer or shall at once report to him. 8. They shall present themselves to him for inspection in the morning and in the evening for five consecutive days. 9. A bond may be required of them to insure their appearance, or they may be placed under the surveillance of a special officer. 10. If they have been well all that time they will then be free to go anywhere and everywhere. 11. Should they present any symptoms of fever they shall at once be isolated and be treated scientifically to prevent infection. 12. By thorough disinfection of all that comes from the patient as soon as it leaves him or has touched him, the disease will not affect any one else around him nor infect the household effects nor the premises. 13. As soon as the patient has recovered he must be disinfected, and also all his effects. 14. Also the nurse. 15. Also persons and things which have been in the room and the house. 16. Also the premises, yard, privies, and gutters. 17. All this must be done according to the instructions to the medical inspectors. 18. Non-immune persons who had been in the house or on the premises must also be kept under observation for five days after the disinfection of their clothing and effects.

The Sensory Capacity of the Female Genitals from a Forensic Point of View.—A midwife in Breslau some years ago was arrested charged with procuring an abortion by passing an "instrument" and causing the "waters" to come away; the fœtus being expelled two days later. Experts called were of the opinion that the patient could not be sure whether the instrument was passed into the vagina and uterus, or into the bladder. Dr. Calmann (*Archiv f. Gynäk.*, Bd. lv., Heft 2), who has recently investigated this subject of genital sensibility, concludes as follows: 1. The sense of localization is very defectively developed in the female urino-genital system; the local differentiation between the urethra, bladder, and the vagina is quite uncertain; and a similar sense of locality between the vagina, portio, and uterine cavity does not exist at all. 2. The sense of touch, especially of the portions of this region which lie above their respective entrances, is likewise defectively shown. All judgment is absent as to the length of an object introduced; the thickness is fairly well recognized, but no correct estimate of it is made with certainty. There is great obscurity as to the form and other characters of objects introduced. The number of objects introduced into the vagina is often falsely given. There is no sense of touch in the portio vaginalis and the uterus. 3. The sense of pressure is somewhat well developed in the urethra, in the vagina it is very feeble, and in the uterus and outer surface of the portio it cannot be demonstrated. 4. The sense of temperature is also fairly good in the urethra. In the vagina it is feebly developed, especially toward the hotter degrees of temperature. It fails entirely in the uterus and portio. 5. Sensation of pain is quick in the urethra and in the vagina; in the portio and cervical canal it is only moderate, in the uterine cavity it is often marked. This forms the only subjective difference between the uterus and vagina. 6. Vaginal douches and the customary disinfectants diminish the sensibility of the vagina.

The Cost of Sickness.—The records kept in Germany in regard to sick insurance, which is now compulsory upon workmen, are beginning to show how serious a strain sickness produces upon a country. It appears that nearly eight millions of persons in Germany subscribe to the Krankenkassen, that is to insure against sickness, and that in 1898 one-third of this number reported illnesses of one sort and another, the average duration of sickness being seventeen days. Now if we reckon wages at only fifty cents a day this comes to a loss of more than twenty-two and one-half millions of dollars a year in wages alone, besides what has somehow to be provided for food, physic, and maintenance. This, of course, is among working people during the working period, which is presumably the most healthy part of their lives.—*London Hospital.*

Nerve Suture and Sensation.—In the French supplement to *La Grèce Médicale*, Dr. Petridis relates a case of secondary suture of the radial nerve after eighteen months, in which restoration of sensibility was practically instantaneous. The patient had been wounded by a bullet in the forearm during the recent Greco-Turkish war so severely that the surgeons proposed to amputate, and would have done so "had not the Greek troops been obliged to retire." The wound left a painful cicatrix with atrophy and ankylosis of the arm and hand, especially the thumb, index, and middle finger. There was entire loss of sensation over the region supplied by the radial nerve. After operation, while the patient was still on the table and recovering from the anæsthetic, Dr. Petridis pricked with a needle the dorsal surface of the hand in a spot which had been totally anæsthetic for eighteen months, and the patient at once responded. Four hours later sensation over the affected part was almost normal. The writer gives a summary of other cases in surgical literature showing the capricious and still unexplained manner in which sensibility returns after suture of divided nerves. Perhaps the most interesting is an observation of M. Remy in two cases of division and suture of the median, in which touching the tip of the index finger gave rise to sensation in the thumb and middle finger respectively: "This transformation of sensibility is not transitory, for I have observed it more than a year after the commencement. Paget has published a case of the same kind."—*Medical Magazine.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended January 26, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Colorado, Denver	January 7th	1	
Huerfano County	January 9th	3	
District of Columbia, Washington	January 12th to 18th	2	
Georgia, Blackshear	January 11th	16	
Brunswick	January 11th	10	
Darien	January 11th	2	
Jesup	January 11th	2	
Liberty	January 11th	1	
Indiana, Evansville	January 13th to 20th	2	
Kentucky, Coviogton	January 13th to 20th	4	
Louisville	January 11th to 18th	1	
Louisiana, Calcarien	January 7th to 13th	3	
East Feliciana	January 13th	50	
Livingstone	January 13th	Several.	
New Orleans	January 14th to 21st	54	2
Shreveport	January 13th to 20th	..	2
Massachusetts, Malden	January 13th to 20th	1	
Nebraska, Omaha	January 13th to 20th	1	
New York, New York	January 13th to 20th	1	
Ohio, Cleveland	January 13th to 20th	20	
Youngstown	January 15th to 22d	7	
Oklahoma, Beaver County	January 10th	Reported.	
Blaine County	January 10th	1	
Noble County	January 10th	Reported.	
Pawnee County	January 10th	Reported.	
Pennsylvania, Allegheny	January 13th to 20th	1	
Texas, Butte	January 1st to 16th	75	1
Houston	January 6th to 13th	4	
Virginia, Portsmouth	January 13th to 20th	20	1
SMALLPOX—FOREIGN.			
Brazil, Babia	December 2d to 9th	1	
Rio de Janeiro	December 1st to 8th	..	52
Canada, Ontario	December 30th	243	
Egypt, Cairo	December 23d to 31st	..	7
England, London	December 22d to January 6th	15	
Southamptoa	December 31st to January 6th	1	
France, Lyons	December 7th to 23d	..	2
Marseilles	January 2d	Epidemic.	
Nice	December 12th to January 8th	2	
Greece, Athens	December 31st to January 6th	3	1
India, Calcutta	December 8th to 16th	..	2
Mexico, Chihuahua	January 6th to 13th	..	9
Vera Cruz	January 6th to 13th	..	1
New Brunswick, Campbelltown	January 13th to 20th	5	
Russia, St. Petersburg	December 23d to 30th	12	7
Scotland, Leith	December 31st to January 6th	1	
Spain, Corunna	Deeember 23d to January 6th	3	4
Turkey, Smyrna	December 17th to 24th	..	3
YELLOW FEVER—UNITED STATES.			
Florida, Key West	January 16th	1	1
YELLOW FEVER—FOREIGN.			
Brazil, Rio de Janeiro	December 1st to 8th	1	1
Colombia, Barranquilla	December 23d to 30th	1	1
Cuba, Havana	January 6th to 13th	4	3
CHOLERA.			
India, Calcutta	December 8th to 16th	..	38
PLAGUE—UNITED STATES.			
Hawaii, Honolulu	From outbreak to January 8th	..	19
PLAGUE—FOREIGN.			
India, Calcutta	December 8th to 16th	..	54
Kurrachee	December 8th to 23d	3	3
Japan, Formosa, Tamsui	November 28th to December 12th	14	7
Paraguay, Asuncion	November 7th to 21st	..	9
Portugal	From outbreak to January 6th	287	105

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Original Articles.

REMARKS ON SUBPHRENIC ABSCESS; WITH A REPORT OF THREE CASES.[1]

By A. A. BERG, M.D.,
NEW YORK,
ADJUNCT SURGEON TO MT. SINAI HOSPITAL.

To Leyden belongs the credit for calling attention to suppuration in the subphrenic region, as distinct from purulent collections above the diaphragm. In his descriptions he had reference to large cavities filled with gas and pus, lying underneath the diaphragm, but pushing the latter upward, so as to occupy relatively the lower thoracic region and giving physical signs somewhat resembling pyo-pneumothorax. In contradistinction to the latter affection, he named this new one pyo-pneumothorax subphrenicus. From a number of cases that came under his observation he sought to establish a clinical basis upon which to rest the differentiation of the supra- from the infra-diaphragmatic suppuration. His observations made in 1880 have been added to from time to time, notably by Barlow and Pfuhl, but, although it is almost a decade since his classical descriptions of this affection appeared, our differential diagnosis is to-day by no means perfect.

The name which Leyden gave to this affection, viz., pyo-pneumothorax subphrenicus, would lead us to infer that all these abscess cavities are gas-containing. This condition does not, however, always obtain, for very many of these subphrenic abscess cavities are non-gaseous. This variance in the presence of gas, along with the pus, necessarily causes a variance in the physical signs that suppuration in this region would give. To arrive more easily at a basis upon which to rest our clinical diagnosis of these abscesses, we must therefore divide the subject into two main classes: (*a*) Those abscess cavities that contain gas and pus; (*b*) those that contain pus alone. Again, in either class we must consider whether or not there has been a secondary involvement of the pleural cavity.

I shall consider each class separately, pointing out the physical signs that are usually obtained from the presence of such an abscess, and attempt to show how to differentiate subdiaphragmatic suppuration from the other affections with which it is likely to be confounded.

First, as to those subphrenic abscesses that contain gas. The classical signs that such an abscess would give are as follows: An enlargement more or less marked of the lower thoracic region, with downward displacement of the liver and spleen, so that these viscera become distinctly palpable. Fremitus is diminished, or even absent, over the lower part of the chest on the affected side. Percussion of the chest from above downward gives a note, increased in pitch and intensity above, and merging below into a full tympanitic sound; splenic and hepatic dulness is more or less obliterated. On auscultation there is normal vesicular murmur at the apex, with increased or bronchial breathing just below it, and still further below amphoric breathing, or metallic tinkle, or both; succussion is present; the apex beat is but little, if at all, displaced. An abscess giving rise to such physical signs can be confounded only with pyo-pneumothorax, in which the physical conditions are of the same nature as obtain in subphrenic pyo-pneumothorax.

Leyden in his earliest papers indicated the lines on which our differential diagnosis can be made: (*a*) The previous history of the patient, which points to a primary trouble somewhere in the abdomen, and not in the chest. (*b*) The absence of cough and expectoration, or of any pulmonary lesion which could give rise to a pyo-pneumothorax. (*c*) The presence of normal vesicular murmur, with normal fremitus at the apex, with a sharp line of differentiation from the amphoric breathing below; furthermore with deep inspiration the line of normal breathing descends to where the amphoric breathing had been. (*d*) The very slight displacement of the apex beat. (*e*) The rather inconsiderate bulging outward of the intercostal spaces, and the absence of immobility of the chest wall. Neuser has added the observation that the basal line of thorax dulness is crescentic, with the convexity downward, instead of horizontal as in encapsulated pyo-pneumothorax.

When we come to consider those cases of gas-containing subphrenic abscess that have become complicated by the presence of a pleural effusion, we find that there have been added to the physical signs of the subphrenic abscess those of fluid above the diaphragm. This would seem to render the differentiation of these cases from simple pyo-pneumothorax much more difficult; but the acute observations made by Barlow in such a case that came under his observation have rendered the diagnosis very much simpler in those cases in which the pleural effusion is free, and especially if it is serous in character. For it must be remembered that the pleural effusion may be either serum or pus, that it may be free or encapsulated, and that the pus may or may not have the same characteristics as that in the subphrenic cavity.

I shall consider the simplest complication first, viz., the presence of free fluid, whether serum or pus, above the diaphragm. The physical signs by which Barlow has enabled us clearly to differentiate such a status from pyo-pneumothorax are as follows: (*a*) In addition to the physical signs I have detailed above, due to the subphrenic abscess, there were undoubtedly the signs of a pleural effusion lying above this gas-containing abscess cavity; (*b*) the maximum intensity of the amphoric resonance and breathing was underneath the false ribs. If these observations are added to those made by Leyden, and which I have just quoted, viz., the previous history of the patient and the absence of any pulmonary lesion that could have called forth a pyo-pneumothorax, the diagnosis is rendered comparatively simple; and it is rendered more certain, as was also pointed out by Barlow, by exploratory aspiration. For if on aspirating through one of the upper intercostal spaces we draw out clear serum, and on aspiration at a lower level pus, the probability is very strong that the diaphragm is separating these two cavities; for it is very unlikely that a membranous septum in the pleural cavity could be so complete as to separate the latter into two compartments, the one containing pus and gas and the other serum.

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[1] Read before the Medical Association of Greater New York.

When the pleural exudate is encapsulated, the difficulty in reaching a diagnosis is considerably increased. Should the exudate happen to be serum, exploratory aspiration, with the result of finding serum at an upper intercostal space and pus at a lower level, would help us very much; but should pus be obtained from both punctures, we would have to depend for making our diagnosis upon the two points so strongly insisted upon by Barlow, and which I have already mentioned, viz., "the level of maximum intensity of the amphoric resonance and breathing," which, in a pyo-pneumothorax subphrenicus, is underneath the false ribs; and, secondly, that "the signs of fluid are distinctly above a cavity containing both gas and pus."

This brings me to consider the second class of subphrenic abscess, viz., those cases in which there is no gas within the abscess cavity, but only a focus of suppuration in the subphrenic spaces. Such abscesses may even be due to ulceration of the hollow viscera, in which the communication with the viscus has been shut off by an adhesive inflammation around the ulceration, before perforation has really occurred. In this class of cases it is not the differential diagnosis alone that presents the difficulty, but the actual diagnosis of the existence of the abscess itself. For it is very evident that there may even be quite a considerable collection of pus in the subphrenic region, without giving any physical signs whatsoever; and the frequency with which we fail to detect subphrenic abscess in obscure cases of suppuration should be a warning to us to have constantly in mind the possibility of the existence of pus in this region, without any distinct signs pointing thereto. Very often these cases of subphrenic abscess remain undetected until they have ruptured into the pleural cavity or caused a secondary empyema.

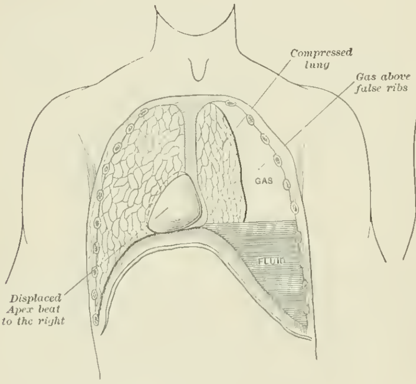

Fig. 1.—Left Pyo-Pneumothorax. (After Maydl.)

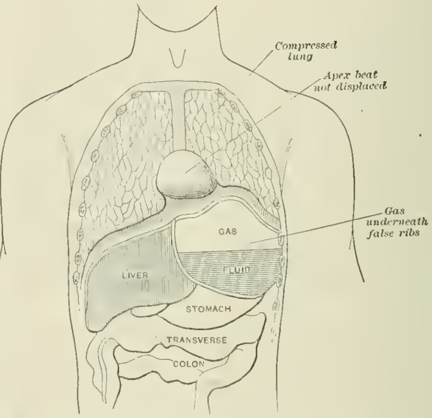

Fig. 2.—Left Pyo-Pneumothorax Subphrenicus. (After Maydl.)

When they have become large enough to give rise to physical signs, these must be sought in the chest rather in the abdominal cavity. Inspection of the affected side may reveal a slight bulging or œdema of the lower thoracic region. The liver or spleen is slightly displaced downward and can be palpated. There is very likely to be a distinct area of pain and tenderness underneath the false ribs. Percussion shows "dulness" over the lower thoracic region, which may be more or less marked. The breathing is not much changed in frequency, but the lung over the abscess shows the signs of compression, which diminish with a deep inspiration. These physical signs, with a pus temperature, and an absence of any preceding pulmonary history, or of any cough or expectoration, are sufficient to enable us to make the probable diagnosis in most cases.

When such an abscess has excited, either by rupture or by its vicinity, an inflammation in the pleural cavity, with a resulting exudation into that cavity, the diagnosis is very much more difficult. Here we have to depend upon the history, which points to an antecedent abdominal inflammation, and upon aspiration, which, if the needle withdraws pus at a lower level and serum at an upper intercostal space, decides the diagnosis, and to the manometric test of Pfuhl.[1] Should there be pus both above and below the diaphragm, our diagnosis is very difficult and must be decided by the extent of the downward displacement of the liver and spleen, and by the observation of the lowest level at which we can aspirate pus.

This variety of subphrenic abscess must be differentiated from an abscess of the liver, that causes the latter to be enlarged upward and backward; and from a splenic abscess that bulges the latter upward. This differential diagnosis is most frequently impossible, for the same causes that call forth an abscess of the liver and spleen also give rise to subphrenic suppuration. The physical signs that are to be elicited in either case are identical in character, and unless there is a distinct history pointing to a liver or splenic abscess, or the pus on microscopical examination shows the presence of liver cells, the differential diagnosis cannot be made.

I have gone thus carefully into the differential diagnosis of subphrenic abscess, because a knowledge of the exact location of the pus, whether it is above or below the diaphragm, has considerable influence upon the lines of our operative attack. I shall call attention again to this, when I consider the treatment of subphrenic abscesses.

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[1] The manometric test of Pfuhl is based upon the negative pressure existing inside the chest during inspiration, and the increased pressure therein during expiration, and the very reverse of these conditions in the abdominal cavity, viz., an increased pressure during inspiration and a diminished pressure during expiration. Therefore if a cannula connected with a manometric tube is inserted into an abscess cavity above the diaphragm, the mercury in the tube will fall with inspiration and rise with expiration on account of the physical conditions named above; and vice versa, a manometric tube connected with an abscess cavity below the diaphragm will show a rise of pressure during inspiration and a fall of pressure during expiration.

It might be of interest here rapidly to run over the etiology of subdiaphragmatic suppuration. Here again we can divide our subject into the two same classes as before, viz., those abscesses that contain gas and those that are non-gaseous. The gas which is present in a subphrenic abscess arises from a perforation of one of the hollow abdominal viscera, or from a secondary rupture into a bronchus, or from gas-producing bacteria. It must be remembered, however, that a subphrenic abscess may be due to ulceration of one of the hollow viscera without the presence of gas in the abscess cavity, as the visceral fistula may have been closed by adhesive inflammation to neighboring organs before actual perforation has occurred.

Gas-containing abscesses may be due to (*a*) wounds, ulcerations, whether benign or malignant; inflammations, with ulcerations, of any one of the hollow viscera, as the stomach, duodenum, intestine (small or large), or appendix; (*b*) wounds or ulcerations of the bile ducts. (*c*) Simple subphrenic abscesses may become gas-containing, from perforation into a hollow viscus or into a bronchus.

Non-gaseous subphrenic abscesses are (*a*) usually metastatic—the primary focus being situated in any part of the body, but most frequently in the abdominal cavity; (*b*) secondary to liver or splenic abscesses or perinephritic abscesses; (*c*) due to the echinococcus; (*d*) traumatic in origin; (*e*) secondary to disease of the costal cartilages or vertebræ.

Treatment.—We can dismiss this with a few remarks. The only therapeutic measure is operative procedure to evacuate the pus, both below and above the diaphragm, when the latter is present. As regards the technique of the operative attack upon the subphrenic pus, in case the pleural cavity is normal I prefer to resect the tenth rib, from the anterior axillary line to the scapular line. This takes the wound below the limits of the pleura, and if it is necessary to gain more room I carefully strip up the costal pleura from the eighth and ninth ribs, resect these ribs to a similar extent as the tenth, and then peel up the pleura from the diaphragm. I prefer this low point of attack to the higher trans-pleural operation, because we can thereby avoid invading the pleural cavity. In the trans-pleural operation, I have found great difficulty in walling off the general pleural cavity, so as to prevent its infection; and the suture of the diaphragmatic pleura to the costal pleura, with the view of shutting off the pleural cavity, I have found to be very unsatisfactory, because the sutures are firstly very difficult to apply, and, when in place after considerable difficulty, they invariably tear out when an attempt is made to tie them. After the pleural layers have been stripped upward, the diaphragm is incised and the pus evacuated. Drainage is established by tube and gauze, and an aseptic dressing is applied. Should the pleural cavity have been opened, the operator must be on his guard for the evil consequences of the acute collapse of the lung, and be ready to use artificial respiration, or, even better, the "Fell-O'Dwyer" apparatus for artificial respiration, until the pleural cavity can be closed by packing or sutures. Should there be serum in the pleural cavity, this will be found to disappear spontaneously, on removing the primary cause of trouble; but when pus is present this must be evacuated, preferably by resection of a rib. I would prefer to drain the cavities by separate openings, retaining the lower incision for the subphrenic space, and using a higher one (over the seventh rib) for the pleural drainage.

With the preface of these remarks on this subject I beg to submit to your attention the clinical records of the three following cases that came under my care during the past summer:

Case I.—Hannah D——, sixty years of age, a housewife, was admitted to the medical service of Dr. Brill, at the Mount Sinai Hospital, on May 10, 1899. Her family history was negative. She had had rheumatism several times. There was no specific history; she had passed the menopause twelve years previously. Her present history began three months before admission, with fever, chilly sensations, and general weakness. At the same time she became short of breath, and had occasional attacks of cardiac palpitation. Urination had been scanty and painful. The feet and legs had been swollen since the onset of her illness. She had had some cough and muco-purulent expectoration; there had been loss of appetite and constipation.

On admission to the hospital the physical examination gave the following data: A very obese woman, pale and flabby, with moist and coated tongue; pulse rate of 98, regular; considerably sclerosed arteries; temperature, 103° F.; respiration, 30–36. The lungs and heart were normal. There was a slight cough, and a very moderate expectoration. The liver and spleen showed nothing abnormal in size or position. The urine was likewise negative in pathological constituents. The patient remained in this condition, with a daily rise of temperature between 101° and 103° F.; pulse, 96–116; and respiration, 26–36. On May 17th she gave the first indication as to the site of her trouble. On this day she complained of considerable pain in the left hypochondrium posteriorly. On May 22d there were resistance and marked tenderness in the left hypochondrium. On May 24th the physical examination gave the following signs: In the left lung, fine crepitant râles at the base in the axillary line; behind, at the extreme base, there were slight dulness, slightly increased voice, roughened breathing, and marked crepitations, extending downward for three inches. The liver was negative; the spleen was displaced downward, and merged above into a hard indurated area, which extended forward to the mammary line, and downward to two fingers' breadth above the umbilicus. This area was flat to percussion and painful and tender. Doctor Brill aspirated this mass in the axillary line, tenth interspace, and withdrew a syringeful of yellowish pus which showed no liver cells.

On May 25th the general condition was worse; the pain was intense, and her fever had been continuously between 101° and 103° F.

On May 26th Dr. Lilienthal operated upon her under chloroform anæsthesia. He first made a lumbar incision for the purpose of exploring the perinephritic tissues, but found these normal. He then made a second incision at right angles to the first one, and extending upward from its middle for about three inches. The aspirating-needle introduced directly inward at the upper limit of this second incision revealed the presence of pus. The tenth rib was excised between the anterior and posterior axillary lines; the pleural cavity was opened, and when found to be normal it was immediately closed by suture. The diaphragm was then incised, and a large quantity of pus evacuated. The pus was of a yellowish-brown color, and showed tyrosin cystals and fatty and degenerated liver cells. The cavity was drained by tube and gauze and dressed dry.

May 27th: The patient reacted well from the operation; there was a profuse purulent discharge from the wound. The highest temperature was 101.6° F.; pulse, 100; respiration, 24. The urine contained granular and hyaline casts.

June 5th: During the week the patient had lost ground. The temperature ranged between 100° and 103° F. each day; pulse, 110–130, and weak; respiration, about 40. The wound looked pale and flabby, and discharged profusely. During the next fortnight the patient continued losing ground. The temperature ran a little higher course, reaching 105° F. at times; the pulse became more rapid, 146, and there were signs of mental wandering with hallucinations. The patient appeared septic, but no other focus of pus could be found, and the wound itself appeared well drained, and was filling up with granulations. On June 25th, on the suspicion that there might be an encapsulated focus of pus in the vicinity of the wound, which had not been drained, an exploratory aspiration was made in several directions around the old wound, but with negative result. The liver, which was slightly enlarged, was also aspirated, but with like negative result.

July 1st: The patient was still in the same condition. She complained of pain and tenderness in the epigastrium, in which a marked resistance could be felt. There was also considerable ascites.

July 3d: The resistance in the epigastrium could be distinctly felt, and it was thought to be the left lobe of the liver. Exploratory laparotomy was decided upon, which I proceeded to perform at once. Under chloroform anæsthesia I made a median laparotomy in the epigastric region. The peritoneum was found intensely œdematous, and there was considerable ascitic fluid in the general peritoneal cavity. The left lobe of the liver was enlarged. The surface of the liver was smooth, and of normal consistency. Aspiration of the left lobe showed the presence of multiple miliary abscesses. Nothing was to be found in the right lobe. Nothing could be felt in the portal vein as it lay in the gastrohepatic omentum. The subphrenic abscess appeared to have no connection with any of the hollow viscera. The abdominal wound was partly sutured and drained and an aseptic dressing applied.

July 4th: The patient bore the operation very badly; her pulse became very rapid, and she died twenty-four hours later. A culture of the liver pus obtained by aspiration showed the presence of streptococcus longus.

Autopsy: A complete post-mortem not having been permitted, an examination was made through the wound by Dr. Libman, the assistant pathologist of the hospital. The report was as follows: The liver showed marked degeneration. In the left lobe were numerous miliary abscesses, varying from a pea in size to one inch in diameter, and containing thick green pus. In the neighborhood of some of the abscesses were small hemorrhages due to aspiration. The portal vein contained no thrombus. The stomach was entirely normal, with no ulceration and no connection with the abscess cavity. The spleen was moderately enlarged. A depressed white scar ran across its centre transversely. In the upper pole was a white nodule about 1 cm. in diameter. Both these seemed to be healed abscesses. The splenic vein contained a purulent thrombus. Heart: the mitral flaps had calcareous deposits. The left ovary was cystic, about the size of a large walnut.

Case II.—Becky B——, aged thirty-six years, admitted to the gynæcological service at the Mount Sinai Hospital on July 2d, with the following history: She had been confined four weeks previous to her admission, by a midwife. The day after confinement she had several chills and fever, the next day she was curetted for retained secundines. The fever continued with sweating; there was no vomiting, but a constant pain in the epigastrium. There had been no pain in the chest, and no cough or expectoration, at any time during her illness. On admission the physical examination gave the following data: Her general condition was poor, and she was slightly icteric; the tongue was moist but coated. Temperature, 100° F.; pulse, 80; respiration, 20. Lungs: anteriorly there were no abnormal signs; posteriorly, on the left side, there was dulness from the mid-scapular region to the seventh rib, with flatness below; breathing and voice were absent at the extreme base, but distant bronchial at the level of the angle, becoming normal above; there were no râles and no friction sounds. Fremitus was diminished at the angle of the scapula, but lost below. On the right side there was diminished breathing at the base, but this was less marked than on the left side. Heart: sounds feeble but otherwise negative; no displacement of the apex beat. The liver extends from the fourth space downward to two fingers' breadth below the costal margin. The left lower margin of the liver descends to a lower level than is usual. There were pain and tenderness over the gall bladder. Spleen: enlarged to percussion, but not palpable. Abdomen: muscles tense. There was pain in the right side of the epigastrium and in the left lumbar region; nothing was to be felt in the left lumbar region, but a mass could be palpated in the right epigastrium, most likely the gall bladder. The extremities were normal. The urine was normal. The pelvic organs were normal.

On July 29th, Dr. Allen, the house surgeon, aspirated through the ninth intercostal space, left side, in the scapular line, and withdrew pus. The patient was transferred to the general surgical service for operation.

On August 4th she was operated upon, in my presence, by the house surgeon, under chloroform anæsthesia. About two and one-half inches of the eighth rib, from the middle axillary line to the scapular, was resected, and the pleural cavity opened. It was found to be normal, except that the lung was adherent at its base to the diaphragm. The pleural cavity was protected above by a wall of packings, the diaphragm incised, and about a pint of pus evacuated. The cavity was drained by tube and gauze; the pleural packings were left in place, and an additional tube drain was inserted into the pleural cavity; dry aseptic dressing was applied.

August 5th: The patient reacted well from the operation, but was extremely dyspnœic, the respirations being 54 to the minute, evidently due to the collapse of the lung. The temperature was 102.4° F. at its maximum; pulse, 100–104 per minute.

August 7th: The wound was dressed. There was no empyema present, but the left lung was still collapsed, as the pleural cavity had not as yet been closed by adhesive inflammation around the packings. There was a profuse discharge from the subphrenic wound.

August 15th: The pleural cavity had become shut off by adhesions; the respirations had fallen to 24–28; pulse, 120; the temperature had fallen to 99.8° F. The general condition was much improved, and there was much less discharge from the wound, which was commencing to granulate nicely.

August 30th: The temperature, pulse, and respiration were almost normal. The wound was closing by granulations and there was very much less discharge. From now on the abscess cavity gradually contracted and filled up by granulations, and the patient made a good and rapid convalescence, being discharged cured on September 24th.

I should like here to call attention to the urgent dyspnœa produced in this patient by the opening of the pleural cavity, with the consequent collapse of the lung; also to the inefficacy of the pleural packings as a means of closing the cavity, as these were being constantly displaced by the movements of the chest wall.

Case III.—Annie R——, nineteen years old, an operator, was admitted to the Mount Sinai Hospital on August 29th, at 10:30 P.M., with the following history: She had been perfectly well until three weeks before admission, when she was taken suddenly ill, with collapse, severe general abdominal pain, and high fever, 107° F. The pain and fever continued until three days before admission, when the abdominal pain became less marked, and the patient began to cough and have pain in the left chest. The physical examination gave the following data: General condition poor; temperature, 103°; pulse, 118; respiration, 20. Lungs: In the left chest, in front there were dulness on percussion over the left supra-clavicular region, and hyper-resonance below the clavicle. There were bronchial voice and breathing at the base. In the axillary region there were dulness on percussion, and diminished voice and breathing. Crepitant râles were over the entire left chest. In the right lung, over the base posteriorly, there was slight dulness, with increased voice and breathing, and crepitant râles. The abdomen was soft and collapsed. The liver extended one and one-half fingers' breadth below the free border of the ribs. In the left hypochondrium, from the seventh rib downward, there was flatness to percussion; the spleen was displaced downward and forward, reaching to the level of the umbilicus. Beneath the false ribs was a tender, indurated mass, which extended forward to the mammary line, and merged below with the spleen. This mass gave a sense of deep fluctuation: there was no succussion. In the epigastrium was a tender, indurated mass, about the size of a small orange. There was no sign of fluctuation. The urine was acid; specific gravity 1.020; otherwise negative.

The patient was sent to the operating-room at once, and under chloroform I proceeded to operate. I first aspirated the indurated mass in the left hypochondrium, through the ninth intercostal space, and withdrew thick, extremely fetid pus. I resected the ninth rib for two inches, and found the costo-phrenic sinus obliterated by adhesions. I incised the diaphragm, and opened into a large abscess cavity, non-gaseous, containing about one pint of extremely fetid pus, a culture of which showed the presence of streptococci and bacteria coli. The spleen bulged into the wound; it was covered by a thick coating of lymph. At its lower pole was a whitish spot which seemed to me to be scar tissue. I excised a wedge-shaped piece of this for examination. The pathologist reported that it showed only the evidences of congestion and perisplenitis. The abscess was well walled off on all sides. To afford better drainage, I resected the eighth rib, and displaced the pleural layers upward. The cavity was drained by tube and gauze. Exploratory aspiration of the left pleural cavity withdrew only clear serum; this was left undisturbed. I considered the advisability of exploring the indurated mass in the epigastrium; but in view of the extremely septic condition of my own and assistant's hands, the instruments, etc., I decided to wait for further developments, rather than expose the patient to the risk of infection of the general peritoneal cavity.

August 26th: The patient had reacted well from the operation. Her temperature was 103.8° F.; pulse, 104; respiration, 30. There were frequent vomiting and muco-purulent expectoration. Examination of the blood showed a moderate leucocytosis. The wound was dressed; there was a slight amount of discharge.

August 30th: The patient's temperature still persisted, ranging from 101.8° to 103.2° F. daily; the pulse rate from 102 to 112. There were considerable cough and muco-purulent expectoration. The physical signs in the left chest still persisted, but aspiration of the left pleural cavity resulted negatively. The mass in the epigastrium was still present, but it was not tender, and there was no sign of fluctuation therein. The general condition of the patient was fair. The wound was covered with pale granulations, and there was less discharge. There was nothing to be found to account for the daily rise of temperature.

September 2d: The temperature still persisted. The sputum was examined, but no tubercle bacilli were found.

September 6th: The patient was in about the same condition: there was continued high temperature, and rapid pulse rate. The sputum was again examined and found negative. There was a trace of albumin in the urine.

September 13th: During the past week the general condition of the patient had slightly improved, but the temperature persisted, varying between 100.4° and 103.2° F. The wound looked clean and discharged very little. The epigastric mass was somewhat larger but not tender. In the right lumbar region was a round, smooth swelling, which I could displace upward; it was very tender. The house surgeon took this swelling to be an enlarged and distended kidney; I considered it to be the lower pole of a floating kidney. The urine was of a specific gravity of 1.010, and contained a trace of albumin, pus cells, and bacteria, and was alkaline in reaction.

September 14th: The epigastric mass was painful and tender, and I decided to make an exploratory laparotomy to ascertain the nature of this.

September 15th: Under chloroform I made a median laparotomy, directly over the mass. I at once opened into an abscess cavity, which was adherent to the anterior abdominal wall; the same thick pus that was contained in the previous abscess was also here evacuated. The walls of the cavity were formed by adherent coils of intestines, and the cavity reached considerably below the umbilicus. There was no visible connection with the stomach or the other abscess cavity; its extension downward suggested an appendicitis, and the odor of the pus was remarked at the first operation to be appendicular in character; but even under the anæsthesia there was absolutely nothing to be felt in the right iliac fossa, and there had been no pain or tenderness there. The cavity was non-gaseous. The abscess was drained by tube and gauze and dressed dry.

September 16–19th: The temperature fell the next day to 99° F., but rose again in the evening to 102° F., and then continued on the same plane as before. The patient's general condition was getting worse; the pulse was more rapid and feeble, and there was evidently more pus somewhere, which had not been evacuated. The right kidney was so painful and tender, and the urine contained so much pus and bacteria, that I decided to explore the kidney.

September 19th: Exploratory nephrotomy was performed under chloroform. A small incision was made in the lumbar region; the kidney was exposed and aspirated in all directions, but no pus was found. I did not open the pelvis of the organ. The wound in the soft parts was closed at once by sutures and sealed off from the abscess cavities on the left side. I then aspirated the left pleural cavity again, and drew off some very fetid pus, the odor being similar to that in the other abscess cavities. I resected a portion of the seventh rib, and evacuated about eight ounces of pus from a sacculated cavity. This was drained by tube and gauze and dressed.

September 20th: The patient reacted well after the operation: the temperature at its highest point was 101° F.; pulse, 100; respiration, 28. She took considerable nourishment; the urine was the same as before.

September 28th: The general condition of the patient had improved considerably; the temperature ranged between 98.8° and 101° F.; pulse, 100. The kidney wound had completely healed and the sutures were removed. The other wounds were granulating and contracting.

October 5th: The temperature has become almost normal. The general condition was much improved, the patient sitting up in bed. The wounds were granulating nicely. There was still some odorous discharge from the first perisplenic wound, but nothing could be felt on probing it.

October 9th: The patient was convalescing in the hospital.

Comments on these Cases.—As to their etiology. Case I.: There was no positive conclusion reached either at the operation or during the course of the illness, or at the autopsy, as to the cause of the original subphrenic abscess. As to the possibilities, there may have been an abscess of the spleen, subsequent to an infected thrombus or embolus. In favor of this there were the calcareous condition of the arteries and heart valves, and the whitish nodules in the spleen, that the pathologist thought might represent a healed abscess. If this was the primary cause, then we must suppose that there was a secondary rupture into the subphrenic space, with a resulting abscess formation there; then a suppurative thrombosis of the splenic vein, and metastatic miliary abscesses of the liver; or the thrombus may have lodged originally in the splenic vein.

Case II.: This subphrenic abscess was undoubtedly metastatic, from an infection in the uterus.

Case III.: Here again I am not positive as to the cause of the trouble. The possibilities here are: (*a*) An appendicitis which gave no signs whatever; the odor of the pus was very suggestive of this trouble. (*b*) A perforation of a gastric or duodenal ulcer. The high temperature observed by the patient's physician at the very beginning of her attack, while it would seem to oppose this view, yet does not altogether rule it out; for there may have been an adhesive inflammation around an ulcer that was about to perforate, so that when actual perforation occurred there were no bleeding and no extravasation into the general peritoneal cavity.

In both Cases I. and III. there was no primary focus to give rise to metastatic abscesses.

As to diagnosis: This should have been easily made in all three cases. In Case I. it was made by Dr. Brill, and in Case III. by the writer. In Case II. the physical signs were classical, but the high site at which pus was aspirated led me to expect rather a sacculated empyema. Had I but kept in mind Leyden's earliest points, viz., that in the absence of any previous pulmonary lesion, and in the presence of a primary abdominal trouble, we should strongly suspect subphrenic pus, I would have made the diagnosis in this case also.

As to treatment: The important point, as I have already indicated, is to avoid opening the pleural cavity. This was avoided in two cases. In the third the pleural cavity was opened and packed with gauze. The acute collapse of the lung which occurred in this case illustrates the danger of such invasion of the healthy pleural cavity, and in debilitated persons it is enough to turn the chance of recovery against our patients. I cannot lay too much stress upon this point, for the "trans-pleural" route is very frequently used in opening hepatic abscesses as well as subphrenic abscesses.

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Note.—In the discussion, among other remarks, Dr. H W. Berg called attention to the comparative frequency of subphrenic suppuration. In differentiating subphrenic abscess on the right side from an abscess of the liver, he laid great stress upon the "marked fixidity" of the liver in the former affection, due to the adhesive inflammation of the liver to the diaphragm, which latter organ had become paralyzed to a marked extent. In abscess of the liver, on the other hand, the liver remains perfectly movable, and shares in the movements of the diaphragm. Furthermore, as regards pyo-pneumothorax, he called attention to the extreme importance of the following physical signs: The tympanitic resonance in pyo-pneumothorax extends up to the apex of the chest, and over this tympanitic area there is an absolute absence of any respiratory murmur. In subphrenic abscess, on the other hand, the tympanitic resonance and the amphoric voice and breathing are at the base of the chest, and there are distinct respiratory murmur and voice at the upper part of the chest. In the cases of right-sided subphrenic abscess that had come under his observation, the patients had complained of pain in the right shoulder. To explain the comparatively greater frequency with which subphrenic suppuration accompanies purulent collections in the iliac fossa, he instanced the experiments which showed the free communication of the lymphatics in the iliac fossa with those in the subphrenic region.

THE RESULTS OF THE SO-CALLED CONSERVATIVE TREATMENT OF APPENDICITIS.[1]

By SAMUEL LLOYD, M.D.,

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Gentlemen: When Dr. Morris, a few days ago, asked me to read a paper before you this evening, I had just been reading his reply to some of his critics in the Medical Record of December 9, 1899, and was reminded that for some years I have been following the histories of a number of patients who had been treated, in their first attacks of appendicitis, upon the theory that the disease belonged to the domain of medicine rather than that of surgery. I immediately looked over my histories, with the following results:

Case I.—A physician, who had had several attacks of abdominal pain, never diagnosed as appendicitis. In 1885, he had a severe attack and was treated by means of calomel and opium. He suddenly collapsed and died in a few hours. The autopsy revealed a perforation of the vermiform appendix, through which a small concretion had escaped. There was no attempt at "walling off" of the peritoneum, so that the opening communicated directly with the peritoneal cavity.

Case II.—A woman came under my observation in 1887. She was forty-three years of age, married, and had been for many years a patient of the physician whose case I have just related. She had for many years been subject to abdominal pain on the right side, which had always yielded to rest, diet, and opium. As she had always recovered after a short illness, she persistently refused operation. After she moved out of the city, I have ascertained that she had two attacks, between November, 1891, and February, 1892, and the last and fatal one during the summer of 1893. At the autopsy the appendix was found badly diseased and perforated, and the ovary and tube of the same side were also diseased. There were a ruptured abscess in the appendical region and many old adhesions throughout the whole peritoneal cavity.

Case III.—A woman, thirty years of age, married, no children, no uterine or pelvic disease, was suddenly attacked in 1888, after a heavy day's work, by abdominal pain, which was supposed to be simple colic. Home remedies were tried without relief, and I saw her in the morning. She had a temperature of 102.5° F.; pulse, 120; with marked tenderness over the abdomen and great distention. In the course of a few days, it was possible to make out a tumor in the right iliac region, but she was treated conservatively and finally recovered. In May, 1892, I saw her again.

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[1] Read by invitation before the New York Medical Union, December 26, 1899

She had been under the treatment of another physician, who had diagnosed, first, peritonitis from a salpingitis, and then abscess about the rectum. When I examined her, I found a marked swelling in the right iliac fossa which could be readily felt bagging down into the rectum. The vesical symptoms were also well marked and urination was exceedingly painful. There was a well-marked induration in the vagina, and fluctuation could be made out between the rectum and vagina. As there was no time to lose on account of the patient's condition, operation was performed at once. An incision over the appendix evacuated an immense abscess. An opening was also made in the vagina, and both cavities were found in communication. Just at the end of the flow of pus from the vagina there was a gush of urine, and on injecting the bladder it became evident that there was an opening into that viscus. It was impossible to prolong the operation in order to find and repair the opening in the bladder. No examination of the urine was made before operating, because of the necessity of haste in our preparation. The patient made a complete recovery.

Case IV.—A man, fifty-five years of age, was attacked in 1889, at his country house, some miles from New York. I saw him the next day and made out a well-marked case of appendicitis. Operation was declined. On the twelfth day the abscess evacuated itself into the bowel, and the patient made a rapid recovery. Up to the time of his death from typhoid fever, three or four years later, he had no recurrence.

Case V.—In October, 1891, I saw a woman forty years of age, who declined to allow me to operate. In the past eight and a half years she has had but one recurrence, and that was six years ago.

Case VI.—In May, 1892, I saw a young man, twenty-four years of age, in consultation with Dr. Louis Morris, of New York. He was then recovering from a well-defined attack of appendicitis, and afterward had several attacks, but always recovered under conservative measures. Later, he had another attack and was operated upon by Dr. William T. Bull, in New York Hospital, for suppurative appendicitis. He recovered.

Case VII.—In April, 1892, a young man, aged twenty-six years, consulted me about a tumor in his abdomen. He gave the history of an attack of pain and tenderness in the right side, with fever, constipation, and vomiting about ten days before. He had been treated for intestinal obstruction, he claimed. A tumor, the size of an egg, in the right iliac fossa, painful on pressure, with considerable rigidity of the right side of the abdominal wall, was made out, and the diagnosis of appendicitis was easily reached. He declined operation and continued medicinal treatment, but never fully recovered. Constipation, with more or less pain, indigestion, and loss of flesh persisted, and he finally concluded, six months later, to be operated upon. An ulcerated and thickened appendix, much enlarged and in a very dangerous condition, was removed; he has had no discomfort since.

Case VIII.—In 1892, I saw a boy aged twelve years, who was brought to the hospital with a distinct attack of appendicitis. He improved so much within the next twelve hours, under the continued use of the ice coil and rectal enemata, that his friends declined to have him operated upon. In ten days he was discharged. About a year later, this boy had another attack, with suppuration, and was operated upon.

Case IX.—The next case was a young man aged nineteen years, who gave the history of constant indigestion. When I saw him, he had a well-marked attack of appendicitis, but was evidently improving. He was advised to have an interval operation, but claimed he was too busy to attend to it. He recovered, and resumed business, but had, within the next four or five months, several very mild attacks; finally, while away from the city, severe symptoms intervened, necessitating immediate operation, and death followed within a few hours.

Case X.—In March, 1893, a young man, twenty-five years of age, was attacked while visiting out of town. The attending physician made a diagnosis of renal colic, for which he was treated for several weeks. When I saw him, he had a large tumor in the right iliac fossa, peritonitis pretty well over the right side, pyrexia, and a pulse of high tension. Nevertheless, he was allowed to get out of bed, and was compelled to do so to attend to the calls of nature. As it was impossible to operate with any safety in the place where he was, he was treated conservatively and returned home some weeks later. About a year later, also while away from home, he had a second attack, from which he also recovered. He then remained well until November, 1898, when he had a third attack. I operated upon him, and found the appendix and surrounding tissues gangrenous, and he died of sepsis in a few days.

Case XI.—In March, 1894, I saw a young woman, about twenty-four years of age, in consultation with the late Dr. William H. Helm, of Sing Sing, N. Y. She had a tumor about the size of a small orange just above the appendical region. She was evidently over the severe part of her attack, and operation was advised against until all the acute symptoms had subsided. She has had no recurrence.

Case XII.—In December, 1895, I saw with Dr. Louis Morris a young woman, twenty-seven years of age, who had been seized with appendicitis on her way home from work a few days before. When I saw her, she had been steadily growing worse. Her home surroundings were distinctly unfavorable for any successful surgical interference, yet both she and her family absolutely declined to permit her removal to the hospital. There was a large, exquisitely tender induration filling the whole of the right iliac fossa, and her symptoms were extremely grave. I saw her several days in succession in connection with Dr. Morris, and there was but little improvement. The induration gradually extended upward toward the liver, and we expected her death at any time. Pleurisy, and then pneumonia, set in; finally she coughed up vast quantities of fecal-smelling pus, and the induration along the right side became distinctly less. She was then removed to a hospital, and was supposed to have phthisis, but finally recovered, and has had no further attacks.

Case XIII.—On December 20, 1896, a young woman, twenty-two years of age, walked into my office, complaining that for two days she had had pain in the right iliac fossa. She was in collapse, pupils widely dilated, marked diaphoresis, vomiting bile, tongue coated; pulse, 134; temperature, 99.8° F.; respiration, frequent and sighing. There was marked tenderness over the right iliac fossa, with spasm of the abdominal muscles and pain about McBurney's point. She was immediately sent home and stimulated all day, in the hope that her condition might improve enough to warrant surgical interference. The next day there was a discharge of pus from the rectum, and she gradually but slowly improved. For the next year she suffered more or less constantly with pain in the right side, but persistently refused operation. No severe attack has as yet appeared since the first.

Case XIV.—It was also in December, 1895, that Dr. Ellery Denison, of New York, asked me to see a boy of ten or eleven years of age, who had had a great deal of so-called colic. This had been going on for a year or more, and he complained, after each of these attacks, of pain and soreness, and walked with a limp. He refused to take part in any boys' sports, and was disinclined to undertake any exertion. At Thanksgiving time he had a more than usually severe attack, and Dr. Denison saw him. He found him with much tenderness on the right side, fever, vomiting, constipation, and distention. After a few days, a thickening was made out in the lower right side, and it was then that I saw him. An involvement of the appendix was evident. As he was almost over the attack, an interval operation seemed possible, and this was advised. A few weeks later, January 7, 1896, he had another attack, and operation became immediately advisable; a badly diseased and adherent appendix was removed.

Case XV.—On February 9, 1896, I was called by Dr. E. H. Bergen, of Princeton, N. J., to see a young man, aged twenty-three years, who gave the history of having had two or three attacks of pain in the appendical region, which had been treated by his family physician, and from which he had promptly recovered. The present attack had come on while he was at a ball a week or more before I saw him, and he had been treated conservatively from the first. Dr. Bergen was finally called in consultation and insisted upon my being sent for to operate. The abscess had ruptured into the general peritoneum before I reached the house, and in spite of early incision and careful lavage of the whole peritoneal cavity, he died fourteen hours later of general peritonitis.

Case XVI.—During the same year, one of my assistants at the New York Post-Graduate Hospital, while convalescing from an acute attack of articular rheumatism, was seized with appendicitis. I saw him at midnight, together with Dr. B. Farquhar Curtis. He recovered under anti-rheumatic remedies, but had another attack the following summer. He had another attack in 1898, but has not yet been operated upon.

Case XVII.—In April, 1896, I was consulted by a young woman from Sewickley, Pa., who gave the history of several attacks of severe abdominal pain during the four years of her college course. About a year before I saw her, she had a severe attack of peritonitis, and during the fall of 1895 she had had a severe illness that had been diagnosed as typhoid fever. It was during her convalescence from this last illness that she consulted me. She had constant pain in the right side, and frequently had a temperature as high as 101° F. The appendix could not be made out, but on palpation a tumor low down in the right side could be felt. After carefully trying treatment, the patient finally consented to operation, and the appendix was found to have sloughed off, and to be the centre of an abscess cavity, involving the right tube and ovary. She made a perfect recovery.

Case XVIII.—In July, 1896, I saw a patient who had been ill for several days with what was supposed to be inflammation of the bowels. He had general peritonitis, and his distention and tenderness were so great that it was impossible to make a satisfactory examination. A few days later, I could make out a distinct tumor in the right iliac fossa, both through the abdominal wall and through the rectum. Operation was advised, especially as he gave the history of several previous but mild attacks. An interval operation was decided upon. On his recovery, he was so impressed by the statements of the physicians who had treated him during his previous attacks, that he had only an inflammation of the bowels, brought on by indiscretions in eating, that he was inclined to doubt my diagnosis and thought I was riding a "fashionable surgical hobby." In February, 1897, I saw him again and examined him. He had had no discomfort since the summer, and the induration had practically disappeared from the region of the appendix. A few days later he went to his home in Rhode Island, and while there had a sharp attack with an abscess that finally ruptured into the bowel. He again recovered, and now believed his troubles were over and that his attacks had destroyed the appendix; but in the early part of this year he was taken with severe pain while on his way to business one morning, was removed from an elevated railroad station to Roosevelt Hospital, and operated upon at once for suppurative appendicitis, from which he made a slow recovery.

Case XIX.—During the summer of 1896, a medical student, who had been troubled with occasional attacks of indigestion, with abdominal pain, since childhood, was attacked in the night with diarrhœa and vomiting, pain and slight tenderness over the whole abdomen. There was also a slight rise of temperature. A few days' rest in bed with attention to the bowels relieved all the symptoms without arousing any suspicion of a distinct intra-peritoneal lesion. One day in August, he complained that all day he had had severe abdominal distress, but it was not marked enough to lead him to give up a bicycle trip. During the ride he was obliged to dismount several times because of abdominal pain, and finally he was compelled to give up the trip and return home by train. He suffered intensely during the journey back to town. By the time he reached home, his pain was intense; temperature, 100° F; and he was having diarrhœa and vomiting. I suspected appendicitis, but could not palpate the appendix. In a couple of days he seemed to be all right, and on the following Saturday went out of town to spend Sunday. While he was away, he ate very carelessly, and had another attack, which he attributed to his carelessness. He then remained unusually well, until a few days before Christmas, when he was taken ill again, and this time his appendix was palpable. Operation became necessary and considerable pus was evacuated. Two concretions were washed out, and during his convalescence two more escaped.

Case XX.—In October, 1896, I saw a young married woman, who gave the history of several attacks of peritonitis, dating back to childhood. She frequently suffered from attacks of pain in the right side, coming on usually in the night. There was some endometritis, and the right ovary seemed to be in Douglas' cul-de-sac, pushed down by a tumor on the right side. The left ovary could not be made out. On palpating the appendix, it was found pointing downward and very tender. She was much constipated and suffered constantly from intestinal indigestion. She absolutely declined operation at this time. About a year ago she had another very severe attack, and was several weeks recovering. She then decided to be operated upon. I found the appendix running downward, enlarged and thickened, and its apex entering into the tumor on the right side. This was found to be an abscess at the tip of the appendix, which was walled off from the general peritoneum by the right ovary and tube above, the uterus on the inside, and the left ovary, which had been drawn over, behind. Both ovaries and tubes were infiltrated with septic material, and it was necessary to remove them both with the appendix.

Case XXI.—During the same month I was consulted by a man from Honesville, Ky., who gave the history of three attacks of appendicitis. The first attack had occurred in the South. The physicians who had attended him in both these attacks advised against operation, and are probably carrying his name among their triumphs in curing appendicitis without the knife. A few weeks before coming to me, the third attack came on, and I saw him just after he was able to get about again. He had an ectopic testicle in the inguinal canal of the right side, and a hernia; but one could also palpate a tumor, which was exceedingly painful and about the size of an egg, in the lower right iliac region. While trying to make up his mind in regard to operation, he had a slight return of the pain, which settled the question. The incision was made so as to include the hernia, and so effect a radical cure at the same time. This hernia was found to be the caput coli, and an appendix fully six inches in length. The part included in the hernia was closely adherent to the intestine, but about two inches of the free extremity was movable in the abdominal cavity and was strangulated by the hernial ring. It was intensely congested and in spots almost gangrenous. Recovery was prompt.

Case XXII.—In December, 1896, in consultation with Dr. F. P. Williams, now of Kansas City, I saw a young woman, a cloak model, who had been attacked the day before, while at her business, with appendicitis. All the symptoms were well marked, and there was a very indefinite history of previous milder attacks of colic. She was admitted to my service at the Post-Graduate Hospital, but her mother, an ignorant woman, refused to allow her to be operated upon. She made a slow convalescence, and was discharged cured. About ten months later, she was suddenly attacked again and removed in an ambulance to a hospital, where an emergency operation was performed for suppurative appendicitis.

Case XXIII.—During the same month, I saw a young woman, a physician, who was attending the Post-Graduate Medical School. She had a well-marked attack, and operation was not undertaken because her parents refused their consent. She had several mild attacks during the winter, and was able to attend to her studies only very irregularly in consequence. This patient I have lost track of and cannot tell whether she was operated upon later or not.

Case XXIV.—A young man from Georgia was taken ill with appendicitis, while at a summer resort, and gradually recovered without operation. He came to see me on his way home, and I found a small tumor involving the appendix and advised him to have it operated upon at once. As he had already overstayed his vacation, he felt that he must first go home and arrange for the extra time, and he agreed to enter the hospital for operation at the end of two weeks. On his arrival at home, he had another acute attack, and as soon as he was well enough started for the train to come north. On the way to the station the appendix perforated, and he died of peritonitis.

Case XXV.—In November, 1898, I operated upon a man aged thirty years, who had an attack of appendicitis in Mexico, a few months before. Following that he had continued to have constant intestinal indigestion. As he was contemplating a trip of the same kind, he came to me. I found an enlarged appendix filled with large fecal concretions. He then made a complete recovery.

These twenty-five cases offer some suggestions in regard to what happens in the so-called conservative cases of appendicitis. I have frequently had physicians tell me that they cure their patients by one method or another, without operation. If it is not the rest and opium idea, it is the administration of salines, and then when the patient recovers from that attack, he is recorded as cured. Unfortunately, they do not go to the trouble, and it is a great deal of trouble, to trace these patients through the hands of the other medical men who treat them in their succeeding attacks, until they yield to the surgeon's knife, or find a final resting-place from the discomforts and torments of an ever-recurring intestinal lesion. Of the twenty-five cases, six (Cases I., II., IX., X., XV., and XXIV.) terminated fatally. This is a mortality of twenty-four per cent., and is rather startling when it is compared with the statistics of experienced operators. Three of these patients, it is true, were operated upon, but it was then too late to save them. One patient had perforation and was in collapse when I operated, one had gangrene of the appendix and of the surrounding parts and died of general sepsis, and the third was also operated upon after the abscess had ruptured and general peritonitis was well under way. All of these patients had several attacks, and could undoubtedly have been saved had they been operated upon earlier.

These statistics do not compare very favorably with the operative results. Taking my own simply as a basis for comparison, and including the two in this series that I operated upon *in extremis*, I have had one hundred and fifty-four cases with four deaths, a percentage of not quite 2.6.

Recurrences (I., II., III., V., VI., VIII., IX., X., XIV., XVI., XVII., XVIII., XIX., XX., XXI., XXII., XXIII., XXIV.): Only seven cases without history of recurrence! This is contrary to the usually accepted statements of the physicians who have reported that their cases of appendicitis always result in recovery under medical treatment. The explanation seems to me to be a comparatively simple one: They do not follow up their cases. Many of these patients I have traced from one physician to another before their histories were complete. The physician sees a patient in one attack and he gets well after a certain time. He wanders away from the town, or, finding that he is having more or less trouble in the way of indigestion, constipation, and so forth, he consults some one else, who sees him in his second attack, and so on to the end of the chapter.

There is nothing especially instructive about the recurrences, except the gradual tendency to increase in frequency and in severity. I do not mean by that that every attack is worse than the last, but that the general condition gets worse, and the sum total of the attacks one year is apt to be greater than that of the year before. Nor do I mean to be understood as claiming that the attacks need necessarily follow one another in rapid sequence. On the contrary, several months or even several years may elapse between the attacks, but in the end the testimony of the patient will be that the colic is more frequent and more severe, the constipation less readily combated, and the indigestion more constant and more marked. The right spasm is more distinct and more tense; the patient is inclined to protect the right side and keeps it turned away from danger as much as possible; the appendix becomes more readily palpable and more painful to the touch. Flesh is gradually lost, and the general tone is decidedly below the proper and usual standard.

Operation.—This was ultimately performed in fifteen of the cases, and three of them ended fatally. Two of these have already been mentioned in speaking of the deaths. The other one was also operated upon when it was too late, general peritonitis having already supervened. Of the remainder, ten patients developed pus, and had to have the abscess opened; one had the appendix included in a hernia with strangulation of part of the appendix, and one had a constant intestinal discomfort that led him to have the operation performed, and his appendix was found overdistended with large fecal concretions. Some of these patients could possibly have continued longer without operation, but every one of them must have had a tedious recovery, with the usual slow absorption of the pus, or its escape into some of the hollow viscera, or gradual working through the abdominal wall, or it would have ruptured into the general peritoneum, and death would have promptly followed as in the three patients who did die.

No Operation.—There were ten cases not operated upon. Three of these patients died, one of perforation of the appendix by fecal concretions and general septic peritonitis, one of general sepsis and peritonitis from the rupture of an appendical-ovarian abscess, and one of general peritonitis from perforation. Every one of these might have been saved by early operation, and every one had given abundant symptoms to permit a proper diagnosis to be made.

Seven patients recovered without operation; one was lost sight of completely, and I suppose should not appear in this group of cases that I have attempted to trace from their first to their last attacks of appendicitis. One (Case V.) had her first attack in 1891 and her second in 1893, and has been free since.

Two (IV. and XIII.) had abscesses that ruptured into the bowel, and one had no recurrence up to the time, three years later, when he died of typhoid fever. The other remains well (three years). I cannot help calling attention, however, to the fact that it is not always safe to assure the patient that he will be well after the rupture of an appendical abscess into the gut. Case XVIII. illustrates that fact very forcibly. This man recovered from his first attack and then declined an interval operation. Seven months later he had another attack while out in the country, and the physician who treated him assured him, when the abscess ruptured into the bowel, that he was safe from future attacks. In about nine or ten months, however, he had another attack and had to be operated upon.

One patient (XI.) has never had a recurrence. One (XVI.) has had a number, the last during last spring, but as he has a marked rheumatic diathesis and the attacks have yielded to anti-rheumatic treatment, he continues to decline to be operated upon. He is, therefore, still under observation. One other patient (XXIII.) was a young woman, a physician, who continues to have several attacks each year, and who is now practically invalided by the condition, yet her parents decline to give their consent to operation. The last patient (XII.) had an immense abscess, that gradually burrowed upward, finally penetrating the pleura and discharging through the lung. But she has now been perfectly well for over a year.

On April 16, 1896, I read a paper before the Medical Association of Georgia, which has never been published except in the transactions of that society. As a basis for that paper, I took five hundred and fifty-eight cases from literature and tabulated them. Four hundred and forty-five resulted in abscess, perforation, peritonitis, and so forth.

The following table was made up at this time:

Perforation without given cause	11
" with abscess	10
" " ulceration	16
" " peritonitis	32
" " concretion or foreign body	41
" " gangrene	7
" " gangrene and concretion	19
" " inflammation	13
" " hardened fæces	1
" " concretion and peritonitis	24
" " foreign body and peritonitis	7
	181
Abscess without perforation, uncomplicated	136
" with concretions	19
" " peritonitis	2
" " sloughing appendix	2
" " foreign body	1
	160
Foreign bodies	36
Fecal concretions	26
Inflammation	8
Enteroliths	2
Gangrene	9
Gangrene with concretion	2
Inflammation with concretion	3
	86
Genera lperitonitis with concretion	5
" " " foreign body and gangrene	1
" " " foreign body	3
" " " ulceration	1
	10
Total number of cases	437

This collection of cases, taken at random from the literature of the disease, illustrates the futility of medical treatment in the vast majority of the cases, and bears out most emphatically the conclusions arrived at by most surgeons as a result of clinical experience.

Symptoms following an Acute Attack.—Constipation and intestinal indigestion are by far the most constant symptoms. These are accompanied by a great deal of flatulence, by colicky pains in the abdomen, sometimes of considerable intensity and sometimes referable to the appendical region, though more often near or immediately under the umbilicus.

The tongue is usually badly coated, especially toward the back, and the breath is foul. Often eating increases the discomfort, and occasionally the flatus interferes with respiration by pressing on the diaphragm. On examination of the abdomen, tenderness is nearly always elicited by pressure upon the appendix, and that organ is nearly always palpable.

In one patient, the acute symptoms were mistaken for renal colic, and he suffered constantly from indigestion. When he was dying and having fecal vomiting, he said, "That is the stuff I have been tasting all the time during the past year."

One need not go further, it seems to me, than the study of a few series of cases similar to these, to reach a conclusion that an attack of appendicitis predisposes the patient to a recurrence, and it is also conclusively shown, I think, in this *résumé* of my own cases, or rather cases I have been in a position to follow up, that operation offers the best, the safest, and the shortest method of treating the condition.

24 West Fiftieth Street.

HOW THE MILK SUPPLY OF NEW YORK MAY BE IMPROVED.

By HENRY DWIGHT CHAPIN, M.D.,

NEW YORK.

No subject of greater interest than the production and care of cows' milk can come before those who are interested in the public health. Its importance in large communities, where the difficulties of delivery and proper preservation are great, warrants much more attention than is generally bestowed upon the problem. The magnitude of the whole question can be appreciated when it is known that 1,250,000 quarts of milk are daily delivered into New York City, and that this amount comes from five States, including thirty-four counties, and some of it from a distance of five hundred miles. The city itself, however, is no small dairy ground, as 23,500 cows are contained within the municipal limits, which furnish a certain amount of milk for the inhabitants. The writer's attention was first drawn to this question in studying the home modification of cows' milk for infant feeding. The condition and ingredients of the milk in any given locality assume a great importance when this problem is approached. Hence an effort has been made to learn something of the actual conditions of the milk trade in Greater New York.

There are in the boroughs of Manhattan, Bronx, and Brooklyn over fifty wholesale and retail milk dealers, whose capital ratings, according to the commercial agencies, range from $3,000 to $1,000,000. A list of questions was sent to these dealers asking, among other things, whether they sold bottled milk to families; where the milk is bottled, in city or country; what percentage of butter fat their milk is guaranteed to contain; whether the milk runs uniform in quantity of butter fat; if there is any variation in quantity of butter fat; in what months of the year is there the least quantity, and in what months the greatest quantity; is the milk run through a centrifugal machine to remove dirt; how soon after milking is the milk delivered in the territory covered; what territory is covered; is the tuberculin test ever applied to the cows?

Nineteen replies were received, all from large dealers, their combined capital ratings being about two-thirds of the entire capital invested in the milk business in these boroughs. These dealers all furnish bottled milk, which they guaranteed to run four per cent. fat and over, the least amount of fat being found in the spring months. Three of the dealers use separators to cleanse their milk, the others simply claiming especial care in the matter of cleanliness. The time of delivery is from twelve to thirty-six hours after milking. Nine out of the nineteen dealers say the tuberculin test has been applied to their herds, although not regularly. Three simply stated that there was oversight of the herd by a veterinarian. A few of these dealers owned the cows producing the milk, but the great quantity of milk is collected by companies who have depots in various dairy districts and who buy from farmers and dairies. These companies have regular forms of contracts, which are generally based on the "Fifty Dairy Rules" of the United States Department of Agriculture. These contracts may allow the companies' inspectors to examine the cows, stables, and utensils, regulate the manner of feeding, handling of milk, etc., and sometimes even provide for notice to the company of any contagious disease in the family or help of the producer. The milk is brought to the depot at stated hours, cleaned if necessary, and immediately bottled or canned, and shipped either in boxes containing ice or in refrigerator cars, and delivered within twenty-four to thirty-six hours after milking. About seventy-five per cent. of the milk now received in this city comes from these receiving stations, or, as they are usually called, creameries.

There is no doubt that milk handled in this large way is an improvement over the old plan of the various milk dealers receiving their supplies from numerous small, independent dairies. A system of judicious control and oversight is likewise simplified. In order to learn the actual amount of butter fat contained in the milk supplied by our best dealers, thirty-two assays were made during the past fall and winter months of the milk purchased from these dealers in the open market. These assays showed the lowest proportion of butter fat to be 3.10 per cent., and the highest 5.25 per cent. Twenty-two of the assays showed four per cent. and over, and the other ten showed very close to four per cent., such as 3.52 and 3.66 per cent. From this it seems fair to conclude that milk containing four per cent. of butter fat is a good average as supplied by first-class dealers in this city.

When it came to cleanliness, the showing was not so good. A large number of the bottles exhibited particles of dirt in the bottom. It is a very difficult matter to keep milk from contamination, especially when handled in very large quantities. Much of this dirt is doubtless innocuous, except that early souring of the milk is induced. The prevention of any contamination of milk, as handled at present, is a subject for careful study and observation. In order to learn what impurities get into milk, a visit was made to a receiving station in the country where eighteen hundred quarts of milk were run through a separator, consuming a little over two hours. The layer of foreign matter was then scraped from the sides of the bowl, and found to contain air, pus, blood, mucus, fibrin, great numbers of bacilli and cocci, and detritus from vegetable matter, probably from fæces. It seems that with extra care at the source of the milk supply, these impurities, even in small quantity, could be kept out of the milk. If the milk is drawn from healthy cows that are kept clean and in hygienic surroundings, by healthy milkers who keep scrupulously clean, and is received into absolutely clean vessels, and is then strained, aerated, and kept cool until delivered, the question of a proper milk supply for any locality thus served will be solved. The real key to the situation is the handling of milk on the farm, far away from the inspectors of the health department. All the latter can do is to see that the milk has not spoiled upon being delivered, that it does not run below three per cent. butter fat, and that no preservatives have been added.

In spite of the vigilance of the health inspectors, there is a large sale of various preservative solutions that are presumably used for the purposes for which they are sold. Dairy supply firms openly advertise the sale of these preparations. Their commonest active ingredients are boric acid and its sodium salt borax, and formaldehyde. While small amounts of these substances may not always in themselves be directly injurious, they have a tendency to harden the clot of casein and thus make the milk less digestible.[1] Anything that aims to take the place of strict cleanliness in the handling of milk is reprehensible, as by masking the effects of uncleanliness less care is naturally taken, and various impurities will not be suspected because their usual effects are not observed.

The great need of a city like New York is a strictly clean milk that will require neither superheating nor the addition of any preservative in order to keep it in safe condition against the time of consumption. Such milk should be available to every one at a fair price. Considering the importance of milk in the nourishment of infants and as the universal food, the subjects of its source, care, and distribution are properly a matter for consideration by the medical profession. The writer believes that doctors have it in their power to accomplish much toward settling this question on a more satisfactory basis than it now exists. It might take the form of a medical commission which would make a careful study of the whole subject, and then enter into friendly and advisory relations with any milk dealers who would desire the benefit of their counsel. If a few dealers take hold of this subject and furnish an extra clean and fresh supply of milk, collected and distributed under the strictest precautions, physicians should know and approve of it. Self-interest will compel other dealers to follow, and in time an abundant supply of the best milk will be obtainable by all, rich and poor alike, the demand for milk will increase, and the dealers will be thus rewarded for any bettering of their supply. The idea of a commission of physicians becoming an advisory committee in the production and handling of milk was started some years ago by Dr. Coit, of Newark, and has since been in successful operation with one of the local dairymen. It is also carried out in New York, Buffalo, and various other cities. If this system can be made to work with one dealer, why cannot it be enlarged to take in any dairyman or dealer who wishes to take advantage of its provisions? It is in some such way that the general supply of a large city can be gradually but appreciably improved.

If physicians and dairymen will thus meet in earnest council, we may gradually get what both should desire—a strictly clean milk that runs fairly uniform in its ingredients.

Salophen is prefered to salol by Caspar in typhoid fever. It acts as an antifermentative in the intestinal canal.—*Medical Examiner.*

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[1] "Lactoform consists essentially of casein precipitated by metallic salts and subsequently hardened by formaldehyde. It is employed in place of horn, ivory, ebony," etc.—"Dairy Chemistry," by Henry Droop Richmond. London: Charles Griffen & Co., 1899.

A NEW "T" BANDAGE.

By W. O. GREEN, M.D.,

CLINICAL LECTURER ON RECTAL DISEASES AT THE KENTUCKY SCHOOL OF MEDICINE, LOUISVILLE, KY.

For the past three or four years, in private and hospital practice and at his clinic, the author has employed a simple device for holding dressings in place about the anal region. This is known in the hospitals and infirmaries of this city—after his name—as the "Green T bandage."

It was devised first for convenience and to save time in the infirmaries, and, later, in private practice as a substitute for the various awkward contrivances made by patients or inexperienced attendants, who failed to get an adequate idea of the instructions given, or who had a preconceived notion of the "proper" manner of making a "binder."

It was devised also because in some points it seems to offer an improvement upon the regular form of T bandage, which has made it very useful to the writer and which would appear to justify its more extended use.

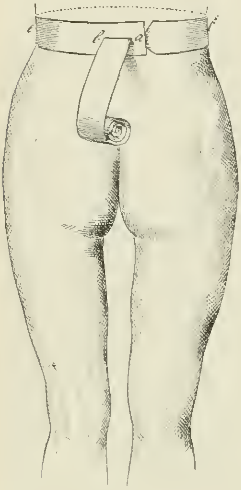

Fig. 1.

The "Green T bandage" is quickly made and requires no sewing, buttons, or pins. It is made of a single piece, and can be more quickly loosened or tied if the knot is properly placed than the other forms of bandage of this type. When the material is of the proper thickness and breadth it conforms nicely to the parts and holds the dressings in place satisfactorily.

Sometimes it is found that after a T bandage is applied the waistband will be found too loose or too tight, which will necessitate a removal of the pins to readjust this portion of the bandage. It may happen that when this change is made by the patient, the dressings become disarranged and fall down, and require the assistance of the surgeon or nurse to be satisfactorily replaced. The patient may readjust the bandage under consideration by untying and relaxing or tightening the perineal strip with one hand, while the other hand is held against the dressings to allow the perineal strip to slide smoothly over their surface.

One knot only is required, and this should be made in front. Should the knot be placed at the back, when the patient assumes the recumbent posture it becomes exceedingly uncomfortable, and the same may be said of a button and sometimes of a large-sized safety-pin in this locality. In the ordinary improvised T bandage, made from a roller, it is not uncommon to see one or two knots in the back. The discomfort which follows naturally will cause the patient to attempt to readjust the bandage, which, in turn, will likely be followed by a misplaced and uncomfortable dressing about the perineal region.

It is customary in many infirmaries to keep a stock of T bandages, which have been carefully made and are intended for prolonged service. When one of these bandages has been removed from a wound, if not too much soiled, it is separated from the other dressings, washed, and laid aside for another fresh dressing. The simplicity and cheapness of the bandage under consideration offer little temptation for washing and a second application. In consequence, especially in those cases in which he desires most careful aseptic methods, the surgeon may feel less apprehensive that other than a new and clean bandage will replace the one which has been soiled and removed.

This bandage is always the proper length because it is not made until applied, when there is sufficient material provided for several bandages from the same piece. Narrow or broad strips made of this material, by movement of the muscles about the parts, are apt, in the course of a few hours, to cause the abdominal band to roll into a sort of string and become very uncomfortable to the patient. For this reason it is necessary to employ heavy, thick material. The material best adapted to the purpose is the heaviest unbleached cotton made in strips not less than four inches wide. The average length of each bandage is two yards. It has therefore been found convenient to have the material made into rollers six yards long, which will ordinarily be sufficient for three bandages. Rollers longer than this are undesirable, because of the necessary length of the cut in the back, through which the perineal strip passes from the waistband.

In preparing the bandage for application, about six inches of its length is unrolled and folded upon itself at a point about three inches from the end. In the centre of the presenting fold a cut is made with a pair of scissors. In consequence of the fold the cut should be made only one-half the desired length when unfolded, and the limit of the cut at the outer point should be at least an inch or an inch and a half from the free end of the bandage. This will be about half an inch or more than the diameter of the roller.

The following diagrammatic cuts are intended to simplify the description:

Fig. 1 represents the waistband applied with the perineal band brought through the cut *a b* (mentioned above) placed in the centre of the back. In order to make the bandage comfortable, it is necessary to have the bands laid flat against the surface of the body, thus avoiding folding or rolling into a sort of string. Should the patient apply the bandage, the roller should be passed through the cut (*a b*) in front, after which it can be slipped around to the centre of the back, preparatory to making the perineal band. It will be seen from this arrangement how pins, buttons, or knots may be omitted from the point of attachment in the back, and at the same time the perfect ease with which the perineal band and waistband can be made to conform to the parts. The broken line *e f* is intended to indicate the course of the bandage across the front of the abdomen.

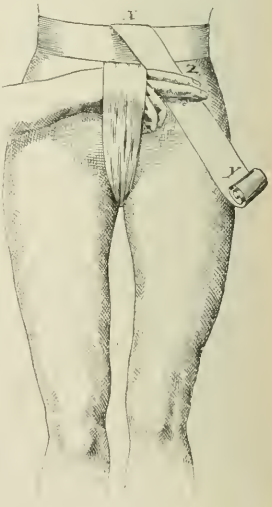

Fig. 2.

Fig. 2 gives a front view of the perineal strip continued up and passed under the waistband. This figure also represents the first stage of the knot, which is a very important part of the bandage. It is important, while tying, that sufficient tension be made to hold the dressings in place. It is equally important, while tying, that nothing shall slip, and that when it is necessary to remove the bandage no trouble shall be encountered in untying. The method which is here illustrated will fulfil these requirements, and the knot—which is a re-enforced bow-knot—may be made in less than five seconds with only moderate dexterity.

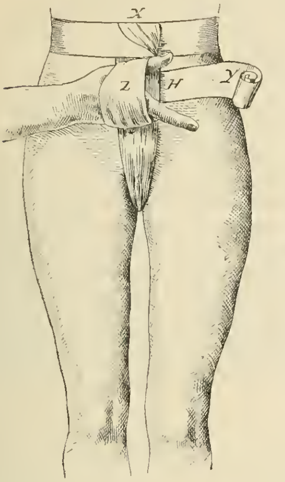

Fig. 3.

After bringing the perineal band above the waistband at the point *X* (same figure) about eighteen inches of the free end is unrolled, which is brought down and held firmly to the side, *Y*. The other hand is passed under the perineal band and the strip *X Y* caught near the waistband, *Z*, and drawn back in a loop, making the tension from *Z* to *X*.

Fig. 3 shows the loop slipped across the knuckles, which is drawn across the front of the perineal band. The index finger catches the remainder of the strip *H Y*, the end of which has been brought up parallel with the waistband, while the thumb maintains the tension from above.

A second loop is made by drawing the band *H Y* through at *Z*, and the knot is completed as represented in Fig. 4. The roller is cut off after the knot is tied. The time required for making and applying should not be more than two or three minutes, even by one who is awkward.

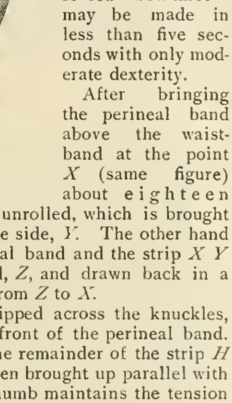

Fig. 4.

Thus far the bandage has been employed almost exclusively for holding in place rectal dressings, but it can be used with equal efficacy for genito-urinary and other perineal dressings. For the first dressing subsequent to rectal operations the writer does not employ this bandage, because sufficient pressure cannot be brought to bear to give firm support to the anal region to prevent straining, and control, to a greater or less extent, the capillary and venous bleeding. A special form of perineal bandage is employed for this purpose.

709 Second Street.

Smallpox prevails to a large extent throughout the South and West due, it is claimed to culpable negligence in enforcing vaccination.

The Hæmostatic Use of Gelatin.—It is perhaps too early as yet to fix a final estimate of the value of gelatin in stopping hemorrhage. In cases which resist other methods of treatment, it offers some hope—hæmophilia, inoperable aneurisms, etc.—J. B. Nichols, *Medical News*, December 2d.

Polyarthritis Deformans in Childhood.—M. Moncorvo reports a case in a child aged five and a half months, which evidently began at the end of the second month of life. About forty-nine cases are on record as occurring between the ages of three months and fourteen years. The author believes that the microbe theory in relation to articular rheumatism is probably correct. A few bacilli similar to the bipolar bacillus of Bannatyne and Walman were found in a few drops of blood taken near an affected joint in his little patient.—*Bulletin de l'Académie de Médecine*, January 9, 1900.

The Staining of Gonococci with Neutral Red, in Living Leucocytes.—Plato (*Berliner klinische Wochenschrift*, December 4, 1899, p. 1085) reports the results of observations with regard to the tingibility of gonococci in the leucocytes of gonorrhœal pus. He found that if a small drop of fresh gonorrhœal pus be admixed with a platinum loopful of a dilute solution of neutral red in physiological salt solution (1 c.c. of a cold saturated aqueous solution of neutral red and 100 c.c. of physiological salt solution) and the mixture be examined in hanging drop or in the wet state, a number of the intracellular gonococci will be seen to be stained deeply red, in many instances without any other portion of the cells being stained. At times, in cells with and without gonococci, bright red granules are visible that will not cause confusion. The specific granulations at times stain light yellow, but the nuclei in general remain unstained. Not all intracellular gonococci are stained, but stained and unstained may lie side by side. If the leucocytes are stimulated to amœboid activity by gently warming the slide, gonococci that were at first stained in the granular portion of the protoplasm will at times gradually lose their color if in consequence of the movement of the cell they become displaced into the homogeneous marginal zone of the leucocyte, and they become again stained when they are subsequently resurrounded by the granular protoplasm. The conclusion that only degenerating or degenerated intracellular gonococci accept the stain appears unjustified in view of this fact. Division or spontaneous movement of intracellular stained gonococci cannot be observed. Leucocytes that contain only a small number of gonococci are at times characterized by especially active amœboid movement, while pus corpuscles filled with gonococci as a rule exhibit no manifestation of vitality and are provided with a more or less deeply stained nucleus. Although numerous other intracellular micro-organisms, also resembling gonococci, were examined according to the method described, in no instance were similar rapidity and intensity of staining observed, so that possibly neutral red may be considered an aid in the differentiation of the gonococcus from similar micro-organisms. Extracellular gonococci, as well as other micro-organisms, cannot be stained in hanging drop in a solution of neutral red of the concentration stated, even after exposure for days. In fixed preparations more concentrated solutions of neutral red (20 c.c. of a cold saturated solution of neutral red to 100 c.c. of water) stain both the extracellular and the intracellular gonococci a deep red within a few seconds, and the nuclei invariably less intensely, so that optic concealment of the gonococcus by the nucleus does not take place.

MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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PRECAUTIONS AGAINST THE PLAGUE.

If it were not for wars and rumors of war, which almost monopolize public attention, the spread of the plague to all quarters of the globe would give rise to much more alarm and discussion than are at present the case. The sinister fact, that the disease has for the first time gained a footing in the western hemisphere, does not appear to be regarded as an event of vital importance, and although the occurrence of plague on a vessel in New York harbor created a temporary sensation of dread, this feeling was quickly lulled into one of security, based chiefly on the widespread opinion that it is virtually impossible for the malady to make headway in places where a proper system of sanitation is carried out.

These optimistic views are certainly to a large extent justified by the history of the course of the plague in other parts of the world. Within recent times proof has constantly been afforded that plague rages most virulently among dirty surroundings, and many experts hold that where the environment is cleanly its ravages are easily controlled. However, this latter contention is thought by others to be more or less open to doubt, as there are several instances on record in which the disease has made decided progress under conditions presumably unfavorable to its spread. On more than one occasion after it has been proudly proclaimed that in a certain city or town the plague has been wiped out by the energy displayed in rendering the sanitary system complete, the news has come that a recrudescence has occurred on a larger scale than before. Nevertheless, in the light of experience during the past decade it may be said that efficient sanitation is the best safeguard against plague. In localities where hygienic arrangements are good the bacilli of the disease will find no soil suitable for its incubation and propagation. Again, our knowledge as to the best means of treating the disease has advanced, albeit but slowly. No absolutely reliable specific has yet been discovered, but investigation has demonstrated its cause, and it has been also shown that when possible isolation of patients and segregation of those exposed to infection are among the most prominent factors in limiting the spread of plague. Consequently the enforcement of these measures, a rigid adherence to the laws of sanitation, together with the prophylactic and curative methods now at hand, would seem to provide sufficiently strong barriers against the plague securing any but a temporary foothold in this country.

There is unfortunately a dark side to the question. The plague has not only planted itself in Brazil but is gradually drawing into its net all the islands of the Pacific, and from these, and especially from the Hawaiian islands, comes the greatest danger of importation into the United States. The disease promises to spread like wildfire among the inhabitants of this group, while our traffic to and from Honolulu is considerable and frequent. The conditions prevailing in many of the American towns on the Pacific coast are not such as to warrant the belief that, if the plague were to obtain an entrance, its extermination would be a matter of little difficulty. There is a large Chinese population, and this race is peculiarly predisposed to plague infection. In addition the climate, overcrowding, and uncleanly habits of the aliens in that part of the United States favor diseases of this description.

The various ways in which plague can be transmitted have already been fully dealt with in former numbers of the MEDICAL RECORD, so that it will suffice to consider the measures in force to prevent its ingress into the United States. The maritime quarantine regulations contained provisions relating to the plague, but the Treasury Department has deemed it expedient under the exceptional circumstances to supplement these with special regulations, which order that at foreign ports and places infected or suspected of being infected with plague the United States quarantine regulations referring to cholera shall be observed with regard to vessels and cargoes bound to the United States. Quarantine regulations relating to cholera are also to be observed at ports and on the frontiers of the United States. Dr. Wyman, the surgeon-general, Marine-Hospital service, in a pamphlet recently published by him, speaks thus of the quarantine equipment of this country: "The government is well equipped with quarantine stations for the disinfection of infected vessels, and has besides several large stations where immigrants can be detained in barracks under observation." Dr. Wyman goes on to say: "It seems impossible that the plague should ever again ravage the earth as in previous centuries. Modern quarantine is effective to a degree. Though old-fashioned and absurd as administered by some of the European countries, and imperfectly executed in others, it nevertheless has proven and will continue to prove a powerful shield against this Asiatic invasion." The following suggestions with respect to public hygiene are advanced by Dr. Wyman: "The destruction of rats and other rodent animals; the prevention of congregations of individuals, as fairs, celebrations, and pilgrimages; the surveillance and supervision of markets; the cleanliness of the soil; the regular removal of garbage; the cleanliness of habitations; the particular supervision of places, workshops, forges, etc., intended for occupancy by the laboring and industrial classes; the cleaning and regular disinfection of latrines and cesspools; the care and cleaning of gutters, etc. Administrative care should also be brought to bear to improve the sanitary condition of notoriously unsanitary quarters and dwellings."

The primary and principal object in the fight against the plague is to keep the disease out of the country, and this, according to the views of the most distinguished authorities, can be effected only by a strictly rigorous system of maritime quarantine. Our system is undoubtedly a good one, but, if it requires strengthening, nothing should be allowed to stand in the way of legislation tending to the preservation of the health of the country at large. The next and scarcely less important aim is to have our towns in so efficient a state of sanitation that if the disease were to gain an entrance it would be given no opportunity to spread. In this respect many of our seaboard centres of population will be found wanting. Therefore it would be well if the advice proffered by Dr. Wyman regarding public hygiene was taken to heart and promptly acted upon by the city fathers throughout the land.

OSTEOPATHY IN NEW YORK.

THE medical profession, in this and other States, has none too easy a time in combating fraud and charlatanism on one hand, and ignorance and stupidity on the other, and the development of something new under these headings, called osteopathy, has added a fresh source of difficulty and injustice. The supreme court of New York, in Smith *vs.* Lane, 24 Hun, 632, has decided that a man who practises massage does not practise medicine, and prosecutions of osteopaths have therefore been discouraged on the assumption that osteopathy is massage.

We cannot see the justice or the force of this form of argument. An osteopath pretends to diagnosticate and treat by manual means many forms of disease, and does not limit himself to working under the direction of some one else, as is almost invariably the case with the masseur. When the physician wishes a patient to have massage, he prescribes it as he would any other form of treatment, and it is given by an individual trained for such work, the physician still being responsible for the welfare of the patient. When the osteopath finds a victim, he makes his own diagnosis, decides on and carries out his own treatment, and is apparently neither legally nor morally responsible in any way for the outcome of his ministrations. We cannot see how the mere fact that the osteopath does not order any drugs for his victim should relieve him of the responsibility of practising or attempting to practise medicine. Does the surgeon who straps a sprained ankle or a fractured rib practise a branch of medical science, or would the law relieve him of responsibility in case of a bad result from such conditions, if he should plead that he had used no internal medication, and was, therefore, not practising medicine? The answer does not require argument. The important fact is that the osteopath presumes to make a diagnosis, and to institute what he dares say is proper treatment, and this ought to render him liable to prosecution under the medical law, without considering the fact of subsidiary importance that no drug has been actually given.

If the osteopath cannot be reached under the present medical law, there ought to be an amendment, for if something is not done the regular practitioner will actually have less protection than the impudent charlatan. If a registered physician can be proved before a jury to have been negligent, the complainant can recover heavy damages, but it is very doubtful whether the unregistered and unqualified osteopath could be reached in this way. It would be an excellent thing if the County Medical Society could find out whether, in the eyes of the law, it is not the making of a diagnosis and prescribing of treatment which constitutes practising medicine, and not merely the application of treatment, with a difference between treatment with or without internal medication. We should certainly try to be sure that any person who pretends to treat or prescribe for the sick or injured in any way, on his own responsibility and initiative, should be compelled to come up to a certain standard of proficiency in such subjects as anatomy, physiology, and obstetrics, be his system of therapeutics what he likes, and we should be prompt to deny that the osteopath is not attempting to practise medicine, merely because he does not prescribe drugs.

RECIPROCITY IN MEDICAL LICENSING.

A MOVEMENT has been set on foot in at least one State of this country with the view of abolishing the present anomalous, not to say absurd, conditions ruling the laws of medical practice. As mentioned in the MEDICAL RECORD of October 14th, the Wayne County (Mich.) Medical Society has despatched circulars to the authorities of the different States and Territories requesting their opinions as to the best steps to be taken which, in time, may lead to a uniformity in the requirements for the license of practising medicine in the United States. The State board of medical examiners of New Jersey, in their report for last year, express their desire to recognize and indorse the medical licenses issued by other State boards as far as their academic and medical standards will admit. Several other State boards would doubtless be willing to go as far as the New Jersey board, but it is certain that until the standard of medical education shall be placed on a uniform basis in all the States, the existing deadlock, so far as interstate reciprocity of medical license is concerned, must continue.

It is nevertheless a happy augury for the future that even the "thin end of the wedge" has been inserted, and if the members of the medical profession will band themselves together and will use their utmost endeavors to bring medical education in all the States and Territories upon the same plane, the time cannot be far distant when matters will be upon such a footing that interstate reciprocity of medical licensing will at any rate be brought within the range of practical politics. The question will be considered in all its bearings by the National Confederation of State Examining and Licensing Boards at their meeting at Atlantic City in

June next. This confederation, being composed of representatives of the examining-boards of the different States, can alone solve the problem. Their agreement upon a minimum academic and medical standard would bring about the desired result. Efforts should be made, and these quickly, to remedy the prevailing incongruous state of affairs. First establish a uniform standard of medical education, and then will follow, "as the night the day," interstate reciprocity in medical licensing.

NURSING IN THE BRITISH ARMY IN SOUTH AFRICA.

Male nurses are rarely met with in Great Britain. All the nursing at the large hospitals in Great Britain is done by women. The British Medical Hospital at Netley is probably the only large institution of its kind in the United Kingdom where the nursing-service is performed by men. In times of peace this system works smoothly enough, and women on the whole are found to do the duties required of them as efficiently as men. But war places a different aspect on the matter, especially in a campaign on so large a scale as that now being carried on in South Africa. The edict has gone forth from the War Office in London that women nurses shall not be allowed to serve in the field hospitals, but must be retained at the base hospitals. In consequence of this order, and owing to the fact before mentioned, that there are but few trained male nurses in Great Britain, there is said to be a deplorable scarcity of these necessary adjuncts to the surgeon at the front. Of course the regular army has with its medical corps orderlies who are trained in and fulfil the duties of nurses, but when it is considered that the army medical corps is far below its proper strength, there will be no difficulty in comprehending that its trained nursing-staff is not numerically so efficient as it should be.

Notwithstanding this reported state of affairs, the New York *Herald*, in its Sunday edition, quoting from a private letter from Sir William MacCormac, says that there is much ill-feeling between the army medical officers in South Africa and the female nurses at the base hospitals, some of the former urging the sole employment of male orderlies. The thought will naturally strike one that the services of a well-trained female nurse must be preferable to those of a half-trained male nurse. It is satisfactory to note, however, that on the whole the much-decried medical army corps in South Africa has up to the present come out of their trying ordeal with flying colors. This indeed is the one bright spot in the dark cloud of disasters which have overtaken the British arms in that country.

The Study of Cancer.—The Massachusetts State board has undertaken a collective investigation of carcinoma, with a view to secure more accurate information regarding certain disputed points, especially the alleged increase and the infectiousness of the disease.

News of the Week.

Sir Thomas Grainger Stewart, of Edinburgh, physician in ordinary to the Queen in Scotland, died on February 2d, at the age of sixty-three years. He was graduated in medicine from the University of Edinburgh, and after graduating studied in Berlin, Prague, and Vienna. On his return to Edinburgh he became resident physician in the Royal Infirmary. In 1876 he was appointed professor of medicine and clinical medicine at the University of Edinburgh, and held this chair at the time of his death. He was at various times president of the Royal College of Physicians in Edinburgh, of the Medico-Chirurgical Society of Edinburgh, and of the British Medical Association. He was knighted in 1894. He was a writer and teacher of note, the diseases of the respiratory organs and of the kidneys being his favorite objects of study. Among the best known of his works were a treatise on Bright's disease and the article on diseases of the trachea and bronchial tubes in the "Twentieth Century Practice of Medicine." He was a member, active and honorary, of many societies, among them the College of Physicians of Philadelphia.

Typhoid Fever in Army Camps.—Dr. Victor C. Vaughan, of Ann Arbor, who was commissioned by the government to investigate the causes of typhoid fever which prevailed to such a frightful extent among the troops during the Spanish war, has sent his report to Washington. In this report, according to a synopsis published in *The Sun*, he says camp polluting was the greatest sanitary sin committed by the troops. His conclusions are that about one-fifth of the soldiers developed typhoid fever, and army surgeons correctly diagnosed fewer than one-half the cases; that the percentage of deaths from typhoid fever was 7.5; that about eighty per cent. of the total deaths were due to this disease, but that the percentage of deaths from typhoid fever is not so high "if we accept the diagnoses given in the official reports." He blames the superior line officers for locating camps in the face of the protests of medical officers.

The Antivivisection Bill.—Some changes have been made in the constitution of the Senate committee on the District of Columbia, upon whose action depends the fate of Senator Gallinger's antivivisection bill. The committee now consists of Senator James McMillan, Michigan, chairman, and Senators J. H. Gallinger, New Hampshire; H. C. Hansbrough, North Dakota; R. Redfield Proctor, Vermont; J. C. Pritchard, North Carolina; Lucien Baker, Kansas; George L. Wellington, Maryland; S. R. Mallory, Florida; W. V. Sullivan, Mississippi; W. A. Clark, Montana; Thomas S. Martin, Virginia: William M. Stewart, Nevada; and Richard Kenney, Delaware. Personal letters may be addressed to them or to other senators. Petitions should be addressed to the Senate of the United States.

Carbolic Acid is, we are informed, to become more expensive. If those who have the price regulation in charge are acting in the interest of humanity, and have taken this means to diminish poisoning accidents and the use of the drug for suicidal purposes, they deserve all praise. The MEDICAL RECORD has attempted to point out to those who would reach other worlds by the poison route, that there were other and better and less painfully distressing drugs which could be employed; cheapness, ignorance, and ease of obtaining, have been the reasons for the great popularity of carbolic. Perhaps the price, if sufficiently increased, will tend to lower the record of victims. It is said that both for internal and external burns by this acid scarcely anything equals good old-fashioned cider vinegar.

Contract Surgeons for the Philippines.—The medical department of the army is now in need of some additional assistance in the Philippines, and it is desired that candidates for appointment as acting assistant surgeons will make application to the surgeon-general of the army. Applicants must be graduates of reputable medical colleges, who have had practical experience, since graduation, in hospitals or in private practice. Candidates between the ages of twenty-five and thirty-five are preferred. Candidates should forward with their application one or more letters from well-known professional men, giving testimony as to their character and qualifications. Appointments will not be made through political influence, and letters designed to produce political effect will injure rather than benefit the applicant. All applicants will be examined as to their physical and professional qualifications for service in the Philippines before they are given a contract. Contracts are made for one year, with the understanding that the approved candidate will remain in service for a longer period if his services are required.

Medico-Legal Society, Philadelphia.—At the annual meeting held January 30th, the following officers were elected for the ensuing year: *President*, Dr. A. M. Eaton; *First Vice-President*, Dr. L. H. Adler; *Second Vice-President*, Dr. Samuel Wolfe; *Secretary*, Dr. C. H. Clewell; *Treasurer*, Dr. G. M. D. Peltz; *Librarian*, Dr. J. D. Nash.

Leprosy and the United States.—At last this country has become recognized as a lepra centre. At the last meeting of the Berlin Medical Society, no less a man than Virchow stated that he had never observed and did not know of an instance of contagion in Europe by the intermediary of a leper coming, for example, from the United States.

The Society for the Prevention of Cruelty to Children has won its fight against the State board of charities. The board had asked the courts for a writ of mandamus compelling Mr. Gerry's society to submit to its supervision and inspection. The president of the society maintained that it was not a charitable institution within the meaning of the new constitution, and that it did not come under the supervision or inspection of the State board of charities. The question was brought before the courts, and it has finally been decided by the court of appeals that the society exists for the sole purpose of enforcing the criminal laws to prevent cruelty to children, and can be called a charitable institution only in the same sense that the term would apply to any other corporation organized to aid in the enforcement of any other branch of the criminal law. The society is not over its troubles, however, for a bill has been drafted repealing the provision of the law whereby this city pays $30,000 a year to the society, the ground for this repeal being that the society has been adjudged by the court of appeals not to be a charitable organization, and that being the fact it is no longer entitled to this annual appropriation, which has been made for the ostensible reason that the society was carrying on a charitable work.

The Third Scandinavian Congress for Internal Medicine will be held in Copenhagen on July 1st and subsequent days. The subject for discussion will be serum treatment, which will be opened by Drs. Aaser, of Christiania, Hellström, of Stockholm, and Sorensen, of Copenhagen.

Addition to a Hospital.—A large and new annex to St. Joseph's Hospital at Lancaster, Pa., was opened on January 26th, almost doubling the capacity of the institution by the addition of forty-four rooms and four wards, including one for children, and also a sun parlor for convalescents. The annex is four stories high, and built of brick and stone. It contains a pathological laboratory, and a specially designed operating-room. The hospital is now one of the most complete and perfectly appointed institutions in the State.

Smallpox is spreading in Oklahoma, and it has been necessary to close the post-offices in several towns because of it. In the northwest also the disease prevails, and friction has arisen between the authorities in British Columbia and those in Washington over the disinfection of the mails from Spokane. It is reported from Louisville that smallpox is prevalent in about thirty-five counties of Kentucky, and the State board of health finds itself without the necessary means to fight the disease. The secretary has received the resignations of the county boards of health in at least a dozen counties in which the disease is the most serious, the cause of the resignations in all cases being the inability to fight the disease owing to a lack of money. The protection afforded by vaccination is emphasized by the report of the Connecticut State board of health recently issued. According to this report there were but three cases of smallpox in the State in 1899, and one of these was that of a patient who went to Stamford from this city after assisting in the care of a case here. Dr. Lindsley, secretary of the State board of health, attributes this immunity to the thorough manner in which vaccination has been done in the public schools, and to the wise and effective legislation which permits the exclusion of unvaccinated pupils from the schools.

Bovine Tuberculosis.—Following the report of the special investigating-committee on tuberculosis in animals, a bill is to be introduced into the New York legislature, embracing the following provisions: (1)

That the protection of the herds of this State from tuberculosis and the examination and destruction of glandered horses be placed with the commissioner of agriculture; (2) that the commissioner of agriculture will appoint a farmer well acquainted with the value of cattle, whose duty it shall be to accompany and assist the veterinarian in making examinations of suspected herds and appraise those condemned; (3) that the State can force the condemnation of only such animals as are found to have tuberculosis by physical examination. But if a dairyman elects to have his herd tested with tuberculin, and will enter into an agreement with the State before such examination shall be made, that he will disinfect his premises, and either slaughter or hold in strict quarantine all of the reacting animals and their products, the State will assist him in his efforts to rid his herd of the disease; (4) that the appraisal of condemned animals shall be made at the time of or immediately following the examination; (5) that the State shall pay the owner of all cattle slaughtered under the provisions of this act, known to have been owned in this State at least one year, one-half of the appraised value for all cattle found to have tuberculosis, and full appraised value for all cattle found to be non-tuberculous upon post-mortem examination.

Smallpox in Mississippi.—In a communication addressed to the State senate, Secretary Hunter of the Mississippi State board of health stated that smallpox exists throughout the State, and he advocated the passage of a bill providing for compulsory vaccination.

Illegal Practice by Midwives.—The board of health recently obtained warrants for fifteen midwives in this city who were conducting lying-in institutions without permits. The business is one prohibited by the sanitary code, the births are not reported to the health department, and the deaths are reported from some other place. A number of these women are also strongly suspected of being abortionists.

Cremation of New York's Garbage.—A bill is to be introduced into the legislature providing for the establishment of a crematory plant for the consumption of the garbage of this city. This will abate the garbage-reduction nuisance on Barren Island, and will provide New York City with an adequate and sanitary process of disposing of its garbage.

Health Authorities Close a Library.—A public library in Scranton, Pa., has been closed by order of the board of health, which announces an epidemic of scarlet fever and diphtheria in the city. The board publishes its opinion that the germs of many infectious diseases are carried from house to house by circulating libraries, and so it has issued this order in the hope of stopping the epidemic. The books will be fumigated before the library is reopened.

Study of Tropical Diseases in the Philippines.—By direction of the Secretary of War, a board of medical officers, consisting of Lieutenants Richard H. Strong and William J. Calvert, assistant surgeons, and Acting Assistant Surgeon Joseph J. Curry, United States army, has been appointed to meet at one of the general hospitals near Manila, Philippine Islands, for the purpose of studying tropical diseases as they occur in those islands. The board is to receive its instructions from the surgeon-general, and will be under the immediate direction of the chief surgeon at Manila.—*Boston Medical and Surgical Journal.*

The Medical Control of Marriage.—A Colorado legislator has introduced a bill forbidding the marriage of medically unfit persons. The bill provides for county boards of medical examiners, each to consist of three physicians, no two of the same school, and one at least, if possible, a woman. No licenses shall be granted until a certificate is had from the board that the man is not less than twenty-five years old, the woman not less than twenty-two, and that both are free from dipsomania, insanity or hereditary tendency thereto, tuberculosis, cancer, epilepsy, and syphilis, and that there is no blood relation existing between them.

An Epidemic of Hydrophobia has broken out among the cattle in Center County, Pa. It is believed the disease was spread by a rabid dog which ran wild over an extensive district a few weeks ago. Dr. Riter and other officers of the State live-stock sanitary board are making every effort to control the epidemic, but new cases are continually appearing in unexpected places.

The German Hospital, Philadelphia, has received $10,000 from Henry D. Justi for the endowment of two free beds.

To Restrict Football.—Assemblyman Sullivan purposes offering an amendment to a bill repealing the present boxing-law which would prohibit the playing of football games in this State. He has collected statistics showing that thirty-nine persons have been killed in football games within two years, while two persons only died as a result of engaging in boxing-bouts.

The Effect of Cold on Micro-Organisms.—Prudden has shown that a temperature many degrees below the freezing-point is ineffectual in destroying the typhoid bacillus, but now it has been shown that no known degree of cold will destroy these and some other pathogenic microbes. A paper was read last week before the Royal Society in London, in which a number of startling experiments by Professors Dewar and MacFadyen and Sir James Creighton Browne were reported. In these experiments typhoid, cholera, diphtheria, and other pathogenic bacteria were submitted for twenty hours to the temperature of liquid air (—310° F.), and were shown later by culture tests to be still alive.

Women Nurses in Military Hospitals.—A number of the women who acted as nurses in the army and Red Cross hospitals during the Spanish-American war have appointed a committee to secure the passage of a bill by Congress to provide for the permanent employment of women nurses in army hospitals. Women are so employed now, but only at the will of the army medical authorities. The bill provides "that women nurses in the proportion of not more than ten per cent. of the sick and wounded in general and post hospitals of fifty beds and upward, shall be employed by and constitute the women's nursing-service of the medical department of the army; that there shall be a superintendent of women nurses, who shall be a woman graduated from a general hospital training-school for nurses, having a course of instruction lasting not less than two years, who shall be appointed by the Secretary of War at a salary of $2,000 per annum; that the nurses shall be graduates of general hospital training-schools having courses of instruction lasting not less than two years; that they shall be appointed by the surgeon-general under regulations approved by the Secretary of War; that they shall receive $40 a month when on duty within the limits of the United States, and $50 a month when on duty outside of the limits of the United States." The bill provides, further, that nothing in its terms shall be construed to limit the power of the Secretary of War in time of war or national disaster to avail himself of other duly qualified nurses.

The Sale of Diphtheria Antitoxin by the Board of Health.—A bill has been introduced into the legislature providing that when the board of health has too much vaccine virus and diphtheria antitoxin on hand it may sell the surplus at public auction, but such sales shall not in any one year amount to more than $5,000. The board of health is required to publish a detailed statement every six months showing the amounts of vaccine virus and diphtheria antitoxin that the board has made, the amounts it has used and distributed free, and the amounts it has sold.

The Plague.—In Honolulu, up to January 24th there had been fifty-five cases of plague with forty-one deaths. The health authorities, soon after the disease appeared in the city, adopted the radical plan of destroying by fire every infected building, but on January 20th the fires got out of control and spread from one building to another in the native and oriental quarter, until nearly the entire district was in ruins. Four or five thousand persons were rendered homeless and Chinatown was wiped out, but it is believed that the advance of the plague was stayed.—It is stated, apparently officially, that Rio de Janeiro and Santos, in Brazil, are now entirely free from the disease. A few cases of plague have occurred at Ensenada, Argentina, and the ships of the United States South Atlantic squadron under Admiral Schley were quarantined on that account when they arrived at Montevideo from Ensenada.

Intense Heat in the Southern Hemisphere.—At Buenos Ayres on Saturday and Sunday last the thermometer registered 120° F. in the shade nearly all day. On Saturday there were one hundred and two cases of sunstroke, of which ninety-three were fatal, and on Sunday there were two hundred and nineteen cases, of which one hundred and thirty-four were fatal. In Melbourne, as we noted last week, the weather has been extremely hot, and in South Africa the British troops have suffered exceedingly from the unbearably high temperature. Indeed, the entire globe appears to be warmer than usual, for the winter in this country has been far from severe, in the Klondyke the weather is reported to have been almost mild, and at Davos Platz the season has been ruined by the warm weather, which has turned the snow into slush and has housebound all the guests with pulmonary and bronchial affections.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending February 3, 1900. January 31st.—Surgeon H. E. Ames detached from duty in connection with the *Kearsarge* and ordered to duty on board that vessel February 20th. Medical Inspector J. C. Boyd commissioned as medical inspector from October 25, 1899. February 1st.—Pharmacist R. Waggener detached from the *Pensacola* navy yard and ordered to be examined at Washington navy yard February 13th, for retirement, and then home to wait orders. February 2d (changes by cable from Asiatic Station).—Assistant Surgeon J J. Snyder detached from the *New Orleans* and ordered to the *Isla de Cuba*.

Obituary Notes.—DR. LLOYD WILBUR died at Hightstown, N. J., on January 27th, at the age of seventy-five years. He had recently been appointed superintendent of the census for New Jersey.

DR. JOSEPH F. DEPPEN died at Reading, Pa., on January 28th, at the age of fifty-one years. He was a graduate of the medical department of the University of Pennsylvania.

DR. MARY J. SCARLETT-DIXON died at Westchester, Pa., on January 29th, at the age of seventy-eight years. She was a graduate of the Woman's Medical College of Pennsylvania, and was for twenty years in charge of the Woman's Hospital, Philadelphia.

DR. FRANK HODGSKIN, of Chestertown, Md., was found dead in a hotel at Wilmington, Del., on January 30th.

DR. D. S. MARQUIS died on January 31st at Rochester, Beaver County, Pa., at the age of seventy-nine years. He was the only living charter member of Pennsylvania State Medical College.

DR. ERNEST G. METCALFE died at his home in Brooklyn on February 2d, of nephritis, at the age of forty-nine years. He was born in Canada and was graduated from the Long Island College Hospital Medical School in 1872.

MRS. ANNIE WITTEMEYER died at her home at Saratoga, Pa., on February 2d. She was born in Kentucky seventy-two years ago. At the outbreak of the Civil War she entered the Union army as a nurse and soon became famous for her many practical innovations. Among other things she established a special diet kitchen in army hospitals. After the war she lectured in the interests of missionary societies of the Methodist Church, and was at one time president of the Temperance Crusade, which organization preceded the present Woman's Christian Temperance Union. She was also a prominent member of the Women's Relief Corps, and was at one time its president. She was the founder of the Soldiers' Orphan Home at Davenport, Iowa, and was one of the promoters of the Pennsylvania Memorial Home for Soldiers.

Progress of Medical Science.

Boston Medical and Surgical Journal, February 1, 1900.

Valvular Heart Disease.—Richard C. Cabot, from a study of one hundred and eighty-six cases, states that he thinks he has reason to deny that there is any one form of valve lesion which is constantly associated with the clinical evidence either of hypertrophy or of the lack of hypertrophy of either ventricle. He has seen many cases of marked aortic regurgitation without any evidence of hypertrophy of the left ventricle, and of apparently pure mitral stenosis in which the left ventricle was undoubtedly enlarged, while in most of the cases of mitral regurgitation the enlargement of the heart seemed to affect the left ventricle rather than the right.

Intestinal Indigestion and its Relation to Pulmonary Disease.—Chauncey Rea Burr says that the intestinal tract and the liver are the two points at either one of which, if a departure from the normal occurs, auto-intoxication may result. The intestine becomes a veritable culture tube for micro-organisms, which give rise to toxins, ptomains, and toxalbumins, which pass to the liver, poison its cells, and the filter leaking floods the circulation with poisons. The lungs, being excretory organs, suffer greatly, and the author describes the various pulmonary affections due primarily to intestinal intoxication.

Epilepsy.—Walter E. Paul says that institutional treatment has been inaugurated in several States, and the result of six years' trial is encouraging. The cardinal measures carried out have to do with the diet, hygiene, out-of-door life, and, most important of all, systematic occupation. Very little bromide is used. Some of these institutions have a waiting-list of several hundred eager to be admitted.

Cases of Cholecystotomy.—Edgar Garceau reports three cases. One case was complicated by appendicitis. In one the value of the Murphy button in an emergency was well shown.

Combined Superior and Inferior Poliencephalitis.—G. L. Walton describes a case the etiology and prognosis of which are still undetermined. The further progress will be communicated later.

Journal of the American Medical Ass'n, Feb. 3, 1900.

Etiology of Non-Malignant Rectal Stricture in Women.—In discussing this subject, Reuben Peterson confines his attention to acquired rectal strictures, which he says are much more common in women than in men. He discusses them under the heads: (1) Strictures due to pressure from without; and (2) strictures resulting from organic changes primarily affecting the rectal walls, due to trauma, dysentery, gonorrhœa, tuberculosis, or syphilis.

A Case of Carcinoma of the Nasal Passages.—This case is reported by J. L. Goodale. The patient had had nasal polypi removed at regular and frequent intervals for thirty-three years. There was no evidence of syphilis and the general health had been good. At the age of fifty-one years the growths became carcinomatous, resulting in the patient's death in fifteen months.

Spasmus Nutans.—I. A. Abt reports two cases of this disease which improved under good hygienic conditions and the administration of bromide of sodium. He refers to the frequent confusion in diagnosis between spasmus nutans and eclampsia nutans, a much more serious disorder terminating in epileptic attacks and paralytic conditions.

Electricity in Diseases of the Nose, Throat, and Ear.—W. Scheppegrell reviews the uses to which electricity is put in the treatment of these troubles, and says it is to be hoped that some part of the longer period of study now obligatory in all advanced medical colleges will be applied to teaching the principles of electro-therapeutics.

Bassini's Operation for the Radical Cure of Hernia.—G. M. Woods reports seven cases successfully operated on by Bassini's method, for which he claims great advantages over the Wood and Wützer operations which were formerly the rule. The writer says that in the majority of cases this method results in a radical cure.

Vasomotor System, and the Importance of the Drugs which Act on it, in Ophthalmology.—David W. Stevenson says it would be well if oculists would always report the tension of the pulse with the same care and use the same signs which are used in regard to the eye, and it is even more important that they should know the drugs that will control this tension.

Report of a Case of Echinococcus Cyst of the Nose.—In reporting this case W. K. Rogers says it may be of interest to note that careful inquiry failed to elicit any evidence of intestinal parasites. The patient was under thirty-four years of age and in good health. The writer can find but one other case recorded in medical literature.

Report of Recovery from Traumatic Tetanus.—L. B. Van Camp reports this case as being of interest on account of the exceedingly small percentage of recoveries from tetanus. The case was a very severe one, and the principal treatment consisted of the injection of tetanus antitoxin.

The Code of Ethics.—Samuel C. Busey says the national code of medical ethics is the official declaration of the policies of the regular medical profession of this country, and the more it is studied the more widely will it be accepted as the guide of good conduct.

Acute Suppurative Arthritis of Children.—James E. Moore says that these cases are not generally understood, and many joints and lives are sacrificed on the altar of ignorance, the most common error in this, as in all other joint inflammations, being a diagnosis of rheumatism.

Intranasal Angioma, Bleeding Polypus of the Septum.—W. E. Casselberry reports a case of this nature. He does not think these tumors are as rare as has been represented.

A Preliminary Investigation of the Theory of the Inoculation of Malarial Fever through the Agency of Mosquitos.—By Albert Woldert. A continued article.

Contributions of the Medical Profession to General Literature and Collateral Sciences.—By George R. Highsmith. A continued article.

Medical News, February 3, 1900.

Prophylaxis in Gynæcology: Obstetrics.—James Clifton Edgar discusses this subject under three heads: 1. Pregnancy; 2. labor; 3, puerperium. 1. A good hygiene of pregnancy is of prophylactic importance in two ways: (*a*) By providing the patient with healthy blood; (*b*) by increasing the muscular and the general nutrition, factors of undoubted importance in the prevention of subsequent subinvolution of the uterus and adnexa. 2. (*a*) Limiting the duration of labor; (*b*) the prompt surgical treatment of traumatism, the result of labor; (*c*) and most important of all, the observance of strict asepsis. 3. The patient's position in bed during the whole of the puerperium shall be equally divided during the twenty-four hours between the dorsal, abdominal, and right and left lateral postures. Edgar describes a binder which he uses in the puerperium to sustain the pelvic floor and the lower portion of the anterior abdominal wall. Strychnine in the last part of pregnancy and during the puerperium is beneficial. He also advocates the early use of the vessel in bed or the commode at the side of the bed in the puerperium.

Prophylaxis in Gynæcology.—Henry C. Coe declares that it is to the family physician that the question of prophylaxis is of peculiar interest. It is his province to watch the development of the young girl and to guard her against those numerous indiscretions, harmless in themselves, which are common in careless girlhood. Diet, dress, exercise, menstruation, bowels, should all receive attention. The same principles of prevention should be applied to syphilis and gonorrhœa in the female, as to other communicable affections. Through the general application of the principles of aseptic midwifery the dangers of puerperal sepsis have been minimized. Malignant uterine disease is still, from a prophylactic standpoint, hopeless. The early recognition and treatment of specific infection is an advance in prophylaxis. The whole trend of modern pelvic surgery is conservative, and conservatism is prophylaxis.

Diagnosis of a Case of Cerebral Tumor; Operation.—O. M. Steffenson cites the case of a man, thirty-two years old, with the symptoms of vomiting, headache, partial iridoplegia, choked disc, loss of patellar reflex in the right leg, agraphia, aphasia, alexia, mental stupidity, and listlessness. On operation a growth was found involving the angular, supramarginal, and the base of the first temporo-sphenoidal gyri.

The Relation of the Clinical Laboratory to Modern Surgery.—By Willis G. Macdonald. See MEDICAL RECORD, vol. lvii., p. 212.

The Etiology and Prevention of Uterine Disease before and during Pregnancy.—By W. Gill Wylie. See MEDICAL RECORD, vol. lvii., p. 208.

New York Medical Journal, February 3, 1900.

The Development of the Female Genitals and their Life History.—B. Robinson studies the development of the Wolffian body into the pronephros or head kidney with its ureter and duct, which structure quickly ceases to act in the human fœtus, the mesonephron or middle kidney, which is the kidney of fœtal life, and finally the metanephron or adult kidney and its ureter. He then considers the ducts of Müller and their transformation into the uterus and the vagina. The article contains nothing especially new, but is interesting as being a careful study in embryology stated in terms of modern nomenclature.

A Visit to the Plague Districts in India.—L. F. Barker and J. M. Flint, of the Johns Hopkins Hospital, give a graphic account of their recent travels in the East, and describe the measures taken by the English authorities to lessen the spread of the plague and minimize its inevitable misery and suffering. Their recital, while not without some very grewsome features, contains much that is interesting in itself both from its professional value and its vivid portrayal.

An Experimental Research on the Tensile Strength of the Sciatic Nerve.—G. W. Crile and W. E. Lower have conducted experiments upon dogs; also upon the bodies of patients from one to three days after death. In the adult it was found that a weight of one hundred and forty pounds was required to rupture the nerve.

The Use and Abuse of Poultices.—S. E. Earp advocates the use of flaxseed meal as the ideal constituent. The poultice relieves congestion, reduces inflammation, promotes absorption, diminishes tension, softens incrustations, encourages tissue relaxation, stimulates healthy granulations, deodorizes, and disinfects.

A Case of Neurosis of the Heart: Palpitation.—A case without any special features is described by A. Goltman. He advocates the use of nux vomica as a cardiac tonic. Bromide of potassium is recommended for insomnia, and cold application over the heart during exacerbations.

Aneurism of the Subclavian Artery and its Treatment.—In the case of a man aged forty-five years, A. B. Barkley placed a ligature on the distal side of the aneurism, the exact point being as near the junction of the first and second parts of the vessel as possible. The patient was doing well at last report.

School Hygiene.—G. D. Hamlin describes the unfavorable hygienic conditions found in some of the congested districts of New York City, and makes a plea for a better state of affairs.

Malarial Hæmaturia.—By B. Smith. A continued article.

Philadelphia Medical Journal, February 3, 1900.

Syphilis of the Stomach.—Max Einhorn reports six cases illustrative of three groups of syphilitic disease of the stomach. These groups are: Gastric ulcer of syphilitic origin, syphilitic tumor of the stomach, and syphilitic stenosis of the pylorus. Cases of the last-named group are the most interesting, for failure to recognize the nature of the obstruction would probably result in operation. In both of the reported cases recovery followed the exhibition of potassium iodide, after the usual medical treatment of benign stenosis had proved inefficient.

Notes on the Total Removal of the Human Stomach, and on Gastroplication, with a Late History of Two Cases.—G. Childs Macdonald recalls the four successful cases of extirpation of the stomach by Schlatter, Brigham, the writer, and Richardson, and discusses the reasons why other attempts have been unsuccessful. He advocates gastroplication in cases of loss of nervomotor function of the stomach with resultant dilatation, and refers briefly to two cases in which he recently operated successfully.

Remarks upon the Diagnosis and Surgical Treatment of Perforated Gastric Ulcer.—Maurice H. Richardson discusses the symptoms of perforation of the stomach and its operative treatment, and reports at length four cases. In two of these cases an operation was performed and recovery occurred in one; the third case, which terminated fatally, was not operated upon; the fourth case was one of acute hemorrhagic pancreatitis, which is reported as an illustration of the diagnostic difficulties in certain cases.

Latent Cancer of the Stomach.—William Osler and Thomas McCrae report seven cases of cancer of the stomach unaccompanied by indicative symptoms. In three cases the disease involved a large part of the stomach, in two the pylorus, and in two the cardia. In one case the œsophagus was involved and in another the duodenum. In three cases there was ulceration, and in five metastases were present.

Acute Dilatation of the Stomach.—Henry Wald Bettmann says this condition is marked by vomiting of large quantities of a bile-stained fluid, distention of the abdomen while the right hypochondrium remains flat, collapse, and death from exhaustion. The treatment should consist in supportive measures, early resort to lavage, and rectal feeding. Nothing should be swallowed until the vomiting is under control. Narcotics are injurious.

After-History in a Case of Successful Total Extirpation of the Stomach.—Charles Brooks Brigham removed the entire stomach for cancer on February 24, 1898 (*Boston Medical and Surgical Journal*, May 5, 1898). The patient, a woman, sixty-eight years old, is now in excellent health, eats three meals a day of ordinary food, and takes no medicine except a dose of castor oil once in ten days.

Histological Studies Relating to the Early Diagnosis of Cancer of the Stomach.—John C. Hemmeter discusses the diagnosis of cancer of the stomach by means of microscopical examination of scrapings from the mucous membrane. The diagnosis is based upon changes in the character of mitoses peculiar to the cells in malignant neoplasm.

Diagnosis of Gastric Ulcer with Report of Cases.—Frank H. Murdoch gives three diagnostic signs of ulcer in patients with dyspeptic symptoms: (1) Hæmatemesis, (2) severe pain relieved by orthoform, (3) a constant tender point in the epigastrium with or without a corresponding tender spot to the left of one of the lower dorsal vertebræ.

Auto-Insufflation of the Stomach.—C. D. Spivak describes a tube with a lateral opening so placed that when the tube is in the stomach the side opening is situated in the anterior portion of the buccal cavity. The end of the tube is now compressed, and the patient, by closing the lips around the tube and inflating the cheeks, blows air into the stomach.

The Indications for Surgical Interference upon the Stomach.—James H. Dunn says that operations upon the stomach are often made in unsuitable cases, and in suitable cases are made too late, and lays down some general rules to guide the surgeon in his selection of cases for operative treatment.

Direct Electrization of the Stomach, Especially by High-Tension Faradic Currents.—Boardman Reed reports two cases of hyperchlorhydria in which the faradic current was applied directly to the mucous membrane. In the second case a high-tension coil was used with marked success.

On the Newer Applications of Gastro-Enterostomy in the Treatment of Diseases of the Stomach.—Robert F. Weir reports three cases of gastro-enterostomy conjoined with entero-anastomosis performed after the method described by him in the MEDICAL RECORD, vol. liii., p. 541.

Stricture of the Œsophagus Resulting from Typhoid Ulceration.—John S. Pyle reports a case of this nature in which dilatation by hydraulic pressure, applied by means of an instrument of his own invention, was entirely successful.

Perforating Gastric Ulcer and its Surgical Treatment.—Martin B. Tinker presents an extensive study of the literature of this subject, which contains reports of two hundred and thirty-two cases, with a mortality of one hundred and nine, or 48.81 per cent.

A Case of Traumatic Stricture of the Œsophagus Treated by Electrolytic Dilatation.—Arthur G. Minshall reports a case of recent stricture, produced by the accidental swallowing of a solution of caustic potash, cured by electrolysis.

Motivity of the Stomach.—Fenton B. Turck discusses under this title the etiology, pathology, symptomatology, and treatment of motor insufficiency of the stomach.

Gastroplication for Dilated Stomach.—Randolph Winslow reports a case of this operation, performed with success in the person of a man aged sixty-four years.

The Surgical Treatment of Diseases of the Stomach.—William J. Mayo discusses the operative treatment of gastric disorders, his conclusions being partly based upon his own experience in about sixty cases.

Gastrosuccorrhœa.—H. W. Lincoln discusses the etiology, symptomatology, and treatment of both the acute and the chronic form of Reichmann's disease.

Case of Vertical Stomach.—George Macy Ekwurzel describes an instance of this rare anomaly discovered at autopsy.

British Medical Journal, January 27, 1900.

Cases Complicated with Mental Disorder Treated by Thyroid Extract.—Richard R. Leeper says that treatment with thyroid extract is imperative in all cases of insanity showing a steadily downward course, in which there is reason to suspect thyroid insufficiency. In view of the cumulative property of the substance its effects must be carefully watched. This extract owes its remedial results to its direct stimulation of the cortex and the increased metabolism thereby induced among its elements. The rise of temperature is, however, not the most constant symptom of reaction. To the increased pulse-rate and quickened circulation must presumably be attributed most of the good effects of the treatment. The writer concludes by saying that when we know more of the functions and the mode of action of the secretions of the ductless glands, we shall find a solution to many of the problems of psychiatry.

Remarks on the Pure-Air Treatment of Phthisis at Home.—Under this heading Arthur Ransome discusses the treatment of tuberculous patients who are unwilling or unable to leave home. He says that the advantages of "open-air" treatment for this disease are undoubted, but that it cannot be carried out in the patient's own home save under certain stringent conditions, such as a residence drained, ventilated, and furnished with a special view to the treatment, strict attention to asepsis, carefully regulated feeding, the treatment of accidents, suitable amusement, etc. The writer sums up his conclusions by saying that these conditions cannot be met without the constant supervision of a medical man and the services of a trained nurse or of an intelligent and trustworthy attendant. For the poor, suitable sanatoria should be provided at the public expense.

The Application of Bacteriology to Public Health.—Walter C. C. Pakes discusses this subject under two headings, viz., Diagnostic Examinations, including tuberculosis, diphtheria, typhoid fever, etc., and Preventive Examinations, including the examination of water, milk, etc.

The Continuity of the Toxic Process in Fatal Cases of Diphtheria.—John Biernacki gives some deductions from his study of the blood-pressure curve in cases of diphtheria. He says the gravity of this disease may be in part explained by the diverse action of its toxin, which causes a fall in blood pressure and also a change in the cardiac and renal tissues.

Poisoning by Sodium Salicylate.—Gordon Sharp quotes a case in which 130 grains of this drug were taken at one time, in order to prove that the salicylate within reasonable limits is not a cardiac depressant, as is generally taught in the text books, but is, on the contrary, often a calmative of great usefulness.

Poisoning by Oleum Eucalypti.—Frederic C. Wood reports a case in which a child, aged three years, swallowed between two and three teaspoonfuls of oleum eucalypti. The symptoms were identical with those of opium poisoning, except there was no stertorous breathing. The child recovered.

Fracture of Both Clavicles.—In this case, reported by William Semple Young, the patient was a boy, aged six years. The patient was strapped and treated in the recumbent position, with the result that in three weeks the bones united well.

The Removal and Transport of Cavalry Wounded.—T. F. S. Caverhill discusses at length the various ways in which wounded cavalrymen may be most promptly and efficiently aided by means of horse litters, etc.

Formalin in Rodent Ulcer.—F. Wyatt-Smith reports this case, for which operation was refused, and which he treated with a twenty-per-cent. solution of formalin in glycerin and water, with excellent results.

A Case of Enteric Fever with Acute Nephritis.—H. Reynolds Brown reports this case as being a rare complication. The only treatment seriously attempted was by the hot pack and intestinal antiseptics.

The Pathology and Treatment of Appendicitis.—By C. B. Lockwood. See MEDICAL RECORD, vol. lvii., p. 243.

Pericarditis.—A clinical lecture, by Graham Steele.

The Lancet, January 27, 1900.

A Clinical Lecture on Sleeplessness.—W. H. Broadbent discusses this question from the standpoint of the difference in the vascular conditions of the cerebral cortex in the sleeping and waking states. Common causes of insomnia include extremes of temperature in the feet, both high and low vascular tension, and flatulent dyspepsia. Many cases are cured by a relief of these conditions, while in others it may be necessary to alter entirely the manner of living of the individual. Insomnia often follows influenza, and if the case is at all obstinate, an opiate with hyoscyamus is better than the bromides, chloral, or trional. In the insomnia of the later stages of an alcoholic debauch, strychnine with digitalis is indicated.

Excision of the Spleen for Injury.—Recital of a case by O. St. J. Moses. Dangers of this operation are peritoneal infection, and especially bleeding from vessels at the hilum. Sharp probes were passed at right angles through the stump of the pedicle, their ends protected by cork resting on the surface of the abdomen. The spleen was cut away external to the outer ligature, and the remaining stump treated like the stump of the uterus in a Porro operation. The patient recovered.

The Process of Digestion after Resection of about Six Feet of the Small Intestine.—Carl Schlatter says that the removal of this length of bowel closely approaches the critical line between recovery and death. In his own patient the loss of this length of ileum did not seem to make the slightest difference in digestive function. The patient had a severe general urticaria five days after operation, but no other untoward symptom.

Pott's Disease or Fracture of the Vertebræ.—W. R. Townsend reports the case of a girl, aged six years, who after a fall presented a bony prominence in the back of the neck accompanied by dyspnœa and the habit of supporting the head by the hand placed under the chin. Kyphosis was marked, and there was a depression of the upper cervical vertebræ. The patient was seen by several physicians. Both diagnoses named in the title were made.

Deaths Under Chloroform.—J. Edmunds insists upon the same precision of dosage with chloroform as with morphine or strychnine. An improved Krohne inhaler affords a true volumetric dosage. Administration should always be begun with small volumes of chloroform-air, such as to cause neither cough nor resistance.

A Case of Rectal Deformity.—I. G. Modlin reports a case of a woman with a well-formed perineum and a dimple at the site of the anus, but without any opening or sphincter. The vulva, externally normal, was occluded by a movable partition visible on separating the labia. The urethra, vagina, and rectum all opened into one common vulva.

Some Remarks on the Diaphragm.—R. Lee refers to a symptom which he finds very common in influenza. It is a pain around the lower part of the thorax, which he believes to be due to a nervous affection of the diaphragm. Spasm of this muscle may cause the peculiar dry cough of the disease named.

The Use and Abuse of Preservatives.—S. Rideal gives the results of experiments upon milk with boric acid and formaldehyde. Coagulability depends somewhat upon the percentage of acidity, and any preservative is obviously more efficient if added at the time of milking before changes have already begun.

Myoidema in Pulmonary Tuberculosis.—H. Walsham finds this physical sign only in cases attended by great wasting, and believes it to be valueless as an early sign of pulmonary tuberculosis. It is, however, a good index of the actual amount of wasting which has taken place.

The Pathology and Treatment of Appendicitis.—C. B. Lockwood believes that bacterial infection is the great exciting cause of the malady, no matter what type the symptoms may assume. He advocates the oblique incision parallel to the outer half of Poupart's ligament.

Depilation by Roentgen Rays.—Neville Wood shows that exposure to the x-rays may become available as a means of depilation. From thirty to forty exposures are necessary to secure permanent alopecia.

Medical Press and Circular, January 24, 1900.

The Role of the Physician in Renal Affections.—Professor Lancereaux says the physician must in every case of renal disease and under all circumstances meet two indications which never vary: To treat the renal lesion or functional trouble, and to treat the intoxication which is the consequence of the affection. Always and invariably the primary malady localizes its effects at the outset in one only of the anatomical elements composing the kidney. In fever the epithelium alone suffers; in late syphilis and saturnism the vascular connective tissue is affected. In epithelial nephritis cantharides acts as a specific on the epithelium; in connective-tissue nephritis preparations of iodine are capable of modifying the new sclerosed tissue. The lesions of uræmia are focussed on the digestive tract; there are two kinds of symptoms, digestive and nervous. Rules of treatment are laid down.

A Comparatively Rare Injury to the Distal Phalanx of the Finger.—John Ewens records three instances of injury involving the ungual phalanx, which is bent forward as in dislocation by suddenly impinging with great force upon some hard immovable substance. There is no dislocation, nor is it likely that there is rupture of the tendon in the usual way. It is suggested that the termination of the tendon may be torn through close to its insertion, or more probably the periosteum may be raised from the bone.

The Therapeutic Value of Salophen.—T. Poyntz Wright recapitulates English experiences and has personally found salophen of great value in rheumatoid sciatica, while its great value lies in the treatment of influenza. It is a perfect substitute for salicylic acid and its compounds without possessing the disadvantages.

Diphtheria.—By William R. Smith. The third of the Harben Lectures.

Wiener klinische Wochenschrift, Jan. 11 and 18, 1900.

Polioencephalitis Superior Acuta and Delirium Alcoholicum as an Introduction to Korsakow's Psychosis without Polyneuritis.—Emil Raimann reports a case of this kind in a man thirty-seven years old, who had been addicted to the use of alcohol for years. He was attacked simultaneously by alcoholic delirium and by local and general somatic disturbances. In the right eye there occurred an external and internal ophthalmoplegia. There was also paralysis of the abducens of the left eye. This paralysis lasted for a considerable length of time. Consciousness was much disturbed. Peripheral neuritis was not present. The almost simultaneous occurrence of polioencephalitis and alcoholic delirium was not a chance event. The chronically poisoned organism had only waited the opportunity to express itself. The patient suffered not only from loss of memory, but from delusions. From this attack he made a good recovery.

Contribution to the Knowledge of Chyliform Ascites.—F. Micheli and G. Mattirolo state that the pathogenesis of the various so-called milky effusions must be different, and their origin must depend on varied etiological factors. They then give the quantitative constituents of various effusions in which the quantity of fat or rather the ethereal extract—fat, cholesterin, lecithin—was never greater than 1 gm. In some of these effusions there was not enough fat to cause opalescence—1.5 gm. bring necessary for that (Letulle). Experiments were made which proved that opalescence in these cases depended on lecithin. It now remains to demonstrate what rôle lecithin plays in the condition of opalescence of true fatty effusions (ascites chylosus et chyliformis).

The Etiology of Congenital Defect of the Pectoralis Muscle and the Elevated Position of the Scapula.—Hermann Schlesinger says that defect of the pectoralis generally consists in the absence of the sterno-costal part, while the clavicular part is present at least in part. The right side is generally affected. There is an apparent flattening of the sternum on the affected side. The skin of this side is sometimes poor in fat with few hairs. Schlesinger reports several cases of this nature, and thinks the cause of the defect is due to arrested development. The arm on the affected side can be moved for the most part as well as the opposite one, the deltoid generally assuming the function of the defective muscle.

Hæmolysin and Antihæmolysin.—Rudolf Kraus tabulates the results of numerous experiments which prove that the different micro-organisms develop hæmolytic poisons in relation to the blood-corpuscles of different animals, and that normal blood sera can suspend this hæmolytic influence. The antihæmolytic influence of normal serum is to all appearances due to the influence of a ferment.

Some New Drugs in the Therapy of Phthisis.—Jul. Pollak, in this list, first mentions duotal, which is valuable in its influence on the appetite. Pyramidon is used for its antipyretic action, one of its chief virtues being that it has no baneful effect on the heart. Heroin hydrochlorate has a most beneficial control over the cough of tuberculosis.

A Note on the Subject of Infantile Pseudo-Bulbar Paralysis.—M. Bernhardt states that H. v. Halban in his monograph on "Infantile Pseudo-Bulbar Paralysis" has reviewed the literature on this subject, which he himself has attempted to supplement.

A Case of Traumatic Periodic Paralysis.—Julius Donath records this case, stating that von Hartwig was the first to describe this obscure disease.

Münchener medic. Wochenschrift, Jan. 9 and 16, 1900.

Convulsions in Childhood.—J. Lange writes that convulsions in childhood can be classified as organic and functional, and that functional convulsions may be further subdivided into sympathetic and idiopathic. He adds that eclampsia is not an essential disease, but only a symptom, and that its diagnosis as such must disappear from the index of text-books even as fever, vomiting, or headache. Convulsions are frequently caused by foreign bodies in the nose, throat, œsophagus, ear, larynx, and trachea; by irritation of the skin; by many affections of the digestive tract. They often occur at the beginning of an acute, febrile, infectious disease, and are designated as an initial infectious eclampsia. The chronic infections in which they are most common are rachitis, syphilis, and scrofula. Certain poisons excite convulsions, viz., opiates and chloral hydrate. Carbon dioxide plays the greatest rôle in the mortality statistics of convulsions. In the attack the clothes should be loosened, baths may be given, leeches applied to the neck. Bromides are excellent sedatives in this trouble. Phosphorus is sometimes given.

Treatment of Neurasthenia.—Otto Dornblüth advises a careful physical examination as the first step in the treatment of neurasthenics. A careful discrimination should be made between acute and chronic forms of the affection. Rest stands foremost in the treatment of acute neurasthenia—rest in bed being most efficacious. This can be continued from eight days to six weeks. Next in importance comes diet, which in most cases needs to conform only to normal nourishment. Hydrotherapy is very beneficial, as well as electricity—the application of a weak faradic current being preferable. The patient's confidence should be gained, and special attention should be paid to his mental influences. As to drugs the author inclines to the use of sanguinol in anæmic cases, and arsenic in cases of the arthritic type. However, appropriate treatment must be suited to the individual case. Codeine is used in depressive forms. As to the treatment of chronic cases, many are benefited by that just described for the acute form. Those resulting from some form of traumatism should of course have the injury or its results attended to first, when often a desire to resume the normal life will naturally follow.

The Present Reputation of Salt-Water Infusions, with the Description of a Complete Infusion Apparatus.—Häberlin states that infusion is the younger sister of transfusion. In general, the infusion of salt water is indicated in all cases when the heart pump lacks the necessary quantity of blood; when the body is exsiccated through the loss of fluid; when the input of fluid is below par, when the blood and the tissues are saturated with poisons; and when the strength of the heart is weakened, the glandular capacity diminished, or the nervous centres are stupefied. The contraindications generally depend upon heart insufficiency with cyanosis, œdema of the lungs, and a high degree of dropsy with nephritis.

The Treatment of Suppuration of the Frontal Sinuses.—Winckler declares that all accepted operations should be carefully considered in every case of this kind, and that the one most appropriate be used without regard to the operator's penchant for any one particular method. In the after-treatment of his own cases, he no longer flushes out the wound but carefully dries with a gauze tampon, making use of insufflation and inhalation.

Bleeding of the Endometrium from Sclerosis of the Uterine Arteries.—M. Simmonds describes this affection as "apoplexia uteri" (Cruveilhier), and believes that there is a close connection between alterations in the vessels and menorrhagia. Undoubtedly arteriosclerosis is the etiological factor of importance in hemorrhage of the uterus in old women, and after all therapeutic measures fail, resort will have to be had to the extirpation of the organ.

A Second Case of Removal of the Shoulder-Girdle for Sarcoma of the Scapula.—Th. Kölliker refers to the former case with scapular sarcoma on which he operated. The patient died about two years after the operation, of metastases in the brain and lungs. The present patient recovered quickly from the operation, but died six months later from influenza-pneumonia. There was no recurrence.

Suture of the Heart as a Typical Operation.—Emil Rotter thinks that in cases of heart injury, when there is nothing to lose but much to gain, a typical operation should be accepted by surgeons. The heart should be well exposed, and the operation be accomplished as quickly and with as few assistants as possible. He carefully describes the technique, giving illustrations.

A Case of Puncture of the Ear with Loss of Brain Fluid.—Löhnberg reports this case, in which he made careful chemical experiments, proving that the fluid exuding from the wound originated in the brain. The injured part was kept carefully bandaged and strict rest enforced, and the patient was discharged cured at the end of a month.

A Case of Land Scurvy.—M. Rothschild describes a case of sporadic scurvy in a woman twenty-five years of age. None of the ordinary etiological factors was present, unless we accept the damp, cold weather prevailing at the time, as having a causative influence.

Adeno-Carcinoma of the Cæcum; Invagination, Resection, Recovery.—Krecke cites the case of a woman sixty-three years old, on whom resection was successfully performed. It is now a year since the operation, and there has been no trace of recurrence.

Experimental and Clinical Experiences with Orthoform.—August Luxenburger concludes that orthoform is an absolutely harmless anæsthetic which neither diminishes secretion nor delays wound healing.

F. V. Birch-Hirschfeld.—Obituary by Professor Kockel.

Deutsche medicinische Wochenschrift, January 11, 1900.

The Diagnosis of Imbecility in Early Childhood.—Martin Thiemich discusses the various means of testing the mental condition of very young children. These consist in the determination of pain sense, taste, and attention or reaction to non-painful stimuli. For the first he uses a needle, an imbecile child often showing no signs of pain even when pricked repeatedly. For the second he employs solutions of saccharin, quinine, hydrochloric acid, and common salt. A normal infant will usually express satisfaction when the tongue is moistened with the first, but will resent the application of bitter, sour, or salt solutions. As regards attention one must note the possibility of attracting this and also the length of time it can be fixed upon a given object. Later diagnostic factors are the development of the sense of cleanliness and the beginning and progress of the power of speech.

The Taking of Nourishment by the New-Born.—H. Cramer relates certain experiments made to determine the amount of nourishment necessary to maintain the physiological weight of infants during the first ten days of life. He also estimated the suction force necessary to draw milk from the breast and from the nursing-bottle respectively, and suggests that the difference in these forces may be of significance as regards metabolism in infants.

The Valuation of Tetanus Antitoxin and its Employment in Man and Animals.—E. Behring has succeeded in preparing a stable tetanus virus for use in estimating the potency of the antitoxin. He asserts that the mortality of tetanus can be reduced to fifteen per cent., provided the antitoxin is given in doses of not less than one hundred units not more than thirty hours after the appearance of the first symptoms.

The Physical Determination of Unilateral Deafness.—H. Röhr discusses Lucae's instrument for the detection of simulated unilateral deafness (the "interferenzotoscop"), and concludes that it is unreliable. In some cases in which deafness is present the apparatus fails to indicate it, and in others it points to the existence of deafness when the hearing is good.

On a Possibly Serious Skiagraphic Error.—By Carl Beck. See MEDICAL RECORD, vol. lvii., p. 65.

Vratch, January 1 and 8, 1900.

Treatment of Inflammatory Affections of the Uterus and Adnexa with Hot-Air Douches.—In a preliminary communication, A. M. Mansvetoff describes an apparatus for the preparation and application to the vagina and uterus of dry heat. The temperature of the air is from 50° to 60° C. (122° to 140° F.), and the douches are given for one or two hours every day or every other day. The author has never seen any injurious effects of the douches, but on the contrary claims for them the following advantages: (1) They quickly and for some time quiet pain in the pelvic organs; (2) they soothe the nervous system, induce sleep, and increase the appetite; (3) they lower the temperature, pulse, and respirations, when these are elevated; (4) they influence favorably the menstrual flow; (5) they facilitate the perfect removal of the products of inflammation; (6) they increase secretion from the uterine cavity.

Anæsthesia by Injection into the Spinal Canal.—Y. B. Zeldovitch reports four cases in which operations were performed under anæsthesia induced by the injection of a solution of hydrochlorate of cocaine into the spinal canal. He also performed a number of experiments on dogs to determine whether the dose of the injected substance might not profitably be increased so as to increase the anæsthetic action and avoid the unpleasant by-symptoms sometimes observed to follow the puncture of the needle. As a result of his experience he concludes with Bier that, in the present stage of the method, it ought to be employed only in cases in which anæsthesia by chloroform is especially contraindicated.

Vir Effeminatus.—A. S. Tauber reports with illustrations a case of hermaphroditism in a person twenty-two years old. The subject was apparently a tall, well-developed woman, with long hair on the head and no beard. The breasts were large and pendent. There was scanty, irregular menstruation. On palpation of the abdomen a body resembling the ovary could be distinctly felt on the right side. There was an imperfect vagina, together with a female urethra. But with this there was a scrotum containing two bodies resembling testicles, and the clitoris was greatly developed, resembling a penis. The voice was of a masculine character.

Corporal Punishment in Russia on the Eve of the Twentieth Century.— By D. N. Zhbankoff. A continued article.

Post-Partum Sloughing of the Uterus.—By V. G. Bekman. A continued article.

La Riforma Medica, January 9–18, 1900.

The Typhoid Bacillus as Found in the Blood.—Aldo Castelani concludes from his experimental researches that the bacillus is more frequently found in typhoid cases than is usually supposed. By diluting the blood with peptonized and slightly alkaline broth, the bacilli sowed in it usually developed great mobility, giving the characteristic turbid appearance to the culture medium. In some cases, however, they were agglutinated on the bottom and sides of the vessel, leaving the liquid almost entirely clear.

Fibroma Molluscum.—Sergi Trombetta reports a case in a boy aged sixteen years. The affection dated from infancy, and began as a small subcutaneous swelling in the right tendo Achillis, which gradually increased in size. Actual condition showed the right foot in an atrophic condition, even the bones being smaller than normal. A soft, fluctuating mass was situated on the tendon. It was removed and was found to be a fibroma molluscum. The histological examination is described in detail.

Necrobiotic Ischæmic Infarction of the Lung.—Giovanni Cagnetto reports a case and gives a minute description of the anatomico-pathological condition found at the autopsy. He believes the condition to have been due in the first place to the action of Fränkel's diplococcus, found in abundance in the lung tissue, in causing inflammatory lesions in the blood-vessel walls, and secondarily to a resulting thrombosis.

Neuralgic Genital Herpes.—Cesare Casarini records a case in which an infective origin could be excluded. It was held to be due to nervous origin, and related to phenomena of altered sensibility in the superior interior region of the thigh through the genito-crural nerve, and that of the posterior region through the femoral branch of the inferior gluteal.

Rare Anomaly of the Arteries in the Arms.—G. Mollica describes an unusual arterial condition, and holds that surgeons should have a thorough knowledge of abnormal as well as normal conditions of the body.

Rivista Critica di Clinica Medica, Jan. 6—20, 1900.

Common Sense in Practical Medicine.—Augusto Murri, in a lecture to medical students, urges greater individual thought on the part of students and physicians, and greater exactness in the use of language. To the saying, "He who does not learn how to speak forgets how to think," he adds, "and he who forgets how to think cannot learn to operate." Well-trained minds can best grapple with the problems of medicine. The learning of technical details, such as feeling the pulse, the weighing of excreted urea, the measurement of the viscera, are of no use unless one is able to appreciate the significance of the counting, weighing, and measuring. The spirit of the article might be summed up in the words: a physician's brain should be of good quality, well trained, and in constant use.

Puerperal Eclampsia.—Ernesto Pestalozzi makes a distinction between true, concealed, and pseudo-eclampsia. The true and the pseudo are convulsive forms of the auto-intoxication; the concealed form is due to this auto-intoxication, but the convulsions are inhibited by some cause which prevents the cortical substance from acting, such as a cerebral hemorrhage, for instance. In pseudo-eclampsia the auto-intoxication has a secondary rôle, the convulsions apparently being due to the stimulus of a cerebral tumor, or a meningitis for example, upon a nervous system rendered particularly susceptible by pregnancy.

Surgical Intervention in Marked Dilatation of the Stomach.—A. Cardarelli thinks that when a diagnosis of simple stenosis of the pylorus has been made, surgical measures should be at once resorted to. Even when the diagnosis is not quite clear, a recognition of the fact that there is impotence of the stomach walls, shown by the impossibility of its emptying itself of its contents, and permanent retention, justifies operative procedures. Marked dilatation calls for surgical intervention. The author reports four cases.

Acute Hemorrhagic Poliencephalitis from Influenza.—C. Bozzolo reports two cases in which headache, stupor, rigidity of the neck, pupillary disturbances, vomiting, and Kernig's symptom all pointed to meningitis. It was, however, a severe form of influenza, which the author believes induced an acute hemorrhagic poliencephalitis. The diagnosis was purely clinical.

French Journals.

Cardiac Insufficiency and Forced Heart.—Pierre Merklen understands by *cœur forcé* an asystolic state beginning with functional troubles, associated with feeble and persistent dilatation, which have come on suddenly after overtire or violent effort. A distinction must be made between cardiac insufficiency, forced heart, and asystole, which are often regarded as synonyms. Insufficiency is a term often employed by foreigners, he thinks, to characterize feebleness and dilatation with their consequences, venous stases.

It is the equivalent of the French term asystole. Cardiac insufficiency is a state much more than a disease. It should be early discovered, since treatment in cardiopathies is, before all else, prophylactic hygiene. If the patient belongs to the working class, he should give up all but sedentary occupation; if to the wealthy class, he should renounce an active life, and adapt himself to general hygiene applicable to cardiacs.—*La Presse Médicale*, January 17, 1900.

Potatoes in the Diet of Diabetics.—A. Mossé finds that while potatoes have been rigorously excluded from the dietary, and exceptionally allowed, they have recently come to be recommended as a substitute for bread. He has studied their effect upon the urine, and found in one case followed for two months that the sugar diminished after their administration. As a general rule, it has been found that potatoes which swell up and burst open, or disintegrate when cooked in water, contain more flour than those that remain firm—the latter containing a larger proportion of albuminoid matter. According to authors quoted the central portion of fresh potatoes, which have reached perfect maturity, is the most watery, the poorest in flour, and the richest in azote matter, and hence this part should be chosen for diabetics.—*Bulletin Général de Thérapeutique*, January 15, 1900.

Treatment by Cold Baths in the Typhoid Fever of Children.—F. Glénard, to give an idea of the mortality under drug treatment, reviews 1,745 cases studied and finds the mortality fifteen per cent. Under strict bath treatment, the results of a number of reporters gives a total of 503 patients with 18 deaths, or 3.5 per cent. Studying cases treated by baths or moist temperature lower than that of the patient's fever, but not in a systematic manner, he arrives at the conclusion that eleven per cent. represents the mean mortality. Other statistical data are given, and the article is to be continued.—*Revue de Thérapeutique*, January 15, 1900.

Ichthyosis.—Hallopeau and Leredde consider the disease incurable, but think much may be done to keep down the scales as they are produced, and give comfort to the patient. A seeming cure can be secured by inunctions of oil of sweet almonds with vaseline and five per cent. of boric acid, or two per cent. of salicylic acid, or five per cent. of sulphur. In ichthyosis hystrix the concretions may be removed by raclage.—*Journal des Praticiens*, January 20, 1900.

Jour. of Cutan. and Genito-Urinary Diseases, Feb., 1900.

Classification of Tumors.—B. H. Buxton gives with diagrams a new classification. Epithelial tumors he thinks are better classified according to the structure rather than the origin of the epithelium from which they are derived. There are three main groups: flat stratified, cubical, and flat single, calling the benign tumors derived from them papillomas, adenomas, and benign endotheliomas, and the malignant ones epitheliomas, carcinomas, and malignant endotheliomas. He objects to the Greek ending "omata" for the plural, since the termination "oma" has been adopted into our language.

The Rôle of Pus Organisms in the Production of Skin Diseases.—George T. Elliot reviews at length the whole literature, from which it is evident that although micro-organisms, especially the staphylococci and streptococci, are the particular cause of suppuration, yet many other factors both internal and external are active. Contradictory results are obtained by different observers, and chaos still exists. Micro-organisms, while the general cause, are not the exclusive cause.

Prostatitis and Seminal Vesiculitis.—Charles H. Chetwood gives his experience combined with that of E. L. Keyes. Chronic prostatitis is differentiated from prostatorrhœa, and both from seminal vesiculitis. Figures show the employment of a new rectal irrigator—a modification of the Tuttle and Kemp tubes. The treatment of seminal vesiculitis resembles that of prostatitis. During acute inflammation, rest, bland diet, hot sitz-baths, etc., are recommeded. Massage and rectal douches are only proper in the chronic stages.

Pediatrics, February 1, 1900.

The Estimation of the Leucocytes of the Blood as an Aid in the Diagnosis of Diseases of Children.—George D. Head believes that the leucocyte counts in the blood of children affected with certain diseases are as characteristic and fixed as in diseases of adult life. Pyæmic infection is usually followed by well-marked leucocytosis; in appendicitis with pus formation a well-marked increase of white cells is found, while in intestinal obstruction there is rarely an increase, so that this would be of value in differential diagnosis. In the first week of typhoid the count is normal or below normal; in the second, third, and often the fourth almost always below normal. This would distinguish the condition from appendicitis, osteomyelitis, enterocolitis, etc. Cases are given.

Two Cases of Infantile Hemiplegia Following Convulsions in Scarlet and Malarial Fever.—E. B. Montgomery quotes the opinions of many authors, and gives two histories which have led to opinions of his own not in strict accord with those prevailing.

Report on the Cause and Prevention of Infant Mortality.—By Ernest Wende. See MEDICAL RECORD, vol. lvi., p. 719.

The Therapeutic Gazette, January 15, 1900.

The Therapeutics of Tuberculosis.—Lawrence F. Flick says the therapeutics may be predicted upon: (1) The predisposition and resisting-power and antecedents of the patient; (2) the tubercle bacillus; (3) the disease germs which set up mixed infection and so may be subdivided into germs which run an independent course with the tubercle bacillus. The predisposition may be natural or artificial. When natural, little can be done to remedy it, and a fatal termination is usual. Artificial predisposition, such as is produced by alcohol, may be abolished by removing the cause. We should never say that a certain drug is useless, but we should know when and how to use it, and more attention must be paid to the use of adjuvants than to endeavors to find specifics. One remedy which brings comfort and encouragement is creosote. It is best given in large draughts of hot water before meals. The dose should be gradually raised up to gtt. xl.-l. three times a day, the hot water being likewise increased; with the maximum dose a pint being given.

The Treatment of Gonorrhœal Rheumatism.—Charles H. Frazier regards the condition as an infecting arthritis, in some cases the gonococcus alone being the exciting cause, in others we have a mixed infection. The first is the milder form. Firm pressure should be applied to the elevated limb, preferably by means of a rubber bandage, or strips of adhesive plaster, with gentle massage. If these means fail, aspiration and irrigation should be employed. In empyema of the joint, immediate arthrotomy should be done, with antiseptic irrigation and drainage. In phlegmon of the joint the pain is more pronounced. Ankylosis is almost sure to follow improper treatment.

Proper immobilization should be carried out by means of a plaster cast. Acupuncture is an efficient means of relieving congestion. As to internal remedies it is doubtful if they exert any specific effect, but the urethral lesion should be simultaneously treated.

Chloretone a Safe Hypnotic.—W. M. Donald says chloretone is made with caustic potash, chloroform, and acetone. It has the odor of camphor. It is best given in tablet form. It is of considerable value in well-selected cases in doses of gr. xii.–xv., repeated within two hours if necessary. Its relative value has not been determined. The case of a morphine habitué is related who took gr. xlviii. in one day without untoward symptoms. In all gr. cxx. were administered, and sleep extending over the greater part of five or six days was secured.

Electrolysis for Aortic Aneurism—Another Case and a Report of One Previously Reported.—H. A. Hare gives the history of a case, with illustrations, one showing the results after three years' treatment. In statistics published by himself and Holder of 951 cases of aneurism of the thoracic aorta, 570 occurred in the ascending arch, 104 in the transverse, and 110 in the descending portion.

The Use of Creosote in Pulmonary Tuberculosis.—Irwin H. Hance says that when creosote is tolerated it is indicated in any form of tuberculous affection of the lungs, but more particularly in afebrile cases with free expectoration. It should never be forced at the expense of the patient's digestion. The carbonate of creosote has given satisfactory results in doses of gtt. xxv. after meals.

The Use and Abuse of Drugs in Phthisis Pulmonalis.—W. G. Schauffler says individual idiosyncrasy must be taken into account. Cod-liver oil is of use in the early stages, but loses its usefulness later on. Attention should be given to making creosote and other drugs palatable and digestible in the early stages.

My Experience in the Treatment of Pulmonary Tuberculosis by Drugs.—Holland says that creosote and like drugs are useless in arresting tuberculous disease of the lungs and larynx, but are often of service in bronchial catarrh, which is such a troublesome symptom.

The Journal of Tropical Medicine, January, 1900.

Metamorphosis of the Young Form of Filaria Bancrofti in the Body of Culex Ciliaris.—Thomas L. Bancroft describes observations made by him on mosquitoes which were caused to bite a filariated subject. He found that actively moving filariæ were to be seen on the sixteenth or seventeenth day, sometimes not until the twentieth day, and that no further development occurred in them even after a sojourn of sixty days in the insect's thorax. He also made the interesting discovery that the filariæ die after being three or four hours in water, consequently this cannot be the medium through which they reach the human subject. Both of these findings are at variance with those of Manson.

On Tropical Anæmia, and its Relations to the Latent and to the Manifest Forms of Malarial Infection.—In an article with this title, concluded in this number, Albert Plehn discusses not only tropical anæmia but also the entire subject of malaria, including blackwater fever. He objects strongly to the withholding of quinine (which he regards as the only specific for malaria) through fear of causing hæmoglobinuria. He also opposes the theory that the sole mode of infection in malaria is transmission through mosquitoes, his opposition being based upon his experience in Kamerun.

A Case of Goundon or Anakhre.—W. Renner describes the case of a man, thirty-nine years old, in whom the first symptoms were noticed in 1882. The affection consists in a swelling the size of a pigeon's egg, lying obliquely along the nasal process of the superior maxilla on either side. It is apparently the same affection as hempuye or dog-nose, described by Chalmers in *The Lancet* of January 6, 1900. See MEDICAL RECORD, vol. lvii., p. 113.

Treatment of a Leper by Subcutaneous Doses of Chaulmoogra Oil.—Tourtoulis Bey treated a leper for five years intermittently with chaulmoogra oil in doses of gtt. xxx.–l. three times a day. The treatment was finally abandoned, as the oil was no longer tolerated by the stomach. Later the oil was given subcutaneously in doses of 5 gm., and improvement set in almost immediately and has continued up to the present time, during a period of five years.

Lightning Stroke.—R. E. Adamson describes the damage done to a house and one of its occupants by a stroke of lightning. The man felt a terrific blow on the knee and fell off his chair unconscious. He was unable to walk for about a week, but eventually recovered.

Tumbe or Kroo Fly.—A. H. Hanley gives the life history of this fly, which is common in some parts of the Niger protectorate.

Pes Gigas.—P. B. Cousland presents a picture of this affection, but gives no history of the case.

Zeitschrift für Krankenpflege, December, 1899.

Mode of Living for Migraine Patients.—August Dobisch states that migraine is most common in persons between fifteen and fifty years of age. In all such patients there exist defects in the osseous system, hereditary taint, or habits which result in defective nasal breathing and catarrh of the mucous membranes. The physician should study the patient's mode of living, in order to determine which of his habits most readily produces an attack. Lymphatic children suffer in later life from migraine. Close questioning often elicits the fact that some irritation of the upper air passages with consequent irritation of the nervous system has caused the attack. The patients should live in a dry climate. Their clothing should protect them against changes of temperature, hence wool is better than linen. The foot-wear requires careful attention. Sweating is to be avoided; moderation is to be exercised in all things, especially in eating and drinking. Hydrotherapy is best used in the form of cold sponging or very brief baths; cold water is to be taken only in small quantities, and never when one is overheated. The nervous system is to be hardened and protected; excess in wine and coitus should be avoided. The treatment of the attack consists in relieving the nasal obstruction with cocaine solution (3.5 per cent.) and the administration of a saline purgative in order to reduce intestinal fermentation.

Pathogenesis and Prophylaxis of Croupous Pneumonia.—Hans Brunner mentions March, April, August, and September as the four months which are of most importance in their relation to the disease. The characteristics of each, with its temperature changes, winds, sunlight, etc., are given at length. A fall in the pressure of the air exposes the human organism to danger; in the winter it induces perspiration, in the summer a chilling. Individual calling also plays an important rôle; under this heading are mentioned trauma, exertion, marked mental excitement, chilling, and tiring of the body, with sweating and psychical depression. Under the head of prophylaxis, the author says that exertion, sweating, and chilling are to be guarded against at all seasons, especially, however, in the spring. Sudden and extreme climatic changes are extremely dangerous. A stable, relatively moist season is preferable to a changeable one. These changes are especially dangerous to old pneumonia patients, and to those suffering from influenza or bronchitis, or weakened by disease.

Meditsinskoe Obozrenie, January, 1900.

The Diagnosis, Symptoms, and Treatment of Hydro-Pneumothorax.—Ts. I. Shabad presents a study based upon the reports of seven cases, in which he formulates the following conclusions: (1) Hydro- or pyo-pneumothorax may be diagnosed with certainty by means of the *x*-rays. (2) In left-sided hydro-pneumothorax, as in simple pneumothorax, the heart is usually displaced as far as the right mammillary line; when the right side is affected the heart is found in the axillary line on the left side. (3) In left-sided disease a metallic sound is sometimes heard in the left side of the chest synchronous with the cardiac pulsations and the respiration. (4) The patients themselves can feel the movement of the fluid in the chest, and this may be a valuable early symptom. (5) In tuberculous cases with extensive serous or purulent exudations, thoracocentesis with evacuation of the pleural cavity is indicated. In cases of purulent exudation when the pulmonary opening has closed, incision or resection of a rib is necessary. (6) In cases in which life is imperilled, the pulmonary opening not being closed, a drainage tube should be left *in situ* for a time. (7) In many cases of empyema thorough washing out of the cavity may take the place of resection of the rib, but in this case pleural adhesion occurs. (8) Even in cases of pyo-pneumothorax washing out of the cavity may be a good palliative measure.

Gastrostomy by Marwedel's Method.—A. Th. Kablukoff reports two cases of impassable cancerous stricture of the œsophagus in which he made a gastric fistula after Marwedel's method. In this an incision is made in the linea alba from the sternum to the umbilicus, and the abdominal wall is divided layer by layer until the peritoneal cavity is opened. The stomach is drawn to the opening, and two sutures are inserted into but not through the anterior wall of the organ. Then the stomach wall is sutured to the sides of the abdominal incision for a distance of 7–8 cm., and the remaining portion of the incision is closed. An incision, 5–6 cm. long, is now made through the serous and muscular coats of the stomach. In the lowest corner of the mucous tunic a small opening is made through which a drainage tube the size of a lead pencil is passed into the cavity of the stomach. The outer portion of the tube is laid along the bottom of the stomach wound and the muscular and serous layers are stitched over it. Thus is formed a canal 5 or 6 cm. long in the substance of the wall of the stomach. If necessary food can be introduced at once while the patient is on the operating-table.

A Case of Imperforate Vagina.—S. I. Bubnoff reports the case of a woman nineteen years old, who had been married four months. She had never menstruated and coitus was found to be impossible. Examination showed the vagina occluded by a tough membrane bulging outward and fluctuating. On palpation of the abdomen a tense and elastic tumor was felt in the median line reaching over a little to the left. This was about the size of a new-born child's head, and to the left of this was another tumor the size of a hen's egg, of a rather soft consistence and painful on pressure. A diagnosis was made of imperforate hymen with retained menses and resultant hæmato-colpometra and left hæmatosalpinx. This diagnosis was confirmed at the operation, the results of which were so successful that the patient gave birth to a healthy girl a year and a half later.

Late Spontaneous Hemorrhage from the Umbilicus in the New-Born.—J. M. Lvoff reports two cases of umbilical hemorrhage, one on the tenth and the other on the thirteenth day of life. The bleeding in this affection occurs at the end of the first or in the course of the second week, after the stump of the cord has fallen, and is a general oozing from the surface of the umbilical wound rather than a hemorrhage from the umbilical vessels. Hereditary syphilis and hæmophilia are, in the author's belief, the main etiological factors. Applications of styptic cotton or of gypsum usually suffice to still the bleeding, but if this persists a needle may be passed beneath the bleeding surface and vessels constricted by a thread wound round the base.

Castration in a Case of Imperforate Vagina and Rudimentary Uterus.—A. Eberlin and S. Maloletkoff report the case of a woman aged twenty-three years, in whom the following developmental defects were found in the genitalia: The external sexual organs were imperfectly developed; the vagina was completely wanting; there was a uterus rudimentarius solidus unicornis; the adnexa on the left side were absent, but were normally developed on the right side. There was cystic degeneration of the right ovary. The authors have found twenty similar cases of defective uterus and vagina in which operation was performed, and in all but two with success. In five of these cases the adnexa were absent on one side, and that always the left side.

Cases of Ptomain Paralysis.—P. A. Preobrazhenski reports two cases, in a woman aged forty years and her son aged fifteen, of paralysis resulting from auto-intoxication. The chief points of interest were the absence of any prodromes; the apyretic course of the disease; the involvement, in greater or lesser degree, of all or nearly all the voluntary muscles; the greater affection of the muscles of the upper part of the body as compared with those of the lower extremities; the entire absence of any sensory disturbances, vesical or rectal involvement, or psychic disorders; the participation in the paralysis of the vasomotors of the face.

Contribution to the Pathology of the Lower Part of the Spinal Cord.—L. S. Minor reports six cases of traumatic lesions of the lower portion of the spine, usually from falls, in all of which, the sensory, electromuscular, and trophic disturbances were most pronounced and most persistent in the parts supplied by the peroneal nerve. He concludes that in these cases there was a special, purely anatomical lesion of the origin and roots of the peroneal nerves of which the paralysis of the parts was the expression.

Intramuscular Injections of Quinine.—Alexander Ivanoff says it is possible to avoid all the accidents which may follow the subcutaneous injection of quinine by making the injections into the muscular tissue. For this purpose he used a solution of bimuriate of quinine in distilled water (1 : 4), freshly prepared for each injection. The amount injected is 2 gm., the amount of the drug being therefore 0.5 gm. The injections are almost painless, and in more than twenty-five cases in which the author resorted to this method he saw no untoward results at all.

A Case of Interstitial Pregnancy.—V. Stezhenski reports a case of this rare condition occurring in a woman twenty-five years old who had had one normal labor. The fœtus, of about the third month, was removed by operation and the woman made a good recovery. As to the rarity of this condition the author quotes Rosenthal, who collected thirteen hundred and twenty-four cases of ectopic gestation, among which were only forty of interstitial pregnancy.

Tumors.—P. Tikhoff presents an elaborate statistical study of tumors, the chief conclusions from which are that the influence of sex in the predisposition to new growths is not apparent, that cancer occupies an important if not the chief place among tumors as regards frequency of occurrence, and that the extremities are relatively infrequently the seat of neoplasms.

Practical Observations on Antisepsis in New-Born and Nursing Children.—A. N. Ustinoff describes and pictures several forms of apparatus for the disinfection and sterilization of napkins and other articles used in the toilet of infants.

Correspondence.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

I am thankful that it is only the medical aspects of the war of which I am asked—and, for that matter, am competent—to send an account. For the historic and strategic aspects require great knowledge and great tact in any writer who may try to place them clearly and succinctly before his readers. Writing as I do on the morning of January 24th, when all England is holding breath in expectation of news concerning Sir Redvers Buller's relieving column, now describing a semicircle in the direction of Ladysmith, it is sufficient to say that on the issue of the next few hours hangs largely the fate of the war. I do not mean that England will give up the struggle if she meets with another rebuff; but that a victory now will go far toward redeeming past losses. Further prophecy I will not indulge in, particularly as by the time that this letter reaches you the telegraph will have told you so much more than I now know.

General Hospitals.—The first two general hospitals at Wynberg having rapidly received their complement after the reverse at Magersfontein and Colenso, a third general hospital capable of accommodating five hundred or six hundred patients was set up at Rondebosch, a beautiful high-lying spot between Wynberg and Cape Town, while a fourth was established at De Aar, the important junction three hundred miles or so northeast of Cape Town, whence the railway branches east into the Orange Free State, and northwest to Kimberley. There is a hospital at Pietermaritzburg, which will now hold five hundred or six hundred patients. These five hospitals will give care to at least twenty-five hundred medical and surgical cases, and they will, it is hoped, prove equivalent to the demand, supplemented as they are by several smaller institutions. The transport and hospital ships plying between Cape Town and Southampton have already begun to bring back to England regular relays of sick and wounded who are able to travel, and with such abstraction, amounting now to five hundred at least, from the totals of the convalescents the accommodation provided by the general hospitals should be sufficient. In Great Britain at various hospitals and institutions five hundred and seventy beds have been placed at the disposal of the government for the reception of these convalescents, while similar offers are coming in fast. The Herbert Hospital and Netley Hospital will accommodate as many more, so that the after-care of the wounded need not be a source of much anxiety to the nation. In addition, many noblemen and gentlemen are offering their country houses to be used as convalescent homes, guaranteeing the expense of support as well as giving the shelter.

A Half-Way Treatment for the Convalescents.—In view of the fact that a great many of the sick and wounded who have so far arrived home again have been practically cured, and are ready to return to the front, two proposals have been made: (1) That convalescent homes should be established in South Africa; and (2) that such homes should be established in the middle of the return journey, viz., in Madeira and the Canary Isles. The first plan is not indorsed by thinking people. There may at any time be great strain on the resources of Cape Town, the population of which has become wellnigh doubled during the last few weeks; the sea voyage has probably counted for much in the excellent plight in which many of the wounded have reached British shores; and, lastly, as the transports must go from England to the Cape carrying stores, furniture of war, reinforcements, and horses, they may as well convey the sick to England, where ample provision for them can be made. But half-way homes at Madeira are an excellent suggestion, to which practical effect may be given. I do not expect, however, that it will.

The Stationary Hospitals and Bearer Companies; the R. A. M. C. Under Fire.—There are, of course, stationary hospitals in Natal, behind General Buller's advancing force, and behind the columns which have proceeded north against the Orange Free State, or to the relief of Kimberley. Those in Natal had their positions at Frere and Estcourt. The stationary hospital at Frere was designed by Major R. Kirkpatrick, R.A.M.C., and is manned by a quartermaster, four members of the Royal Army Medical Corps, and thirty-eight non-commissioned officers, compounders, cooks, etc.; it has also two army nursing-sisters. At the battle of the Tugela River (sometimes called the battle of Colenso) their hospital was moved to Chieveley, and connected with the bearer companies by twelve hundred civilian stretcher-bearers. The bearer companies went quite up to the fighting line, an ambulance train accompanying them so far that it had to be turned back lest it should be hit by a shell. Each bearer company was manned by a surgeon-major, accompanied by three junior medical officers, fifty non-commissioned officers and military bearers, five hundred civilian bearers, ten ambulance wagons, and a general service wagon. When the battle commenced stretcher squads picked up the wounded from just behind the fighting line, and bore them to a collecting-station. Here the wounded were sorted and carried by stretchers and ambulance wagons to the dressing-tents. There they received first aid, and were sorted in cacordance with their injuries, before being conveyed to the stationary field hospital where the operating-tables were set up. The scene in the operative tents at the station field hospitals beggars detailed description. From 3 A.M. until late at night the operators were hard at work, and altogether eight hundred patients passed under special treatment during the time mentioned.

OUR LONDON LETTER.

(From our Special Correspondent.)

WAR — INFLUENZA — WATER SUPPLY — PATHOLOGICAL SOCIETY; THROMBOSIS, CANCER, PNEUMOCOCCUS — GYNÆCOLOGICAL ADDRESS — APPENDICITIS — SIR M. FOSTER FOR M. P. — SIR H. BEEVOR — LOCAL GOVERNMENT BOARD APPOINTMENTS — DUBLIN MORTALITY — RECENT DEATHS.

LONDON, January 26, 1900.

THE war is almost the sole subject of interest, but in this moment of tension I must not write about it. You will have all the general news from other sources. But I cannot forbear saying that amid all the criminal blundering and neglect of the War Office to which the attention of Parliament is about to be devoted, the conflict in South Africa has shown one bright spot, viz., the medical department, the service which the "combatant" influence has done its best to cripple. The insane jealousy of all "civilians" of the commander-in-chief was always directed to snubbing "mere doctors," and has now reaped its reward. The colonial horsemen he declined on the outbreak of the war, and who were just the men for the work, are at once engaged on the arrival of Lords Roberts and Kitchener.

The wave of influenza is receding here, though not yet in the northern towns. The deaths from the epidemic last week in London fell to two hundred and eight. The rate per thousand for the last four weeks has been 35.2, 37.1, 33.3, and 26.9. In the thirty-three great towns the rate averaged 24.9 as against 29.1 the previous week. In twenty-three of these towns there was an absolute decrease. The highest rate was at Nottingham—32.2—but even that was better than the 44.9 of the previous week, which was the highest rate recorded anywhere during the epidemic. It is thought that though there is an extension of the epidemic northward, its virulence is declining.

The royal commission on the water supply of London issues its final report this week. Their opinion is against permitting the county council to buy up the companies. Further, they say that the cost of bringing water from Wales would be double that required to make the present source adequate until 1941. This plan would cost twenty-eight or twenty-nine millions sterling, to meet which a three-per-cent. stock is recommended secured on the water charges. The commissioners favor the establishment of a new permanent board to control the whole supply, and the proceeding of which board should periodically be brought automatically under the notice of Parliament.

At the last meeting of the Pathological Society Mr. W. Pakes read a description of a case of thrombosis of the right and left iliac and femoral veins, in which he found post mortem bacillus proteus vulgaris. Although this organism is often associated with decomposition after death, he did not think that would explain this case, as the clot contained considerable numbers and there was no obvious decomposition.

Dr. T. G. Stevens gave an account of a thrombosed ovarian vein following hysterectomy. Cultures made with every precaution against contamination showed colonies of bacillus coli communis and bacillus pyocyaneus. Considering our scanty knowledge of the cause of thrombosis it seems desirable that further bacteriological examinations should be made.

Mr. Shattock showed a specimen of spontaneous carcinoma of the uterus of a rabbit, a disease the existence of which seems to have been unknown to many pathologists. It was of interest in reference to Dr. Lack's experiment last year, the result of which is regarded generally as a coincidence, a view taken by Mr. Shattock on this occasion and supported by Dr. Coupland and Mr. Ballance, the latter remarking on the frequency with which what in first experiments may be taken for law turns out to be only an incident.

Dr. Auld read a paper giving an account of some two hundred experiments, extending over two years, with toxins of pneumococcus. Rabbits were principally used. In these an increased sensitiveness to the pneumococcus was produced by inoculation of the toxins, and that under all circumstances of dosage. Attempts to immunize in this way, therefore, seem contraindicated. This result harmonizes to some extent with what has been found in plague and some other toxins. It was suggested that the intracellular bodies of the micro-organisms might be more suitably immunizing agents, as Foà and Scabia had found a watery glycerin extract of the dead bodies better than the diluted virus itself. The occurrence of paralysis of the fore-legs in two cases was notable as not previously observed, and may indicate that the poison has an affinity for the nerves and centres supplying these parts. Dr. Auld had been helped by Dr. Cartwright Wood, and in reply to questions said the hypersensitiveness to the toxins was certainly remarkable, but had also been met with in plague, in diphtheria in guinea-pigs, and he believed with tuberculin under certain circumstances.

At the annual meeting of the Gynæcological Society Dr. W. J. Smyly was elected president for the ensuing year, and the retiring president, Dr. Macnaughton-Jones, delivered a valedictory address on "The Correlation between Sexual Function and Insanity and Crime in Women." From a careful study of the questions involved he concludes: (1) That the correlation of insanity and disordered sexual function arising from affections of the generative organs is a factor to be seriously considered in the treatment of the mentally afflicted. (2) When there is ground to suspect disease of the uterus or adnexa which might aggravate the mental affection, a careful examination should be made, anæsthesia being employed if necessary. (3) In the investigation of crime committed by women during the menopause or while the menstrual function is either active or suppressed, due weight ought to be attached to the influence on the mind of the woman of the irregularity or abeyance, and her previous history and temperament. (4) The special dangers of the climacteric ought to be considered. (5) After operations on the female generative organs there is greater predisposition to mental disturbance than after other procedures. (6) Women who have been insane are predisposed to relapse by the development of disease in or operations on their generative organs. Taking these conditions into consideration it seems that close supervision and care are required to anticipate insane impulses in patients who have shown any symptoms of mental instability.

Dr. Macnaughton-Jones must feel well rewarded for his labors as president by the very hearty vote of thanks which was accorded him by acclamation on the motion of Dr. Routh, seconded by Dr. Smyly, and supported by Mr. Stanmore Bishop. The speeches of these gentlemen were enthusiastic, and their warmth found an echo throughout the audience.

On Monday the Medical Society was regaled with a paper by Mr. Lockwood on that continually recurring subject, appendicitis. The paper elicited a discussion, which was adjourned to February 24th. Mr. Lockwood illustrated by a number of lantern slides the appearances described. By means of photographs of sections he traced the spread of infection through the lymphatics to the peritoneum. He described the varieties of the affection from mild appendicular colic to catarrh, stenosis, ulceration, and gangrene. The conditions appeared to him to be unfavorable to a process of natural cure. Fecal concretions are always associated with ulceration, and Mr. Lockwood's specimens seem to show that they are due to bacteria—a point not previously noticed. Bacterial accumulation in the appendix seems the cause of both the ulceration and concretion.

Dr. Allchin admitted that much progress had been made in our knowledge of this disease, but he defended medical treatment in a considerable number of cases, and thought surgical intervention only called for when pus had been formed. In the ordinary run of cases met with in the medical wards the symptoms usually subsided in about two weeks, and the patients seemed practically cured. These were the cases in which medical treatment was useful, and he regarded small doses of opium, supplemented sometimes by belladonna, as a valuable remedy. As to prognosis he attached much importance to an increase in the rapidity of the pulse. Of course in fulminant and acute cases, and when pus was diagnosed, surgical intervention must not be delayed. Relapsing cases were difficult, but many would be benefited by rest and treatment.

Mr. Barker considered the infection of the lymphatics as demonstrated in the paper and illustrations. Some very difficult cases could be explained in this way, *e.g.*, those in which inflammation occurred at a distance, including subphrenic abscess. He agreed that opium was useful. He insisted on the bactericidal power of the peritoneum, and was not in the habit of washing out the abdominal cavity. Even in widespread suppuration he limited his intervention to the smallest possible area of peritoneum.

Dr. F. Smith remarked that in a considerable number of ulcerated and some gangrenous cases there was no previous history of pain, a fact also observed in many cases of gastric ulcer. He said that even in the post-mortem room it is practically impossible to cleanse the peritoneum, so that he doubted if the surgeon could effect it on the operating-table. From a large number of autopsies he was led to conclude that the most common position for the appendix was behind the cæcum or the ascending colon—so that the surgeon should make an incision which would give access to that region. He regarded rapidity of the pulse and the occurrence of night sweats as reliable indications.

Sir Michael Foster is a candidate for the representation of the London University in succession to Sir John Lubbock, who has been raised to the peerage.

Sir Hugh R. Beevor, Bart., M.D., etc., has been appointed representative of the Society of Apothecaries in the General Medical Council, vice Mr. Brudenell-Carter.

Mr. W. H. Power, as was generally anticipated, is promoted to the principal medical officership of the Local Government Board, in succession to the late Sir R. Thorne Thorne. Dr. Franklin Parsons and Dr. Bruce Low become assistant medical officers.

The committee of inquiry into the excessive death rate of Dublin, which I told you the lord-lieutenant contemplated, has been appointed. It was time, for the registrar-general reports a rate of 49.4 per 1,000 with further increase in deaths from zymotic diseases.

Dr. Grimshaw, registrar-general for Ireland, and ex-president of the Dublin College of Physicians, died on Tuesday.

Dr. John Gorham, who died last month, aged eighty-five years, contributed various medical papers to the journals, but devoted his work chiefly to science, especially optics and mineralogy. He was a fellow of the Botanical and other scientific societies and the contributor of many papers.

Another aged and retired veteran who died lately was Dr. Humphry Minchin, who took his diplomas in 1838 and 1840. He was for some time professor of botany at the Dublin College of Surgeons, and many years treasurer of the Irish Medical Association.

Among other recent deaths are those of Inspector-General E. T. Mortimer, lately in charge of Haslar Hospital. He had a very distinguished career in the navy, and retired in 1894, aged sixty-six years.

Dr. Robert Collum died at the age of eighty-six years. He served in the East India Company, and after his retirement took a prominent part in the Society of Members of the College of Surgeons.

Dr. O'Sullivan, professor of surgery, Queens College, Cork, died aged sixty-four years.

Dr. Samuel R. Mason died suddenly on the eighth inst. He was professor of midwifery R.C.S.I., and had been master of the Coombe Lying-in Hospital. He was only forty-seven years old, and his aged father (born in 1817), who survives him, was joint founder with Dr. Ledwich of the Ledwich School of Medicine, Dublin.

Dr. C. P. Walker, R.A.M.C., died on the fifth inst., at Ladysmith, from dysentery. He was in the front at Dundee and Elandslaagte.

FORM OF LEGISLATION WHICH WILL ENABLE CITIES, TOWNS, AND VILLAGES IN THE STATE OF NEW YORK TO ESTABLISH HOSPITALS FOR THE TREATMENT OF TUBERCULOSIS.

To the Editor of the Medical Record.

Sir: The proposition to establish local hospitals for "consumptives" is based on the following consideration: 1. Consumptives must be under strict medical supervision in order that rules relating to personal hygiene may be rigidly enforced. 2. With the poor this supervision can be properly enforced only in a hospital. 3. As these hospitals are for the poor they should be located as nearly as possible to their homes. 4. It now appears that if these hospitals are well managed, though located near any village or city on a dry and protected place, patients recover quite as rapidly as in a sanatorium on a distant mountain. 5. The local hospital is a centre of instruction to the neighboring community of the utmost value, for experience proves that the people quickly learn from those who are being treated in the hospital how to prevent the spread of the germs of tuberculosis, and strictly follow the rules therein enforced. 6. The cures effected in the local hospital are more likely to be permanent than those obtained in hospitals under different climatic conditions. 7. Vast numbers of sick poor will cherfully enter the local hospital, where they can be near their homes, who would not go to a distant sanatorium.

Fortunately we have in this State a well-organized system of public-health administration, which can be made immediately available in the organization and management of local hospitals in every community. The public-health law requires the creation of boards of health in every city, town, and village in the State. These boards are composed of the best citizens in each locality, and as a rule they choose thoroughly competent medical men as health officers. Finally, they are under the general jurisdiction of the State board of health.

The question has arisen, What legislation would be necessary to enable local boards of health to establish local hospitals for the treatment of "consumptives" within their respective jurisdictions? The following sections of a bill to accomplish that purpose have been formulated from the "public-health law," and from a "Circular of Information concerning the Measures adopted by the State Board of Health for the Prevention of Tuberculosis in the State of New York." The first four sections are a nearly literal transcript of that circular, and the passage of such a bill by the legislature would simply give legal effect to the rules and regulations of the State board of health, now existing, for the prevention of tuberculosis. These sections of a bill are submitted as suggestions to those engaged in securing legislation for that purpose.

"SECTION 1. The board of health of the State of New York having declared, officially, that the communicability of tuberculosis or consumption has been so thoroughly established, and is now so generally recognized by the medical profession throughout the world, that it has determined to take such active measures as may be consistent and possible for the prevention of the disease among the people of the State, it is hereby made the duty of said board and local boards of health to co-operate, as far as practicable, in the enforcement of the measures provided in this act for the prevention of the spread of tuberculosis.

"SECTION 2. Local health officers hereafter shall register the name, address, sex, and age of every person suffering from tuberculosis within their respective jurisdiction, so far as such information can be obtained, and all physicians shall forward such information to the health officials in the respective jurisdictions in which such cases may occur. This information shall be solely for the use of health officers, and in no case will visits be made to such persons by public officials, nor will any public sanitary surveillance of such patients be assumed, unless the patient resides in a tenement house, boarding house, or hotel, or unless the attending physician requests that an inspection be made of the premises, and in no case where the person resides in a tenement house, boarding-house, or hotel, if the physician requests that no visits be made by inspectors, and is willing himself to deliver circulars of information, or furnish such equivalent information as is required to prevent the extension of the disease to others.

"SECTION 3. When a local health officer obtains knowledge of the existence of cases of pulmonary tuberculosis residing in tenement houses, boarding-houses, or hotels, unless the case has been reported by a physician, and the latter requests that no visits be made, inspectors will visit the premises and family, will leave circulars of information, and instruct the person suffering from consumption, and the family, concerning the measures which should be taken to guard against the spread of the disease; and if it is considered necessary, will make such recommendations for the cleaning or renovation of the apartment as may be required to render it free from infection.

"SECTION 4. In all cases where it comes to the knowledge of a local health officer that premises which have been occupied by consumptives have been vacated by death or removal, he or an inspector will visit the premises, and direct the removal of infected articles, such as carpets, rugs, bedding, etc., for disinfection, and will make such written recommendations to his immediate superior concerning the cleaning and renovation of the apartment as may be required. An order embodying these recommendations will then be issued to the owner of the premises, and compliance with this order will be enforced for sanitary reasons. No other persons than those there residing at the time will be allowed to occupy such apartments until the order of the health officer has been complied with.

"SECTION 5. Whenever any board of health of a city, town, or village shall certify to the State board of health that, as a means of preventing the spread of tuberculosis within its jurisdiction, it is necessary to establish a hospital or hospitals for the treatment of persons suffering from that disease, said State board shall cause an investigation to be made of the conditions alleged to exist, and if it shall appear that there is a necessity for the hospital or hospitals proposed by the local board, the State board shall enter upon its minutes an order directing the establishment of one or more hospitals for the care and treatment of persons suffering from tuberculosis within the jurisdiction of the local board making such application, and shall cause a copy of said order to be forthwith served upon said local board; on the receipt of said order, the local board shall cause its entry upon its minutes, and, as soon as practicable thereafter, shall proceed to establish the required hospital or hospitals, but no site or sites shall be selected, nor buildings erected nor rented for that purpose, without the approval in writing of the State board of health and the State architect. Hospitals established under the provisions of this act shall be under the control of the local board of health having jurisdiction of the district within which it is located, except as hereinafter provided, and shall have power to appoint attending and resident physicians and such officers, nurses, and employees as may be necessary for the proper and economical management of any said hospitals; it shall prescribe the conditions of admission of patients and the rules and regulations governing their management. All expenses incurred in executing the provisions of this section shall be collected and paid as provided in section 30 of the public-health law.

"SECTION 6. Whenever it shall appear to the State board of health that a hospital or hospitals for the care and treatment of tuberculosis can be located more advantageously and managed more economically if one or more towns and the incorporated villages therein unite in one sanitary district, as provided in Section 29 of the public-health law, said State board shall notify the boards of health of the proposed sanitary district of its decision, and the local boards of health shall, on receiving such notification, appoint one of their members to meet representatives of the several boards of health of the proposed sanitary district, at such time and place as the State board shall direct, for the purpose of effecting an organization to supervise the establishment and management of one or more hospitals for the sanitary district thereby created. The action taken by the representatives shall be submitted to their respective boards, and if approved, each board shall appoint one of its members to be a member of a board of managers of the hospital or hospitals to be created, and said board of managers shall forthwith proceed to establish the hospital or hospitals authorized by the joint action of the several boards of health, either by leasing existing buildings or by the erection of new structures. All expenses incurred in leasing or erecting buildings, and in the furnishing and management of the hospital, shall be a per-capita charge upon the people of each town and municipality of the sanitary district, to be audited, levied, collected, and paid in the same manner as the other charges of, or upon, the town or municipality are audited, levied, collected, and paid.

"SECTION 7. The board of managers hereby created for the hospital of the sanitary district shall have the same powers to lease existing buildings, or to select a site and erect buildings, for the proposed hospital, and to select a visiting and resident staff of physicians, and to appoint officers, and fix their pay, and make rules governing the admission of patients, as local boards of health, as provided in section 5 of this act, and it shall annually, on or before October 1st of each year, make an itemized report of all expenditures for the preceding year, together with estimates of necessary expenditures for the succeeding year; also statistics of the patients, and the results of treatment; with such suggestions as the board may deem useful. A copy of said report shall be furnished to each of the several boards of health in the sanitary district."

STEPHEN SMITH, M.D.

640 MADISON AVENUE.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 1, 1900.

William H. Thomson, M.D., President.

Amendment of Federal Tax on Legacies to Charitable and Educational Institutions.—A petition, praying for the amendment of the federal tax law regarding legacies to charitable and educational institutions, was presented to the Academy for its indorsement, on the ground that the tax was excessive. It was stated, in the discussion, that the tax, according to the present law, amounted to one-tenth of the whole amount of the legacy. On motion of Dr. Leonard Weber, the Academy gave its official indorsement to this petition to Congress.

Antivivisection Bill.—The Academy also formally indorsed the opposition to Senator Gallinger's antivivisection bill.

Causes of Failure of Compensation in Heart Disease.—Dr. Morris Manges presented a communication on this subject. He stated that in one hundred and two cases studied by Romberg, the average duration of compensation had been found to be seven years. To the myocardium one must look for compensation, and what had been aptly called by Romberg "decompensation." It was now quite generally accepted that fatty degeneration played only a minor part in the production of decompensation. Even undue distention of the heart might be successfully met by a sound heart muscle, but excessive tension of sufficient duration to cause exhaustion of the heart muscle was most dangerous. It should be remembered that the rate of normal muscular fatigue varied with the individual. It had been shown by Theodore Schott that the normal heart could successfully cope with acute dilatation. Littell claimed that in hypertrophy the interstitial tissue increased as well as the muscular fibres. In acute infectious diseases it was not improbable that acute interstitial changes resulted directly in an increase of the connective tissue. According to Deyo there might be a myofibrosis affecting the whole heart, but this view had not been sustained by later observers. The nervous system had also been found at fault, changes having been discovered in the heart ganglia. Hearts which have been attacked by organic valvular disease from any cause no longer had a normal myocardium, since the latter had been involved in foci, or diffusely. While a hypertrophied heart was more liable to arteriosclerosis of the coronaries, and to chronic myocarditis, yet proper care of the general nutrition and proper adjustment of the work of the heart might postpone decompensation indefinitely. From the clinical standpoint it could be said that failure of compensation of the heart was not a clinical entity. Changes in the heart wall leading to failure of compensation might result (1) from failure of the general nutrition of the body; (2) from disturbance of the local nutrition of the heart; (3) from increased work of the heart; (4) from functional cardiac disorders. Gout, rheumatism, and various other constitutional disorders were also potent factors. More rapid in action were such acute infections as acute rheumatism, diphtheria, scarlet fever, typhoid fever, pneumonia, influenza, and sepsis. Chronic arteriosclerosis was by far the most common of the causes affecting local nutrition of the heart. Hearts with valvular disease and hypertrophy were specially liable to these disturbances of nutrition. The danger to the heart of prolonged and violent physical exercise was now generally recognized. In this connection it might be mentioned that the muscular effort associated with parturition would often seriously damage the heart already enfeebled by valvulitis. Fright or extreme and prolonged worry must be included among the causes. A final group could be made of those cases in which much mischief was caused by the irrational and unnecessary use of drugs commonly known as cardiac tonics. The popular abuse of coal-tar products and of the thyroid extract came under this head, as did also an unwise use of cures for the reduction of obesity.

Aortic Valvulitis and Aortitis.—Dr. Frank Jackson, in this paper, confined his attention chiefly to the mechanical results of chronic inflammation of the aortic valves. Chronic inflammation of the aortic valves, he said, resulted most commonly from rheumatism, gout, syphilis, chronic alcoholic poisoning, and excessive and continued muscular strain. The result of chronic aortic valvulitis might be primary or secondary. The primary result would be thickening and deformity, or perhaps rupture of segments of the valve. When there was much deformity of the aortic valve, hypertrophy, dilatation, and irregular action of the heart resulted. While pure aortic stenosis was undoubtedly occasionally found, the condition most commonly passing under that name was one in which a thickened or stiffened valve was associated with a systolic murmur heard over the base of the heart without any true stenosis being present. When the valves were greatly deformed, one found aortic regurgitation and marked hypertrophy and dilatation of the heart. Aortic insufficiency was as common as aortic stenosis was uncommon. The causes of aortic insufficiency were: (1) Congenital malformation of the valves; (2) traumatic rupture of one or more valves, (3) acute endocarditis; (4) chronic endocarditis, the result of rheumatism, strain, syphilis, gout, or chronic alcoholic poisoning. It was so commonly found in athletes that it had been termed "the athlete's heart." The effect of the regurgitation of the blood during diastole might be very considerable. In many of these cases the patient complained chiefly of a tumultuous action of the heart, and more or less dyspnœa on exertion. In some instances, with moderate leakage of the valves, compensation might be maintained for years, and the individual might never know that there was anything wrong with his heart. Such cases usually followed an endocarditis, and were not a part of a general arteriosclerosis. Sudden death was more frequent in these cases than in any other form of valvular disease, though the majority of these persons died feeble and emaciated, often of some intercurrent disease. The physical signs were the murmur, the enlargement of the heart, the action of this organ, and the condition of the arteries. The murmur itself must not be considered as evidence of heart disease. Likewise, the absence of a murmur, when there were other symptoms of cardiac disease, should not be regarded as evidence that there is no valvulitis. A murmur might, and frequently did, appear or disappear repeatedly. While such murmurs were most commonly heard in connection with functional disorder of the heart, they were also noted in conjunction with organic disease of the heart. Some murmurs were audible to the ear and not with the stethoscope, and the reverse of this was also true. He had no explanation to offer for this peculiar phenomenon. Again, murmurs did not always confine themselves to the classical situation. The murmur of aortic regurgitation particularly was often heard only over the ensiform cartilage; less frequently the murmur produced by this lesion was audible only at the apex of the heart. The cardiac murmur should be looked upon only as corroborative evidence of the existence of heart disease, the diagnosis not being made on the presence of a murmur only, but upon the size of the heart, the character of its action, the condition of its muscle, and the concomitant symptoms. A tumultuous action of the heart was sometimes the result of a neurosis, and an apparent enlargement downward in some instances was to be explained by a long, narrow thorax, with a thin muscular covering. The condition of the arteries must be noted, both as regards the presence or absence of arteriosclerosis, and also as to the tension. In aortic regurgitation the dyspnœa was not very severe so long as the mitral valve was competent. Painful sensations were especially common in this form of valvulitis, and least common in mitral regurgitation. The pain was usually substernal and was developed on exertion, though occasionally it was present when the person was at rest.

Chronic Aortitis.—Chronic inflammation of the aorta was usually associated with a similar condition of the aortic valves. The causes were practically the same as those of aortic valvulitis. The symptoms depended upon the nature of the changes. If the aorta was roughened by atheroma, there might be a systolic murmur unassociated with the change in the size or action of the heart. A thinning of the coats of the aorta might result in the formation of an aneurismal sac, and this, in turn, might give rise directly to no symptoms further than those resulting from pressure, and a simulation of other conditions.

Recent Methods of Treatment by Baths and Exercises.—DR. THOMAS E. SATTERTHWAITE described in this paper the methods employed by him in the past two years. He stated that the exercises consisted of flexion, extension, adduction, abduction, and rotation of the limbs, neck, and trunk by the patient, while the operator resisted. Between each single movement there was an intermission. Certain respiratory passive movements he had also found exceedingly useful. For patients in bed, they were instructed to lie on the back while the operator passed his hands under the chest and raised it slowly without lifting the person actually from the bed. This movement was specially adapted to obese patients, or to cases of cardiac dropsy. Each respiratory movement was in the direction of artificial respiration, and should be repeated from one to five times a minute. For stronger patients, they were instructed to sit on a stool while the operator, standing behind, grasped the axillæ, the arms being raised, and raised the patient upward, at the same time bending him backward. The various exercises should be so interwoven as to give a pleasing variety. The séance at first should not last more than fifteen minutes. Slight albuminuria, slight glycosuria, and slight dropsy did not absolutely contraindicate the use of the baths. After the first week of the baths it was his custom to begin to carbonate them. The immersion should not be less than four minutes nor more than fourteen minutes. As a rule, the temperature at first should be 98° F., and an effort should be made usually to reduce the temperature gradually, but not more than one degree each time. A bath should never be made of such a temperature that the patient, on immersion, feels a sensation of chilliness. Intermittent baths had been found more useful than consecutive ones. In neurotic cases it was not advisable to use the more concentrated salts. Baths should not be used in cases of Bright's disease in which the parenchyma of the kidney was extensively involved. Many cases of arteriosclerosis were not benefited. In general, cardiac dropsy, if extensive and advanced, was not likely to be benefited by such treatment. The baths and exercises were applicable, in his experience, to about eighty per cent. of the cases of cardiac disease with broken compensation.

DR. LEONARD WEBER said that as long as the myocardium was not diseased, simple attenuation and hypertrophy would not shorten life. The case was very different when the myocardium was diseased. In cases of acute rheumatic endocarditis the myocardium was the seat of an œdematous infiltration, which was, as a rule, temporary. With reference to the Nauheim treatment, he advised against neurasthenics with cardiac neuroses being sent there, and likewise rheumatic subjects, because of the great dampness of that place. He called attention to the fact that physicians when sending their patients to such bath establishments were commonly negligent about sending with them an accurate history, with suggestions as to the treatment. It was very important that the baths should not be given too frequently or be of long duration.

DR. WILLIAM H. THOMSON explained that his reason for arranging for this discussion on cardiac disease, occupying two meetings of the Academy, was to direct attention to cardiac conditions that might necessarily have no relation to cardiac murmurs. The discussion of this evening had shown very clearly that heart diseases were characterized by a great complexity of symptoms, and Dr. Satterthwaite had insisted upon leaving the heart alone and directing attention to the betterment of the circulation through the muscles, and to improving the functions of the various organs of the body. Personally he believed one of the greatest mistakes in cardiac therapeutics was the placing any reliance for permanent benefit on such drugs as digitalis, strophanthus, strychnine, caffeine, nitroglycerin, sparteine, etc. These were all nervines, and no nervine could have any effect on the nutrition; they served only to stimulate function. Undoubtedly they were useful to combat temporary danger, or as adjuvants to what he would call the real remedies. Throughout the whole animal kingdom muscular power was in direct proportion to the amount of oxygen used. In chronic atony of the stomach and intestine; in chronic atony of the bladder, in chronic bronchitis and emphysema, there was nothing like an abundant supply of fresh air, and he believed the gynæcologist would have to go out of business if all women worked in the open air. In chronic cardiac disease he always made it a point to give iron because this was the remedy that helped us to breathe. The mineral ingredients of the Kissingen water and of the Saratoga Vichy water were the same as those of the human blood. A full dose of either of these waters, therefore, amounted to a full dose of an excess of what was already in the system; there was no foreign substance to eliminate. In heart disease he made use of two drugs which he could not do without, although he was unable to understand how they acted. One of these was sodium iodide, which he gave continuously in doses of gr. v.; the other was calomel, which he gave intermittently.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, January 29, 1900.

GEORGE B. FOWLER, M.D., PRESIDENT.

How the Milk Supply of New York May be Improved.—DR. HENRY DWIGHT CHAPIN opened the discussion with a communication on this subject (see page 230).

The Work of the United States Department of Agriculture in Connection with the Production and Handling of Milk.—MAJOR HENRY E. ALVORD, chief of the dairy division, Bureau of Animal Industry, Washington, D. C., took up this topic. He said that the chief object of the department was to improve and help the farmer, but the department also conducted a large experimental station. The Bureau of Animal

Industry, he said, had been chiefly in the hands of veterinarians, and had in years past devoted itself largely to veterinary matters. Later, it had been engaged a good deal in the inspection of meats, and since July 1, 1895, there had been the dairy division, under his care. The function of this division was to acquire and disseminate information useful to dairymen. Heretofore there had been but little surplus dairy products in this country, with the exception of cheese, but it was probable that in the near future there would be a greater surplus, and hence the division had been looking for foreign markets for such products. The division had been engaged in a series of experimental exports of dairy products. With this same end in view it was the intention to make a good display of such products by the government at the Paris Exposition this year.

Number of Cows in the United States.—The first attempt to count the cows of the United States was made in 1840, and although this attempt had been repeated at each decennial census, there had been no pretence that even an approximate count of the cows in this country had ever been made. A special effort was to be made in connection with the next census to obtain a fairly accurate count. It was probable that there were from five to five and a half millions of cows kept in this country for the purpose of producing milk for food, or about one cow to every fourteen persons of all ages. But every cow in this country does not give more than four quarts of milk daily, so that the supply is only about half a pint a day for each person in the United States—not a very ample supply.

Milk as a Food.—The speaker said that the value of milk as food was not appreciated either by the producer or by the consumer. Milk was certainly better handled now than even a few years ago, and its transportation and distribution were also better. Moreover, the quality of the milk was better, as shown by the proportion of butter fat and total solids, and also as regards its freedom from bacterial contamination. This improvement he attributed less to legislation than to the individual enterprise of certain dairymen and companies. He was of the opinion that the milk supply was a great deal better than it was regarded by many people. There had been much unnecessary alarm over the possible danger of milk as a food. That milk was sometimes harmful could certainly not be disputed, but the number of such well-authenticated cases was proportionately very small. The standard of three per cent. of butter fat for food was enough for all practical purposes, as milk containing four per cent. or more of butter fat frequently had to be reduced in order to make it acceptable to the human stomach. A moderately low percentage of butter fat was not really harmful, except in a commercial sense. From a careful survey of the milk supply of the United States as a whole, the speaker said that he felt entirely safe in saying that the actual presence of disease germs in such milk supply was very rare, and the cases of actual injury from these germs was rarer still. The great mass of evidence on this subject was negative, and in favor of milk rather than against it. Any one could satisfy himself of this by personal search of the official records.

Sterilization and Pasteurization Condemned.—All were agreed as to the undesirability of adding preservatives to milk, for they were simply a premium on carelessness, filth, and dishonesty. He felt strongly disposed to make the same statement regarding both sterilization and pasteurization. These methods should be employed only under certain circumstances, and by no means as the rule. Condensed milk was much less digestible than good natural milk; there should be further and more scientific research regarding the digestibility both of condensed milk and of milk that has been sterilized or pasteurized. He would, at the present time, advocate pure natural milk over all other preparations of milk as food.

Food Value of Skimmed Milk.—Concerning the food value of skimmed milk the speaker remarked that one hundred pounds of skimmed milk contained more valuable food for the human being than one hundred pounds of whole milk. Butter fat had its function in the human economy, but it was not the valuable portion of the milk as a food.

New York Health Board Arraigned.—With the greatest energy possible the speaker characterized the attitude of this city on this skimmed-milk question. He declared that there was no difficulty in regulating the sale of skimmed milk, if it was only energetically undertaken. Of course, prohibition was easier, but the attitude of New York City on this question was that of a lazy man. There was no article of animal food produced on this continent which could compare in usefulness, and pound for pound when bought at the market prices, with skimmed milk, and yet the sale of this article was prohibited in New York City simply because the city authorities had not felt like exerting themselves sufficiently to regulate properly this most desirable traffic. Skimmed milk was sold in Boston, and very largely in the Connecticut valley to the milk operatives, and the latter partook very largely of this product, greatly to their advantage. Another great inconsistency on the part of the authorities of New York City was that they freely admitted condensed skimmed milk (condensed milk sold at low prices in the city) but barred out ordinary natural skimmed milk.

Dairy Bacteriology.—PROFESSOR H. W. CONN, of Wesleyan University, Middletown, Conn., discussed this topic. He introduced it by saying that he did not purpose to treat of it from the standpoint of an alarmist, for he was far from being that. If the ordinary sediment from milk was studied under the microscope, it would be found, he said, to consist of sticks, insects' legs and wings, of hay, of blood and pus—in fact, almost everything possible in the way of dirt, but, alas! a large part of it was excrement. It had been estimated that New York City consumed at least three hundred pounds of cow's excrement daily. He was glad to say that some of the milk-supply companies were endeavoring to bring about a better condition of things.

The Centrifuge and the Strainer Actually Increase the Number of Bacteria.—The centrifugal machine or the strainer only succeeded in removing the coarser portions of this dirt, and certainly bacterial contamination was not in the least affected by straining or by the action of the centrifugal machine. It was a well-known fact that both these processes really increased the number of bacteria by actual count. This was to be explained by the fact that a large number of bacteria were often confined in masses of dirt, and, as these masses were broken up by the centrifugal machine or by the strainer, the bacteria were distributed throughout the milk.

Number of Bacteria in Milk.—The cow was the great source of bacteria in milk. The number might vary from three or four thousand per cubic centimetre in very good milk up to ten or twenty million per cubic inch. Ordinary city milk contained from three to six million of bacteria per cubic centimetre. The number of bacteria varied with the cleanliness of the dairy, the age of the milk, and the temperature at which it had been kept.

Flavor of Butter due to Bacteria.—The presence of these bacteria had caused the development of the milk industry as it existed in this country. To these bacteria was to be attributed the delicate flavor of good butter. Butter made from cream free from bacteria was tasteless. While this was the kind of butter relished and purchased in Europe, it was not at all marketable in this country. The taste of cheese was also largely dependent upon the presence of bacteria.

Pathogenic Bacteria in Milk.—Only a few of the bacteria found in milk were parasitic, and they were the pathogenic bacteria as distinguished from the nonpathogenic. Fortunately, we could almost count on the fingers of one hand the number of human diseases that could be attributed to the milk supply.

Diseases Attributable to Milk.—These diseases were divisible into three types. The first type came from the cow; the second type came from the secondary contamination, and the third type was the result of poisons produced by the bacteria growing in the milk rather than from bacteria growing in the human organism.

Tuberculosis from Milk.—There was only one disease of any importance that could be traced to the cow herself, *i.e.*, tuberculosis. His own opinion was that the danger of tuberculosis from milk had been vastly exaggerated. In the first place, tuberculosis was present to a considerable extent in the milch cows of all civilized countries, though the extent could not be stated by an average percentage because of the very great variations in different herds. In the next place, a tuberculous cow might produce milk impregnated with tubercle bacilli. Again, if the tuberculosis was located in the udder, the cow would produce milk that was impregnated with these bacilli. It was still uncertain whether a cow having tuberculosis anywhere else than in the milk glands could, under ordinary circumstances, produce milk with the tubercle bacillus therein. Of course he did not refer to a condition of general tuberculosis. Milk containing the tubercle bacillus might produce tuberculosis in a person using that milk. The foregoing statements he believed no one would question, and, this being allowed, the next question to consider was, How great was this danger of contracting tuberculosis from partaking of milk? It was probable that this danger was vastly less than had been supposed for a few years. The great seat for tuberculosis in mankind was the lungs, and the entrance of the disease into the lungs was, of course, by respiration, and not by swallowing. Again, if the bacteria in milk produced tuberculosis in man, they would more likely produce intestinal tuberculosis; yet intestinal tuberculosis was not so very common in mankind. Moreover, the bacteria in milk must run the gauntlet of the gastric juice and the hydrochloric acid contained in this juice, as well as the intestinal juices before they had any opportunity to enter the system and do any harm.

Probably Different Germs for Human and Bovine Tuberculosis.—It was also extremely probable that the variety of tubercle bacillus producing the disease in man was slightly different from the one producing the disease in the cow. They belonged to the same species, but, within a few months, very good evidence had been collected to the effect that the tubercle bacillus for the cow was not particularly pathogenic for the human being, and *vice versa*. It must also be remembered that tuberculosis in mankind was decreasing in all civilized communities, while tuberculosis in cattle was increasing very rapidly. This decrease of tuberculosis in mankind was equally great in the United States and in England, where milk was drunk raw, as it was in Germany and continental nations generally where the milk was customarily drunk in a practically sterile state. All these facts seemed to the speaker to indicate that the danger of tuberculosis from the milk had been grossly exaggerated. Undoubtedly there was a danger—to young children, perhaps, a considerable danger—but there was danger in going to the theatre, and he was inclined to think that the adult ran more risk from going to the theatre than from drinking ordinary raw milk.

Other Less Common Infections.—It was probable that the cow sometimes had scarlet fever and diphtheria, and, if this was the case, these bacilli might at times get into the milk, and distribute these diseases to children. While there was a probability, such infection was not very common. Another danger was acute enteritis produced by milk. However, of the first class of diseases—those coming from the cow—tuberculous infection was the only one of much importance.

Typhoid Infection.—Of the diseases coming to the human being by secondary contamination, typhoid fever stood out pre-eminently. It was well known that many epidemics of typhoid fever had been traced to the milk supply; within the last five years undoubtedly as many as fifty such epidemics had been traced to such a source. The reason for this was that the typhoid bacillus was capable of multiplying and growing in the milk, so that if only a few typhoid bacilli got into the milk, they would multiply rapidly. This was in sharp contrast with the behavior of the tubercle bacillus, which did not multiply and grow in milk. An occasional epidemic of scarlet fever or of diphtheria could be traced to secondary infection with the germs of these diseases, though no cases of this kind were on record in this country.

Diarrhœal Diseases.—A large proportion of the many intestinal troubles observed in hot weather could be traced to milk, but not to any particular bacillus or germ. They were the result of the abundant growth of many bacteria in the milk and the formation of certain toxins. Probably most cases of cholera infantum could be traced to milk in which there had been an undue multiplication of some of the common forms of bacteria not ordinarily looked upon as pathogenic.

Pasteurization.—It was impossible for milk dealers to insure the cleanliness of their milk in the present state of civilization in this country. Physicians and scientists might demand it; they might hold it up as an ideal, but we should not forget that "it was a condition and not a theory that confronted us." The speaker said that he heartily agreed with the preceding speaker regarding the undesirability of sterilization and pasteurization; nevertheless, with the present state of our milk supply we could not reject sterilization and pasteurization on the theory that they would encourage uncleanliness in the dairy. The significant fact was recalled that pasteurized milk was sold on a large scale in the city of Copenhagen at the same price as other milk, and the reason given for this was that less care was required in the cooling and handling of milk intended to be preserved in this way before being put on the market.

Good Milk Demands a Good Price.—He would reserve pasteurization for special instances. In conclusion, he would say regarding the quality of milk that everything which tended to cheapen milk did more to lower the standard of quality than almost anything else that could be done. If good milk was wanted, a good price should be paid for it.

The Work of the New York Board of Health.—Dr. Herman Betz, chief inspector of the milk in the health department, discussed the work of the board in connection with the inspection of milk. He said that the borough of Manhattan was divided into nine milk inspection districts. There were ten milk inspectors, and each district comprised about six or seven hundred milk stores. In 1899 the inspectors had made 8,047 inspections, examined 48,832 specimens of milk, and caused 117 arrests. The fines collected had amounted to $3,705. It was worthy of note that only eighty-four quarts of milk had been destroyed in the year 1899, although a total of ten million pounds of foodstuffs had been condemned in that year by the health department. Dr. Betz described in detail the apparatus employed, and the method of conducting the inspection of the milk, and the collection of samples for analysis. To facilitate the work of the department in tracing any individual can of milk, the cover of each can was marked with the name of the dealer, the road bringing it into the market, and the number of the station whence it came. If the analysis of a suspected sample of milk showed that it was more than five per cent. low in solids or three per cent. low in butter fat, a warrant was issued for the arrest of the milk dealer, and prosecution was commenced. Since 1896 every milk dealer had been required to obtain a permit from the health department, which was issued only after satisfactory inspection of the place from which the milk was to be sold. This permit was revoked, and the dealer no longer allowed to continue in the business, after he had been arrested and convicted twice for selling milk below the required standard.

Condensed Milk from Skimmed Milk Not on Sale Here.—In reply to the criticism of Major Alvord, Dr. Betz said that no condensed milk made from skimmed milk was allowed to be sold in this city. Only that very day two warrants had been issued for the arrest of dealers selling such an article. The department had succeeded in absolutely driving out from the city milk containing chemical preservatives.

The Question from the Milk Dealers' Standpoint.—MR. A. CUDDEBACH took up the discussion from this point of view. He said that the milk sold now contained much more butter fat than formerly, and this, he believed, was largely attributable to the quite general adoption of bottled milk, and the education of the people to look at the depth of the layer of cream in the bottle. The general tendency to consolidation among the milk dealers could also be traced to the custom of bottling the milk, because small dealers could not afford to bear alone the expense of such business. This consolidation also permitted the use of ice-cars for transportation where it would otherwise be impossible. The milk within half an hour after being received was packed in ice, and remained so packed until sold to the consumer. He had found that the centrifuge removed all dirt visible to the unaided eye. When the centrifuge was used, even though no butter fat was removed, the cream did not rise so readily, and hence to the public the milk did not appear to be so rich as when it had not been subjected to this process. The great obstacle that the milk dealer had to surmount was the lack of appreciation on the part of the public of many of the efforts made to secure better milk; hence such efforts were not commercially successful.

Some Milk Dealers Possessed the Milk of Human Kindness.—MR. L. B. HALSEY spoke on the same topic. The occasion seemed to him unique, for, in a long experience in this city, it was the first time the milk dealers had been cordially invited to meet the medical profession in the discussion of this very important subject. The discussion had impressed him chiefly with the thought that the milk supply of New York City was not so bad after all, and, indeed, was better than when the discussion had been opened. It was a grievous wrong to suppose that there were not in this city some milk dealers who were desirous of improving the milk supply purely for the good of humanity, and entirely aside from selfish interest; nevertheless it was but just that the milk dealer should receive an adequate compensation for effecting an improvement in the milk supply.

Adequate Compensation Essential.—Such improvement presupposed that the dealer had required of the dairymen better care, better food, and better environment generally for the cows, and better handling of the milk. It meant that the milk must be aerated and promptly cooled and quickly delivered to the transportation company. All this certainly could not be accomplished without proper remuneration. He thought all milk dealers here would agree with him that it was impossible, under present conditions, to distribute milk in small quantities to families at less than eight cents per quart.

The Wealthy Citizen Blocks Progress.—The speaker called attention to the fact that the wealthy citizens of New York actually blocked progress toward getting an ideal milk supply, though perhaps unconsciously. These people give a stated sum to their chefs, and these high functionaries demand from ten to twenty per cent. commission, and if the milk dealer was sufficiently liberal in this respect almost any kind of milk would pass muster. The hands of the conscientious and progressive milk dealers in this city were upheld chiefly by the physicians and by those earnest and intelligent mothers who spared neither pains nor money to secure for their children the best and most wholesome food.

Our Health Board's Methods Antiquated.—DR. H. PIFFARD said that the chief trouble with the milk supply of this city had been the improper regulations of the milk traffic by the health board many years ago, and which had been allowed to remain. He had been informed that the improvement that had been made had resulted from the efforts of the commercial men, and not of the health board. The standard of three per cent. of butter fat was very low when compared with the general average for the cows in this country. Dr. Piffard expressed himself as in favor of having the standard of milk properly defined, and also allowing other and inferior milks to be sold at a lower price.

Double Standard Absurd.—The double standard of three per cent. butter fat and four per cent. total solids had been shown some time ago by Major Alvord to be injudicious. He had shown that the farmers would sophisticate the milk in order to bring it up to the required standard of total solids. It had been shown that the casein varied directly with the proportion of butter fat. With the minimum of butter fat and the maximum of casein one might feel pretty sure that the milk had been sophisticated. In certain counties, notably Cortland, this absurd double standard had demoralized the dairy interests. For example, many of the cows would furnish four per cent. milk, but as such milk would not bring one penny more in New York market, and cows yielding only three per cent. milk were cheaper, the dairymen had sold their better cows, and had bought in their place inferior ones. This was the way in which this double standard had demoralized the dairy industry. Dr. Piffard recommended that the milk for this city coming in cans should be taken only from an area included in an east-and-west line drawn through Albany, and a north-and-south line drawn through Binghamton.

Special Committee Appointed.—On motion of DR. WALTER LESTER CARR the president of the Medical Society of the County of New York was requested to appoint a special committee to consider the possibility of a commission to improve the milk supply of New York, the committee to report to the comitia minora the result of its deliberations.

Nocturnal Enuresis.—Mullein oil in five-drop doses on loaf sugar, on retiring.—ED. *Experience*, December, 1899.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Ninety-Fourth Annual Meeting, Held in the City Hall, Albany, January 30 and 31 and February 1, 1900.

WILLIS G. MACDONALD, M.D., OF ALBANY, PRESIDENT.

Third Day—Thursday, February 1st.

(Concluded from page 213.)

Report of Committee on Medical Expert Testimony.—DR. RANSOM, of Dannemora, presented this report. It stated that a bill had been introduced into the legislature providing for the registration, certification, and qualification of medical experts, and the passage of this measure had been urged by the committee, but to no avail, the bill failing to be reported out of the judiciary committee. This failure was due to a lack of proper support by the medical profession at large. After consultation the committee felt justified in stating that there was no prospect of obtaining any corrective legislation at this time in this direction, in view of constitutional restrictions and limitations, and more especially because of the attitude of the legal profession concerning any innovation in this direction. Indeed, it seemed to be the consensus of opinion that no such legislation could be applied even if enacted. The committee indorsed the suggestions made by the president of the society in his inaugural address before the present meeting, *i.e.*, an appropriation for a State cancer laboratory.

On motion of DR. CHAUNCEY P. BIGGS, the society expressed its formal approval of the work being done by Dr. Roswell Park and his associates at this laboratory in Buffalo, and requested that State aid be continued to this institution.

The Spleen: its Shape and Relation to the Chest Wall and Abdominal Viscera.—DR. LUZERNE COVELLE, of Ithaca, read a paper with this title. He stated that in four well-known text-books on anatomy, the descriptions of the size, location, and shape of the spleen varied considerably. His own observations showed that the spleen lay obliquely across the ribs, extending toward or to a line dropped vertically from the posterior border of the axilla to the eleventh rib. The angle of the ninth rib was approximately a rib-space below the inferior angle of the scapula. The posterior axillary line nearly touched the tip of the eleventh rib. The highest point of the spleen lay about one rib-space below the inferior angle of the scapula, when the arms were hanging naturally. The innermost part lay about double that distance from the spine. The outermost point about touched the posterior axillary line. The anterior and posterior borders lay under the cover of the ninth and tenth and eleventh ribs. The spleen was often very movable. The child's spleen was much larger in proportion and reached much higher and farther forward. The spleen of old age is the reverse of this.

Supra-Vaginal Hystero-Myomectomy.—DR. I. S. STONE, of Washington, D. C., reported in this paper twelve cases in which tumors of greater or less size had been removed from the uterus, and in all of which considerable traumatism had resulted. The object of the paper was to show that there was relatively a greater mortality from the operation of myomectomy than from ordinary hysterectomy.

Atresia of the Vagina.—DR. F. W. HIGGINS, of Cortland, read this paper. He stated that in all the varied etiology of atresia of the vagina, diphtheria may be considered as one of the rarer causes. He had recently operated successfully upon a typical case due to this cause. Twenty-four ounces of blood had been found in the dilated uterus and vagina. Attention was called to the importance of early operation before the Fallopian tubes were affected, and also to the necessity of strict asepsis. He recommended flushing the cavity with hot saline solution, wiping dry, and packing with iodoform gauze.

Spontaneous Discharge of Cerebro-Spinal Fluid from the Nose.—DR. W. FREUDENTHAL, of New York, reported a case of this kind, and stated that he knew of only one such case having been previously reported in this country. His patient used more than twenty handkerchiefs daily because of a constant dribbling of a watery fluid day and night. Before this flow had commenced there had been serious symptoms of brain pressure, and these symptoms had recurred once or twice, when, for some reason, the flow had been interrupted. The original cause was probably pressure produced by a tumor, and life had been prolonged by the formation of an opening and the discharge of sufficient cerebro-spinal fluid to prevent dangerous cerebral pressure. A chemical analysis of the fluid showed the presence of albumin and a substance which reduced glucose.

Inguinal Hernia: Comparative Results of Radical Treatment by Injection.—DR. THOMAS P. SCULLY, of Rome, in this paper spoke highly of the present results obtainable by the Bassini operation. But for the laboring classes, to which long confinement in bed was a serious matter, he recommended the Hecton injection method. These injections should be made under strict asepsis, being repeated once a week for about four weeks. An accurately fitting truss should be applied after the first injection, and should be worn at least two months, though it was preferable to use some form of light protection for six months longer. He had treated one hundred and forty-eight cases by this method. Of the one hundred and twenty single hernias, fifty-eight, or forty-eight per cent., had had no recurrence after one year, and of forty cases traced after two years twenty-six per cent. were not wearing a truss. All of the sixty-two cases not resulting in cure had been more or less benefited. The greatest success had been achieved in the recent hernias.

DR. A. M. PHELPS, of New York, deprecated this attempt to revive a method which had been proved by a Boston commission to yield ninety-five per cent. of relapses. Dr. Phelps then described his operation, and the use of the network of fine silver wire to assist in closing the canal.

Officers Elected.—Officers were elected as follows: *President*, Dr. A. M. Phelps, of New York; *Vice-President*, Dr. George Seymour, of Utica; *Secretary*, Dr. F. C. Curtis, of Albany; *Treasurer*, Dr. O. D. Ball, of Albany.

THE NEW YORK MEDICAL UNION.

Meeting of December 26, 1899.

DR. LE ROY W. HUBBARD, PRESIDENT, IN THE CHAIR.

The Results of the So-Called Conservative Treatment of Appendicitis.—DR. SAMUEL LLOYD read a paper with this title (see page 226).

Discussion.—DR. ROBERT T. MORRIS: We all know what the real conservative treatment is to-day; it is not a matter for discussion. It seems to me, at the present time, we are to be guided by a knowledge of the pathology of the disease, rather than by any personal experience. The time for that is past. There are now few subjects better understood than appendicitis. We know the causation thoroughly, the pathological changes thoroughly, the symptomatology thoroughly, and there is hardly any part of the entire subject not within our knowledge. Therefore to-night

I shall confine my remarks to a few of the points brought out in the paper.

In the first place, I am glad Dr. Lloyd is one of the men who keep records of the cases not operated upon. Few physicians keep good records, and they speak from a standpoint of memory and of incomplete observation. It is a difficult matter to get a good collection of statistics such as Dr. Lloyd has. I have operated upon many patients who are still reported as cured by medical treatment. We know to-day that more than ten per cent. of all appendicitis patients have hard concretions in the appendix; we know to-day that more than eighty per cent. of the patients who have had one attack have mucous inclusions, more or less complete. This percentage does not include soft fecal masses which predispose to appendicitis. Nature makes efforts to throw off this fecal matter, and I am sure that a good many cases are caused by soft fecal masses in the appendix. There follows a spasm of the muscularis of the bowel which gives rise to a catarrhal inflammation with consecutive infection of the appendix. When the guarding epithelium of the mucosa is damaged infection follows. In the report of the cases treated without operation we note two points not usually brought out by writers. Almost all of the patients who come to me after having had one, two, or three attacks give a history of ill health dating from the time of their first attack; and yet they kept about their work, appeared to be quite well, were congratulated upon escaping operation, etc. Experience goes to show that many persons who report themselves in good health have had constipation, or gas formation, and do not feel vigorous or ambitious. They do not enjoy the enterprise they formerly did, and yet they say that they are pretty well. This condition of inferior health is due to several causes: First, it is often due to infection from a mucous inclusion; secondly, it is often due to adhesions of the bowel inhibiting peristalsis; thirdly, it is sometimes due to reflex disturbance of Auerbach's plexus and Meissner's plexus, fermentation taking the place of digestion.

There is not much difficulty in palpating the appendix; if one will give attention to it he will become expert. I have no doubt that most of the members present have no difficulty in palpating the ovaries and tubes; any man who can palpate the oviducts can palpate the appendix as well. I have frequently done it before the class. To do it one must train his finger ends. This matter of palpating the appendix should be acquired by any one who intends to express an opinion on the subject of appendicitis.

Patients refusing to have an operation performed is an experience I do not have, so I do not know how to discuss that point. It seems to me that patients are always ready for an appendix operation. I count upon that fact in consultations. Usually it is the cook, or the mother-in-law, who is opposed to the operation, not the patient. I have been called in to unravel this knot many times, and, instead of arguing for several hours at ten dollars per hour, I say, "Let us leave it to the patient." Patients say, "Operate." Of course I am referring only to acute cases, cases in which there is an acute progressive inflammation. In the interval cases I have frequently had occasion to ask for delay, in those cases in which the patients have had the management of large business affairs, and in which they ask for a delay of one, two, or three months; in these cases I often say: "Wait; we are ready to operate; but let me know at once when symptoms of acute recurrence make themselves known." But I cannot now recall a case in which there was acute suffering and the patient did not say, "Operate." It is a common thing for patients to postpone operation because of the idea that they might save time by it. One of my patients, who has been but nine days in bed since operation and goes home to-day, had previously been eight weeks in bed trying to save time. An idea that many patients have is that they lose time if operated upon. If operated upon, they usually spend but nine or ten days in bed, unless there is abscess complication at the time of operation.

Dr. Lloyd's point about recurrence after abscess had emptied into the bowel is a common experience. No one knows where the abscess is going to empty, whether into the bladder, or into the iliac vein, or elsewhere, and yet the patients may have recurrence of the attack. This we know from the pathology of the disease. I had one case in the sister of a physician who evacuated pus from the mouth after perforation of the lung, and from the vagina at the same time; nearly one gallon of pus was thus evacuated. She recovered and was congratulated perhaps upon escaping operation; yet she had a subsequent attack, was operated upon, and the appendix was removed, and it was a pretty good appendix. A mucous inclusion was present.

Patients suffer less under proper surgical treatment than under medical treatment. The replies of patients, ten in number, who had been operated upon, were published in the third edition of my book; they all made the statement that they suffered less under the surgical treatment. Several of these ten were abscess cases; several of them had had many attacks and had been subjected to different kinds of treatment, and all give testimony which I published.

After all, it seems to me that we are to be guided by our knowledge of the pathology of the disease rather than by personal observation.

Dr. Foot: I was called by a young surgeon of this city about one year ago to see an unusual case of appendicitis. A young lady, in pretty good health and well educated, asserted that she had passed hairs from the rectum, and the doctor had been shown some of the hairs, which were partly extruding. She was very indignant at the suggestion that she had introduced the hairs herself. The question of dermoid cyst was gone over, and a history of chronic appendicitis was elicited. We operated upon her and removed the appendix. She made an excellent recovery. A few days ago I met her and I inquired about the hairs. She told me she had passed hairs, had been operated upon, and had been cured of all symptoms, no more hairs appearing.

Dr. A. F. Currier: I cannot help thinking, as Dr. Morris discussed this question, that while he always discusses this question with great amiability, the question of conservative treatment of appendicitis, yet it is a great deal like the old bull and the piece of cloth. I feel much gratified with the series of cases which we had read to us to-night, because the older in experience I become in the treatment of this disease the more convinced I become that these statements which have been made are facts. That is to say, if a person has an attack of appendicitis he may get well of it; we cannot say he will not. We never can say that a person will never have another attack. That is the argument that I always make to people now, at the time I first see them. Most of the cases that I now see are in the acute period, and my experience has been limited to that form of the disease. I can bear out from recent experiences the statements of Dr. Morris regarding the relief which cases obtain after surgical work is done. I remember an operation done a few weeks ago on a man weighing three hundred and sixty pounds; in this case I defy any man, including Dr. Morris, to palpate the appendix. He was a carpenter and suffered for days and weeks, going around with pain in his side. He suffered acutely. I operated, and after he came out of the ether I asked him about the pain, and he said it was all gone. He has not complained of pain since. I also remember the case of a boy, operated upon a few weeks ago, and he gave the same story regarding the pain. That is an important point. In the course of quite a considerable number of cases operated upon I could recall but two cases in which I could feel any regret at adopting the surgical procedures. There is another class of cases in which the patients feel that they are going to die, and they decline operation. One of these cases I remember had the diagnosis made of appendicitis, and the case seemed clear enough; there were pain in the right side, induration, and other symptoms of this trouble. I saw her one night. The next morning I again saw her, and she stated that the pain was all gone, and she declined to have the operation done. The doctor in attendance said I had come to operate, and so the operation must be done. I found the appendix not very large, but it was diseased. There was some peritonitis, but I also found an enormously hypertrophied liver. The husband threatened to sue me, but the woman has been perfectly well since, and now rides a bicycle. Another case was that of a woman who had been ailing for some time, and the diagnosis of appendicitis was made; the abdomen was opened, but there was not found much inflammation of the appendix itself. Now, what impressed itself upon me was the fact that all were cases of peritonitis, and when peritonitis existed we could not always tell whether we were dealing with an appendicitis or not. I have often asked why it was that peritonitis chooses this portion of the abdomen; is it because the appendix lies there, and is subject to changes? It is certainly a fact that in a great many cases I have seen, in which there is no abscess and the appendix was buried in adhesions, the circulation was interfered with and was a constant menace to life. The more experience I get the more satisfied I am that true conservatism means the relief of the offending organ.

Dr. P. J. Lynch: In olden times we generally found the cases associated with peritonitis. I have seen, what all gentlemen who have practised medicine have seen, several cases which were treated conservatively; a few of them got well after two or three relapses, and some are now well after a period of five or six years and have no constitutional disturbances whatever. From my own experience with these cases, and from the fact that the general consensus of opinion is in favor of operative interference, I now turn them over to the surgeon. There is only one thing I regard as the probable reason why all patients do not select the surgeon in the treatment of this disease; it is because a certain percentage, surgically treated, have died cured. That little fact impresses the uneducated, and they are disinclined to have operation performed. I myself am disposed to turn my cases over to the surgeon, even though I think that many will get well without interference.

Dr. F. Huber: A long period of freedom took place in appendicitis in my own case. Seven years ago I had typhoid fever. During convalescence I developed appendicitis, from which I recovered under the use of ice and small doses of opium and rectal enemata. Seven years later I awoke one morning and I knew then what I had. Thirty-six hours later I was placed on the table, my belly was opened, and was found to be filled with serum. My appendix was distended and a large concretion existed. In the interval between the first and second attack I was absolutely free from any manifestations at all.

Dr. A. Trautman: Of the last four cases I have had, three were not operated upon and got well, and one was operated upon and died the following day.

Dr. Ralph Waldo: I belong in the same class as Dr. Huber, for seven years ago I was operated on for appendicitis. There were two perforations, and it was necessary to pack the wound. The operation relieved the pain as well as many of the other disagreeable symptoms.

There are several things you should properly impress upon your patients. One is that the operation for appendicitis, properly performed, does not kill. If performed at an improper time it may not cure your patients. That is of vital importance to your patients. You can tell them that it is just as proper to consider that the glass of water that a patient took during his attack of pneumonia caused the death of the patient.

I am sorry that I must disagree with Dr. Morris regarding the etiology of appendicitis. I recognize the fact that in certain cases concretions and foreign substances have a good deal to do with the wounding of the epithelial surfaces which is followed by infection. The disease is an inflammatory one, and one or another variety of inflammation affects the appendix and neighboring structures in different degrees. There are many cases of appendicitis associated with intestinal indigestion, in which the latter is markedly improved, but not completely cured, after operation. I am thoroughly convinced that quite a large percentage of cases of appendicitis are simply an extension of an inflammatory disease from the colon into the appendix; the same as catarrh of the nose extends into the Eustachian tube, producing disease there and in the ear. In the same way an endometritis may extend and produce inflammation of the Fallopian tubes. I am thoroughly convinced that that is a prominent point in the pathology of this disease. It has been referred to. Concretions in the appendix, even hard ones or seeds, may not cause disturbance for a long period of time. In the same way one may have a hernia without any disturbances; as soon as it becomes strangulated we then have a local inflammation. The blood supply to the appendix is bad, and sudden attacks of gangrene may come on from conditions that in other portions of the intestinal tract would amount to. little. Appendicitis will not kill every patient if let alone. Any one will get the statements from his patients that Dr. Morris did in writing to the ten he operated upon. All of them will say that the operation afforded the greatest relief from their suffering, even in many cases in which the patients had marked sepsis before operation. If these patients are taken at the proper time, they will probably all be cured. This operation does not kill patients.

Dr. Hammond: It is hardly right for a neurologist to discuss this subject. I was very much interested and instructed by the paper. Of course, even though we are neurologists, we occasionally see cases of appendicitis; all practitioners do. It always seemed to me advisable in all of these cases to operate. When I say operate, I mean operate at the proper time.. We know that when a person has had one attack of appendicitis he will probably have another attack. In considering the question of operation, we should look into the present condition of the patient and consider the history of the case. It is our duty to urge operation when we know that it can be done so safely and without any danger at all, and that it will spare the individual the chances of a future attack of appendicitis and death. Therefore I recommend that these cases should be operated upon. If they have a mild attack, conservative treatment may carry them through it; but as soon as recovery takes place let them be operated upon, and so have no chances of future trouble.

Dr. Hubbard: Dr. Morris spoke of the ill health of the people after recovery—or so-called recovery—following the conservative treatment; I should like to ask the doctor to tell us what, in his experience, is the subsequent condition of the operative cases as to their general condition; also, whether the patients operated upon had subsequent attacks; that is, of course, whether they have had attacks presenting symptoms similar to appendicitis. I should also like to ask him if, from his experience, he would favor operating after the first attack. I speak of this because, at a discussion of a medical society recently, a man reported some cases and made the statement in regard to the cases operated upon, that he would not advise operation after an apparently perfect recovery from a first attack.

Dr. Lloyd closed: In the title of my paper I used the words "conservative treatment" because that is the usual way of referring to the temporizing methods in vogue; I do not believe in it. A few years ago it was more difficult to obtain the patient's consent than it is to-day; I have no difficulty in persuading patients nowadays to be operated upon. A few years ago the mortality was greater, because the operation was undertaken at a less favorable time. There is a set of patients who wait nowadays; that is, they decline operation after we have tried to get them into the interval. They put off the operation on account of social or business engagements; they enjoy apparently good health, and they think they will select a more convenient time for operation. The cases I tried to get together in this paper are those that were treated medicinally and were then carefully followed up from the first attack to the final result. We find cases constantly reported as cured after medical treatment when we know they have had recurrences. Many of these cases have passed through many hands before they get to the operator. The idea I had in mind was to get the actual results or the present conditions.

Regarding the question of continued ill health, there is a good deal in that; many do not have ill health, but many do have it. They often complain of a colicky, flatulent condition in the abdomen. There is more or less colic, and constant distress from intestinal indigestion. These patients sometimes have diarrhœa, and sometimes constipation. Every once in a while they will tell you that they have pain upon pressure in the right iliac region. Those cases that continue to have more or less discomfort must be operated upon. Regarding one of the fatal cases in the series reported, the patient was treated in the country, in a town where they did not know appendicitis; they never had made the diagnosis of a case; he could not have been operated upon. Later, while in Montreal, he had another attack, and the third attack came on while he was at business one morning; they sent for me and I called an immediate consultation. Waiting was advised, to see if the case was one of appendicitis or rupture of adhesions following some severe exercise. That night the appendix perforated. At the operation a gangrenous condition of the bowel was found, including the appendix and even extending to the aponeurosis of the external oblique. He was acutely septic. These are the cases that operation will not save unless they are operated upon early.

Dr. Hubbard asked regarding the question of operating in the first attacks. I stated that I believed that a single attack of appendicitis inclined the patient to recurrent attacks, and to recurrences that were progressively more severe; that is shown by the histories of the cases. I cannot recall ever operating in a case the second time, because I began, early in my experience, to search for and remove the offending organ and not to be satisfied with simple incision and drainage. I cannot now recall a single patient who has had a second attack.

Regarding the question of how long to wait, I believe that the interval operation is the best. But the question really is, how to decide whether the patient will reach the interval or not. I believe that every case, when the symptoms are progressive after twenty-four hours, should be operated upon. If the symptoms are not progressive, if no signs of an acute infection are present in twelve hours, if the temperature goes down and the tenderness is not increased, and the pulse remains of good calibre, it is well to wait for the interval; even then you should be ready to operate the instant there are any indications of an increase in the inflammatory symptoms.

Medical Items.

The Recognition of Renal Typhoid. — According to Amat the renal form of typhoid fever manifests itself in a subsidence, sometimes an absence, of intestinal symptoms, supplanted by signs of an acute hemorrhagic nephritis. The temperature from the outset is hyperpyretic; the prognosis is very unfavorable, the prostration great, and delirium frequent. Dr. Rostoski (*Münchener med. Wochenschrift*, No. 7, 1899) during the past summer observed two cases of typhus renalis in Leube's clinic, which differed from the general description of these cases. In the first instance the acute hemorrhagic nephritis was plainly an exacerbation of an existing chronic nephritis. It lasted fifteen days, and was present before the roseola, enlarged spleen, Widal-Gruber diazo reaction, or the typhoid stool. The fever was not hyperpyretic, and the course of the typhoid was relatively mild. In the second case the symptoms were ushered in by a moderate rise of temperature without the characteristic curve, and presented the picture of a hemorrhagic diathesis with muscle pains and normal hemorrhages. Casts were as yet absent from the urine. They first appeared six days later, were abundant, and were preceded by a chill and a rise of temperature to 40.2° C. Other signs of nephritis were absent throughout the entire course of the disease. Two days later enlargement of the spleen was noticeable. A positive Widal-Gruber reaction was obtained a few days after this, and on the following day large numbers of typhoid bacilli were found in the urine. Notwithstanding this, the roseola was slight and evanescent, the fever was markedly intermittent in character, and the nephritic symptom persisted, although the quantity of blood in the urine gradually diminished. The kidney symptoms were aggravated by a complicating peritonitis, and it was twelve weeks before the urine was free from albumin. This case differs from Amat's type in that the general condition of the patient remained good, and there were no delirium, no hyperpyrexia, and no severe headaches.

Lord Curzon and the Plague.—The new viceroy of India is adding to the harvest of golden opinions he has already reaped by his courageous and energetic behavior in the presence of the plague. Just as soon as the dark and disquieting rumors of a steady smouldering of pestilence in Bombay and Poona were confirmed by a sudden increase in the number of cases, threatening another epidemic, he promptly left the cool security of Simla for a thorough inspection in person of the sanitary arrangements of the infected districts. Before leaving he took the wise precaution of having himself and his entire party inoculated with prophylactic serum, and is in consequence able to urge its use with telling effect. As he shrewdly puts it, "A measure which changes a death rate of from seventy to eighty per cent. into one of from fifteen to twenty, even in those who are attacked after submitting to it, to say nothing of the large proportion who are completely protected by it, is one which no sensible man can afford to neglect." Is it any wonder that his speeches are said to be making a deep impression upon the native population, and that inoculation is becoming positively popular? As a means of cure after the disease has actually made its appearance serum inoculations have not proved very successful, but while still on trial their preventive effects have been most encouraging, although the protection conferred does not last a very long period, so that frequent re-inoculations are advisable.—*English Outlook.*

The Effect of Colored Light on the Nervous System.—It has long been claimed that colored light has a special effect on men and the lower animals. It has been asserted by some that the lower animals grow more rapidly in violet than in white light. On the other hand, Flammarion has found that silkworms grow least rapidly in the violet rays. Experiments on the nervous system are in better accord. They show, according to Henri de Parville, writing in *La Nature*, Paris, that the red end of the spectrum is exciting to the nerves, while violet, blue, and green are calming. It is well known that turkeys and bulls are excited by red; on the other hand blue glasses are often used to quiet horses. In the photographic establishment of the Messrs. Lumiere, in Lyons, France, sensitive plates are prepared in a large room by green light. Formerly when red light was used the workmen always sang or gesticulated at their work. Now they are calm, never speak, and assert that they are much less tired in the evening than they were previously. Every sufferer from nerves knows that a gloomy day affects him unfavorably, while the first ray of sunshine makes him gay again. It has been suggested that the green of vegetation, the blue of the sky, and the blue-green of the ocean may thus have a powerful influence in calming the spirits. Parville, however, cautions his readers against too sweeping conclusions. All that we can say is that colors certainly appear to affect the organism, and that the subject will bear further investigation.— *Public Opinion.*

Do Animals Feel Pain Less than Men?—What we call an "ear for music" is almost an added sense in some people as compared with others. Even in animals of relatively high intelligence, such as dogs and monkeys, there seems to be reason to think that their perception of pain is much less acute than in humans. After serious operations under chloroform they are often frisking about a few minutes after recovering consciousness, and even jumping from the floor on to the operating-table in a way that forbids the notion that they are in suffering. In all animals the skin is possibly less sensitive than the human skin. It is covered with insensitive hair, and, though no doubt more sensitive than any other part of the body, it is presumably on quite a different plane of sensitiveness from the human skin. In human beings the sensitiveness of the internal organs is very small compared to that of the skin. Examples of this are familiar to every one. While in health no one knows anything of his "inside"; he has no sensations from it. Even disease of a very serious kind can and often does go on for years in the internal organs without causing any sensation. The nerves of the internal organs are much more concerned with regulating functions and controlling the size of the blood-vessels than with the conveyance of sensory impressions to the brain. Life would, in fact, be unbearable if the functions of animal life in a normal state caused sensation; and they would cause it if the organs were richly supplied with sensory nerves. Every surgeon knows, for example, that the human intestine is, when its muscular coat is at rest, almost as insensitive as the hair or nails. In the operation of opening the intestine often required in the presence of malignant disease, the cut in the skin and the business of fixing the gut to the skin would be very painful, and deep anæsthesia is required. Two days later, when the gut in its new position has to be opened, the patient is told to shut his eyes and he feels nothing; he does not even wince while a wound nearly two inches long is made in the intestinal wall with either knife or hot iron. This has been proved by hundreds of cases, and certainly it is not to be explained as due to stoicism on the part of the patient. Other important operations have been done without anæsthesia, except for the skin cut, and without giving rise to suffering at all of a severe kind. It is most improbable that even the highest of the lower animals would feel pain where man feels none. On the contrary, from their smaller brain development they probably are less sensitive than man.—*Edinburgh Review.*

Sir William MacCormac.—English *Tit-Bits* of November 25th has the following sketch of this distinguished surgeon: "It is safe to say that the public do not know nearly as much of Sir William MacCormac as they ought to do, for Sir William is in the front rank of the world's surgeons, has had some stirring experiences, and has obtained a unique reputation. This is as a surgeon of wars, a battlefield doctor, and one of the best men in the world to take charge of Tommy Atkins when a bullet has unhappily made him unfit to fight for queen and country. Yet when two or three weeks ago Sir William patriotically offered his services to the government for the war against the Boers, and now when he has at last reached that vast operating-theatre in South Africa, many people have little idea of what Sir William MacCormac has really done. Many reasons account for this state of things. For one thing, the man of science, be he ever so distinguished, unless his science is of that popular enticing sort, like Edison's and Marconi's, does not get talked about in every home. Then the wars in which Sir William has served happened long ago, and they were not wars in which the soldiers of Great Britain were engaged. Lastly, Sir William is a modest man, and less has been said and written of him than almost any other celebrity of the day. Sir William is proud of the land of his birth. He is an Irishman and comes of a good Irish stock, which has had not a little to do with medicine. As a matter of fact, his father, Dr. Henry MacCormac, of Belfast, was about the first well-known advocate of the open-air treatment of consumption. His mother also was a Belfast lady, in which city Sir William was born in 1836. He received his education at the Royal Institution and Queen's College, taking his degree in 1856. He also studied in Paris. At twenty-five years of age he married Miss Katherine Chartres, of Belfast, and three years afterward he was admitted to the fellowship of the Royal College of Surgeons of Ireland. He became F.R.C.S. England in 1871, and in that year removed from Belfast to London, having secured the appointment of senior assistant surgeon and lecturer on practical surgery at St. Thomas' Hospital. When Mr. Le Gros Clark retired in 1873 he became full surgeon and retained that office for twenty years, when he was appointed consulting surgeon and emeritus lecturer on clinical surgery. When the International Congress foregathered in London in 1881, he was elected to the responsible office of senior honorary secretary. The duties were exacting, and to a large extent the success of the congress depended upon the way in which they were carried out. MacCormac performed them admirably—so admirably, indeed, that he was made a knight in consequence. He was then elected to the council of the Royal College in 1883, and has served as examiner since 1887. In 1887 he rose to the vice-presidency, again in 1893, and now, as most people know, he has the honor of filling the presidential chair for the fourth time. In 1897 a baronetcy was substituted for his knighthood, and last year he was further honored by admission to the knight companionship of the Victoria Order. He has a remarkable record of field service. When the Franco-Prussian war broke out in 1870 he realized that in it there might be an opportunity of discovering what military surgery was like, a discovery which he was very anxious to make. So he hastily packed up his traps and was in Paris almost as soon as the declaration of war had been made. To a certain extent he was drawing a bow at a venture; for, to tell the truth, he hardly knew what he might be able to do or even whether the Frenchmen would let him do anything at all. As soon as he reached the French capital he went to the Palais de l'Industrie, where the French National Society for aid to the wounded had established itself. In reply to his questions and his offer he was told that no foreign surgeons would be permitted to serve; but a few days later the Emperor gave his special sanction and welcome to any English or American surgeons who might offer their help. There was a little more delay, and then MacCormac was given instructions to proceed to Metz and report himself to the surgeon in chief there. . . . The young Irish surgeon was anxious to get to work as soon as there was anything to do, and the surgeon in chief assured him of the welcome his assistance would receive. But the French in Metz suddenly conceived a most inordinate dread of spies. It so happened that Prussian spies had just scored heavily, and the word went round for the keenest watch to be kept in the future. Several arrests were made of palpably innocent persons, the proprietor of the hotel in which MacCormac was staying being among the number. One evening, seated at the dinner table, MacCormack happened to speak a casual word to an American who sat next to him. As it turned out afterward, suspicions were held about the American, and the immediate result of the trifling incident was that MacCormac himself was suspected. Next morning he received a summons to attend the office of the prevôt-maréchal. The surgeon's papers, assisted by the evidence of a Metz surgeon, completely cleared him, but the latter advised him to leave Metz without any delay. Various French officers supplemented the advice in such a way as to make it almost a command, numerous threats being held out against him. Consequently, sadly disappointed and very naturally indignant at the treatment, MacCormac journeyed back to Paris. Still he was destined to get the experience he desired, and in this campaign too. At the beginning of the war the Americans in Paris appointed a committee to organize an ambulance. Owing to a dispute between this committee and its surgeons the latter separated, and in company with a few English friends formed an Anglo-American ambulance. There were eight English and eight American surgeons, MacCormac being in command of the English section and ultimately of the whole ambulance. Their services were promptly accepted, enthusiastically so, for the French straightway gave them 15,000 francs, horses, wagons, tents, and everything else they asked for, and promised all the money and stores they might need for the future. The ambulance was despatched immediately to Sedan, and it arrived there on August 30th, taking possession the next day of the Caserne d'Asfeld, which had been converted into a hospital for its use. Almost immediately the cannon commenced to roar, and the great battle of Sedan began. At night the ambulance went over the battlefield and had many of the wounded transported to their hospital. MacCormac was performing operations one after the other as fast as he could, and the same the next day, when the wounded were being brought along in a continuous stream. The night was far spent before he was able to leave the operating-table and seek a little rest. All through the war the work of the Anglo-American ambulances was a brilliant success. At Asfeld during that bloody September and October of 1870, six hundred and ten cases of injuries were treated, of which the comparatively small proportion of one hundred and thirty-seven resulted in death, and one hundred and thirty-eight operations were performed, sixty-one of which had a fatal termination. The experience Sir William MacCormac gained in the Franco-Prussian war he backed up afterward by further aid to the wounded in the Turco-Servian war."

Prognosis of Tetanus.—Although the prospects of recovery are poor in acute cases, the epigrammatic French saying, "Tant de cas tant des morts," is not justified. The prospects are better in the subacute form and in cases of chronic and head tetanus. Any patient who lives over six days has a fair chance of recovery. Lambert claims that even with the older methods of treatment the mortality is for acute cases only eighty per cent., being an average mortality of sixty per cent. for all forms. While the antitoxin treatment has effected a reduction of only five per cent. in the mortality of acute tetanus, it has reduced that of the chronic variety to sixteen per cent., a very material improvement. This increase in the chances of recovery is unfortunately limited to cases in which the incubation period is seven days or over.—*Nancrede's Principles of Surgery.*

The Operative Treatment of Uterine Fibroids.—Lockhart (*American Gynæcological and Obstetrical Journal*, December 18, 1899, p. 526) expresses the opinion that a uterine fibroid should not be interfered with unless it gives rise to serious symptoms, mental or physical. Curetting is merely a palliative measure, as is also in many cases ligation of the uterine arteries. Removal of the appendages should be merely a *dernier ressort*, as it practically never cures, and does not always even relieve. The operation of election should be either total hysterectomy or myomectomy. The latter is to be chosen when the tumor is submucous and pedunculated, when it is subserous and has either a pedicle or a well-defined border, or when several small nodules lie immediately beneath the peritoneum. Total hysterectomy is indicated when the tumor is submucous and non-pedunculated and the cervix cannot be dilated sufficiently to allow of morcellement, or when the tumor is interstitial, large, and subserous, without a pedicle, soft, fibrocystic, or undergoing degeneration, or when the presence of the tumor is complicated by disease of the appendages.

Leprosy Cases in England.—The members of the London Medical College and Polyclinic have been fortunate in the matter of leprosy demonstrations. We are informed that during the past six months no fewer than seven opportunities have been afforded for the inspection of cases of this malady, which in England is very rare. One of these patients, an excellent example of the macular form with tendency to tubercular developments, is expected to attend again. All the cases have been in Europeans who have lived in leprosy districts, and in only one was the patient of mixed blood. One patient had lived in India in the army, another in Australia, a third in British Guiana, and a fourth in the West Indies. In no single case were there any facts suggestive of direct contagion from any known source. All the patients were still living with their relatives without precautions, and Mr. Hutchinson pointed out that no suspicion of contagion had occurred. In one the disease had been for some years completely arrested, while all the others showed the macular type.—*British Medical Journal.*

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THE INOCULATION OF MALARIA BY THE MOSQUITO: A REVIEW OF THE LITERATURE.*

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THE idea that mosquitoes or other insects bear a causal relation to the spread of malaria appears to have been suggested in very early times, and has been expressed during the present century by various writers. In an excellent review of this theory, Nuttall [30, 35] narrates that it was mentioned nearly two thousand years ago by the Roman writers Varro, Vitruvius, and Columella, was referred to in 1848 by Nott, of New Orleans, as a fact already known, and was advocated in an elaborate article by King, of Washington, in 1883. Among more recent writers, the theory was suggested by Laveran in 1884 and 1891, by Flügge in 1891, Pfeiffer in 1892, and Manson in 1894. The belief that mosquitoes cause malaria is also found among the inhabitants of certain malarious regions in widely separated parts of the world.

The first experiments undertaken to test this theory appear to have been made by Bignami and Dionisi [3, 4] in Rome, in 1894, and resulted negatively.

The present scientific interest in the theory dates from Manson's[5, 7] famous support of it in 1894, and subsequently in his Goulstonian lectures, in 1896. Manson, noting the fact that flagellated forms of the malarial parasite were not observed in fresh blood, but appeared only after an interval of twenty minutes or more after withdrawal, concluded that the flagellated forms probably represented the first stage of an extra-corporeal † development of the malarial organism destined to preserve and continue its life cycle outside its human host. He believed that "the crescent body and the tertian and quartan spherical bodies which proceed to flagellation are the extra-corporeal sporulating homologues of the intra-corporeal sporulating bodies; that the flagellum is the extra-corporeal homologue of the intra-corporeal spore. Both types of sporulating plasmodium have corresponding functions, both arise from the same source; one is the germ of the plasmodium inside the human body, the other is the germ of the plasmodium outside the human body; both function in the propagation of the parasite." [7] He also pointed out certain resemblances between malaria and filariasis, and completed the analogy by advancing the theory that, as mosquitoes remove from the human body filaria nocturna and in turn act as host to this parasite, so also may mosquitoes remove and serve the purpose of host to the malarial parasite.‡ It is to be noted that Manson[5, 7, 10] did not think of the mosquito as an agent for inoculating malaria in man by its stick, but rather for removing the parasites from man, harboring them in its body during their development and reproduction, and then spreading them abroad in water and dust to reinfect man, and thus complete their double cycle of existence, just as in the case of filaria. He thought that, after the mosquito had fed on malarial blood, flagellated forms of the parasite developed in the mosquito's stomach; the flagella broke loose, penetrated the tissues of the mosquito, and there continued their extra-corporeal development and reproduction.

In 1895, Surgeon-Major Ross,[6, 7, 6] of the Indian medical service, became interested in Manson's theory, and, guided by personal directions given by Manson, began in India his epoch-making experiments with mosquitoes, which resulted in the first experimental evidence in support of the theory. At this time Ross allowed mosquitoes to feed on the blood of a patient containing the crescent form of the æstivo-autumnal malarial parasite. These mosquitoes were forthwith examined, and in their stomachs the parasites were found to have proceeded to develop into "spheres" and later flagellated forms. No less than forty or fifty per cent. of all the crescents developed into flagellates. Ross' investigations were then interrupted, and no further progress was made in the study at this time.

Manson[7] interpreted Ross' discovery in the following words: "We may conclude with confidence that Ross has thoroughly proved by direct observation my hypothetical conjecture that the stomach of the mosquito is a suitable medium for the flagellated phase of the plasmodium malariæ to develop in; and it seems to me that it is only a question of patience and technique to work out the remainder of the life-history of the parasite in this insect."

In 1896, Bignami[9] advanced the theory of the *direct inoculation of malaria in man by the stick of the mosquito*, comparing the process of infection to the one already known for the production of Texas-cattle fever by the "bite" of the tick, Pyrosoma bigeminum, and after a critical analysis and rejection of the claims of the air and water theories of malarial transmission, he reached the conclusion that, considering all known facts, "malaria behaves itself with regard to man as if the malarial germs were inoculated by mosquitoes."

In 1897, Ross[13] was given an opportunity to continue in India his investigations, and in August of that year succeeded in making a second and most important step toward the experimental demonstration of the mosquito-malaria theory.

Obtaining specimens of a species of mosquito that he had not previously observed, and which he described as a "brown species" and later as "dapple-winged" mosquitoes, he allowed them to feed on a patient whose blood contained crescents, and later in two of these mosquitoes he found peculiar large, round or oval pigmented cells, situated in the outer layer of the stomach-wall. The pigment granules resembled malarial pigment, and the pigmented bodies were found only in mosquitoes that had fed on malarial blood, and were not observed in hundreds of mosquitoes that had fed on healthy blood. Ross believed that he had at last discovered the malarial parasite in the tissues of the mosquito, a conclusion that has since, as we shall presently see, been amply demonstrated. In September, 1897, Ross[15] obtained a third case similar to the previous two, and also claimed to have found pigmented bodies in a "grey" mosquito that had fed on tertian blood, but he subsequently* decided that this case must be excluded, as due to a probable error.

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* Read before the Buffalo Academy of Medicine, October 10, 1899.

† The words extra- and intra-corporeal are employed in this paper always in reference to the body of the warm-blooded vertebrate host, *i.e.*, man, birds, monkeys, bats, cattle, etc., and never to the body of the invertebrate host or insect.

‡ Laveran,[1] in 1884, first suggested the possibility that mosquitoes might "play a rôle in the pathogenesis of malaria similar to that in filariasis."

In the spring of 1898, Ross,[16] finding human malaria scarce, turned his attention to the investigation of the allied parasitic blood disease of birds, the so-called bird malaria, of which two forms existed, due respectively to proteosoma and halteridium. Working with birds infected with proteosoma, and feeding "grey" mosquitoes upon them, Ross subsequently found in the stomach-wall of these mosquitoes pigmented cells similar to those obtained previously by him in "dapple-winged" mosquitoes fed on human malarial blood. These pigmented bodies, which he called coccidia,† were first observed in mosquitoes on the second day after infection (feeding), and at this time were oval bodies, 6 to 7 or 8 μ in their long diameter, containing fine pigment granules exactly resembling those of proteosoma. In mosquitoes kept alive for three or four days after infection, the coccidia were found to have increased considerably in size and become spherical; their protoplasm showed granules, vacuoles, and irregularities, and the wall had become dense and showed a capsular appearance. They increased in size until they reached a diameter of 60 or 70 μ at the end of a week, and were then seen as wart-like excrescences protruding from the outer stomach-wall into the general body cavity. In some of these full-grown coccidia peculiar striated appearances were seen, and others contained several large sausage-like bodies. In a letter to Manson,[18] Ross summarized his conclusions as follows: "(1) Pigmented cells are found in the stomach wall of grey mosquitoes fed on crows, larks, and sparrows with proteosoma. (2) Pigmented cells are not found in control grey mosquitoes fed on healthy men, or men with crescent plasmodia, on healthy sparrows, on crows and larks or on crows and pigeons with halteridium. (3) These pigmented cells are found in the external coat of the stomach, and grow from a size of 6 μ in thirty hours to 60 μ at six days, and are probably coccidia. (4) Successive feeds by the same mosquito on the same bird are followed by fresh crops of young coccidia. (5) Similar pigmented cells have been found in mosquitoes fed on human gymnosporidia (Labbe)."

Continuing his investigations during the spring and summer of 1898, Ross[21, 31] found that the mature coccidia of proteosoma were of two kinds, one containing closely packed within its capsule a large number of delicate, thread-like bodies, often arranged radially about central points, and the other containing several large black spores. The mature coccidia on the eighth or ninth day ruptured and discharged their contents into the general body-cavity or cœlom, which contains the so-called blood or circulating juices, by which the thread-like bodies or "germinal spores" and the large black spores were distributed through the tissues of the body of the mosquito. The empty capsules of the coccidia remained *in situ* in the stomach wall. The thread-like bodies, when free, were found to measure from 12 to 16 μ in length, 1 μ in breadth, and were flattened in the third dimension. They contained chromatin granules, tapered at the extremities, and did not appear to possess independent movement: The black spores were 16 to 20 μ in length and 2 or 3 μ in thickness, were straight, curved, or twisted, with blunt ends, and were of dark brown or black color, with a sharp contour. The ultimate destiny of these black spores Ross did not succeed in determining. Pursuing the thread-like bodies through the tissues he found them collected in large numbers in the cells and ducts of a gland located in the anterior part of the thorax, whose main efferent duct passes forward and emerges at the tip of the proboscis. Ross, unaware of the previous description of this gland, which, in fact, had been fully described in 1888 by Professor Macloskie[2] of Princeton, supposed that he had discovered a new organ, and correctly interpreted it as a venemo-salivary gland, whose secretion was purposed to be injected into the wound made by the prick of the mosquito's proboscis in the flesh of its victim, and thereby occurred, he conjectured, the discharge into the circulation of birds of the numerous thread-like bodies or "germinal spores" found in the secretion of this gland, and doubtless destined to begin anew in birds the intra-corporeal life cycle of the proteosoma!

This assumption he proceeded to test, by allowing infected mosquitoes, after the time at which he had learned to expect the presence of the thread-like bodies in their venemo-salivary secretion, to feed on healthy birds, whose blood he had by repeated examinations assured himself was free from proteosoma. The result was as follows: "(1) Out of twenty-eight originally healthy sparrows subjected to the bites of grey mosquitoes previously fed on diseased sparrows, twenty-two, or seventy-nine per cent., became infected, all with a very large number of parasites, in from five to eight days. . . . (2) Out of two crows and four weaver birds, one of the crows and all the weaver birds showed a copious proteosoma infection within nine or ten days of being bitten by gray mosquitoes fed previously on sparrows with" . . . proteosoma. Control experiments with healthy mosquitoes and healthy birds resulted negatively, with one doubtful exception.

Ross had succeeded in these experiments in carrying proteosoma from birds to mosquitoes and from mosquitoes back again to birds. He had produced experimentally the complete demonstration of the truth of the mosquito-malaria theory as applied to proteosoma-malaria of birds, and he expressed his belief that what he had found true of proteosoma in birds would be found true of human malaria.

During the following winter (1898–99), Daniels,[33] working in Calcutta under Ross' guidance, confirmed in detail Ross' work on proteosoma, and expressed some interesting speculations concerning the destiny of the black spores.

In the mean time, also, Dionisi,[17]* of Rome, had been working on birds, and though he failed to infect them by mosquitoes, he nevertheless made the suggestive observation that in pigeons parasitic blood infections occur most frequently at the time of moulting, when, of course, mosquitoes have the best opportunity of attack.

In a paper presented to the British Medical Association, in July, 1898, Manson,[19] reviewing the mosquito-malaria theory in the light of the facts discovered up to that date, pointed out that his theory had assumed that the flagellum, developing in the mosquito's stomach after the mosquito had fed on infected blood, was the agent that penetrated the tissues of the mosquito to start the extra-corporeal cycle of the organism. This view was incompatible with the fact discovered by Ross that the coccidia found in the mosquito's stomach wall contained pigment granules, *because the flagellum was without such pigment.* This hitch in his theory might be overcome, he thought, by modifying the theory in accordance with certain observations which MacCallum, of Baltimore, had made in studying halteridium, a blood parasite of birds, closely related to the parasite of malaria and to proteosoma.

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* See British Medical Journal, July 1, 1899, p. 4, footnote No. 11.

† Under date of December 31, 1898, Ross[31] wrote to the British Medical Journal that his opinion that these bodies were "coccidia" "is provisional. The true zoölogical significance of the mosquito stage of the parasites is a difficult subject, and will be discussed in the final report."

* Dionisi[22] also at this time discovered in the blood of bats parasites of two varieties, resembling morphologically the parasites respectively of quartan and æstivo-autumnal malaria. (I wish to express here my indebtedness to Dr. Francis E. Fronczak, of Buffalo, for his kind assistance rendered me in digesting the Italian literature.)

MacCallum,[12, 14] in the summer of 1897, had observed the following facts: The full-grown extra-corpuscular parasite of halteridium consisted of two forms, one flagellated, the other non-flagellated. The flagella, breaking loose from the flagellated form, approached the non-flagellated form and one of them penetrated its substance and entered it, resulting in a subsequent commotion of its pigment granules and a gradual change of its shape into an elongated, motile, pigmented body, which he termed, after Danilewsky,[3] a vermiculus. This vermiculus moved about the field of blood, penetrating and actually destroying the corpuscles that opposed its progress. MacCallum later also observed the entrance of a flagellum into an extra-corpuscular spherical body of the æstivo-autumnal malarial parasite, although in this case no resulting vermiculus was observed. He interpreted his observations as showing a process of fertilization of the female parasite by the male spermatozoon, or flagellum, with the production of the vermiculus as the result of this sexual conjugation.

Ross[16] later also observed vermiculi in the stomach of a grey mosquito killed within an hour of feeding on a crow infected with halteridium.

Lately, Koch[28, 39]* also claims to have fully confirmed in many cases MacCallum's clever observations in halteridium, and also to have found the vermicule stage of proteosoma in the stomach of infected mosquitoes, though he failed to observe the act of fertilization in proteosoma.

Marchoux † also, in Africa, working with pigeon's blood infected with halteridium, has recently reported his full confirmation of MacCallum's original observations.

Manson,‡ accepting these observations by MacCallum in halteridium, applied them to proteosoma and human malaria, to explain the pigment granules of the coccidia in the mosquito's stomach-wall. Instead of the non-pigmented flagella penetrating the stomach-wall of the mosquito to develop into pigmented coccidia, what was more natural to suppose than that the pigmented, actively motile vermiculus was the penetrating agent? The development of vermiculi from human malarial parasites has never been observed, but their development may be provisionally assumed, and this hypothesis accepted as the best theory of explaining the origin of the pigment granules of the coccidia. §

The brilliant results which Ross had obtained had meanwhile aroused the interest of the Italian investigators and stimulated them to a series of researches, and in the latter part of 1898 and during the present year several important contributions from them have appeared in the journals, each adding new evidence in confirmation of the theory of the inoculation of malaria by mosquitoes, until it is now possible to say that every essential step in the experimental proof of this theory has been obtained, and the theory has been removed from the realm of speculation to that of established fact.

Bignami,[24] of Rome, in August, 1898, began inoculation experiments on healthy men with mosquitoes obtained from malarious localities, but in two such trials failed to infect his human subjects. A possible explanation of his failure he found in the assumption that his mosquitoes were perhaps not a species suitable to act as host to the malarial organism, as Ross had found that only the "grey" mosquito had played the part of host and inoculating agent of proteosoma for birds. His suspicions were further confirmed, he says, by the appearance, while he was still pursuing his investigations, of an important article by Grassi,[20, 33] showing that in Italy and Sicily, where he had investigated the subject, though mosquitoes were abundant in places free from malaria, certain species of mosquitoes were absent from such places and were found only in places where malaria was rife. He found three species of mosquito thus exclusively associated, he thought, with malarious localities, viz., Anopheles claviger Fabr., Culex penicillaris Rondani, and Culex malariæ Grassi, and he assumed that these were the malaria-bearing species of mosquito. Profiting by this advice,* Bignami started anew an experiment on a healthy man with mosquitoes obtained from Maccarese, an intensely malarious place. The subject of the experiment was a man who had been for six years an inmate of the Santo Spiriti Hospital suffering with a chronic nervous affection, and who had never had malaria. The experiment was conducted in a room in this hospital, "where none of the physicians have ever known an autochthonous case of malarial fever to occur, nor has malaria ever been known to originate in any of the neighboring houses." The man slept in a room in which the mosquitoes found at Maccarese were at frequent intervals liberated, and was subjected to their bites from September 26th until the end of the experiment. On November 1st the patient developed a chill and fever, and the temperature continued elevated until after the administration of quinine on November 3d. The blood examination on November 2d was negative, but on November 3d showed numerous hyaline, pigmented, intra-corpuscular, æstivo-autumnal parasites. Specimens of the mosquitoes used in this experiment were identified by Grassi and were found to belong to the three species Anopheles claviger, Culex penicillaris, and Culex malariæ,† species which Grassi had already found, he thought, to be exclusively associated with malarious localities. Thus Bignami had for the first time succeeded in producing malaria experimentally in man by the bites of mosquitoes.

This important success stimulated the Italian investigators to a more vigorous prosecution of this study, and led to a series of investigations and reports, which collectively have placed the inoculation theory on a sound basis of scientific demonstration.

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* Koch[39] claims to have made these observations prior to the publication of MacCallum's first report, though he fails to state the exact time at which they were made. He acknowledges, however, MacCallum's priority in publication. MacCallum first announced his discovery in a paper read before the British Association for the Advancement of Science, in Toronto, on August 24, 1897; subsequently, also, before the Johns Hopkins Hospital Medical Society, on October 18, 1897.

† "Processus de Reproduction sexuel chez les Hématozoaires du Genre Laverania Grassi et Feletti" (Halteridium Labbé). Comptes rendus hebdomadaires des séances de la Société de Biologie, tome vi., No. 9, March 17, 1899.

‡ Ross[16] first suggested this idea in the following words: "The entry of an entire vermicule of proteosoma into the external coat of the stomach of a gray mosquito and its development there into a pigmented coccidium afford indeed an explanation fascinating in its simplicity."

§ Since the preparation of this paper, Grassi[42], and later also Bastianelli and Bignami[44], have announced the discovery of the vermicule stage of human malarial organisms within the stomach of infected Anopheles.

* Grassi[38] has recently claimed that this third and successful experiment by Bignami was undertaken upon his (Grassi's) express advice as to the species of mosquito to be used, and that it resulted successfully only after he (Grassi) had on October 20, 1898, brought into the experimenting-room some Anopheles claviger. (He claims further that it was he alone who discovered that a fourth species of mosquito, Anopheles superpictus, propagates malaria, and that it was he who concluded that all Italian Anopheles could propagate malaria.)

† From subsequent studies no convincing evidence has been produced to show that these Culex species play any part in the development of malaria.

On December 4, 1898, Bastianelli, Bignami, and Grassi[25] published an article reporting a second successful inoculation experiment, in which they caused a case of double tertian infection in a man previously free from malaria, by the bites of Anopheles claviger. The stomach-wall of these Anopheles claviger on subsequent examination showed the developmental stages (coccidia) of tertian parasites. They also narrate another experiment in which mosquitoes were collected from a room occupied by four people all suffering apparently with æstivo-autumnal malaria. These mosquitoes were found to consist of six Culex pipiens, one Anopheles nigripes, and four Anopheles claviger. Of these eleven mosquitoes, in only two, Anopheles claviger, were they able to find in the stomach-wall developmental forms corresponding to the coccidia described by Ross.

An interesting paper by Grassi and Dionisi[26] appeared in the same journal (December 4th), treating of the biological classification of the various human and animal hæmosporidia, to which it may be well to devote a few lines here, as the biological terms used are being generally employed in articles on malarial parasites.

Considering the question, which of the two hosts of the parasite, the warm-blooded, vertebrate animal, or the invertebrate insect, should be regarded as determinate and which as intermediary host, they concluded that the vertebrate should be considered as the intermediary host and the invertebrate insect as the determinate host. In the intermediary warm-blooded host the parasites develop to maturity, some proceeding to sporulation to continue the life-cycle of the parasite within this host, and others, the extra-cellular, mature forms, being incapable of such sporulation, but being destined to continue the life-cycle of the parasite in the determinate host or insect. These non-sporulating forms are called *gameti*, and exist in two forms, the female macrogameti, which do not become flagellated, and the male microgametocytes, which do develop flagella, when they find the conditions suitable to their development in the stomach of the determinate host or insect. Here the flagella of the microgametocytes become free, and they are called microgameti. They are the male elements, analogous to spermatozoa. They penetrate the female macrogameti in a true sexual process, and as a result the fertilized female macrogameti change their shape, become elongated and motile vermiculi, which penetrate the stomach wall of the insect, there to become encysted, the so-called coccidia. In these encysted parasites sporoblasts develop, and become the sporozoits or germinal threads, which, upon the rupture of the coccidia, are carried to the salivary gland and thence by the bite of the insect back to the intermediary host, to begin again the double cycle of the development of the parasite.

Continuing their work, Grassi, Bignami, and Bastianelli[27]* reported, January 8, 1899, that seventy-five per cent. of Anopheles claviger, caught in rooms that were occupied by people infected with malaria, were found to contain the malarial parasite, while control mosquitoes were negative. They found that an external temperature of 30° C. was best suited to the development of malarial parasites in mosquitoes, while lower temperatures retarded or prevented their development. In Anopheles claviger fed on blood containing ripe crescents, they found the same developmental stages that Ross had described for proteosoma, including the sporozoits in the body-cavity and in the salivary gland and ducts. They also infected Anopheles claviger with tertian blood, and followed the developmental stages of the parasite in the stomach-wall until the fifth day.

On February 5, 1899, these same observers[29] announced that for the first time they had succeeded in infecting Anopheles claviger with quartan blood, from a woman suffering from a severe quartan infection of long standing. Developmental stages of the parasite, corresponding in size to those of the third day after infection with æstivo-autumnal parasites, were found in the stomach-wall.* They reported also a second successful inoculation experiment with tertian organisms. In still another case they allowed three Anopheles claviger, ten days after these mosquitoes had fed on a patient whose blood contained crescents, to bite a healthy person, in whom, after an incubation period of twelve to thirteen days, a severe æstivo-autumnal infection developed. After the mosquitoes had been used for this experiment, they were examined and sporozoits were found in their salivary glands. They also stated that Anopheles pictus was capable of being infected with æstivo-autumnal parasites.

Bastianelli and Bignami[33] reported, in April, 1899, further studies. They made out structural differences between the female macrogameti and the male microgametocytes. In the former the nucleus is large and peripherally placed and contains relatively little chromatin; in the latter the nucleus is placed at the centre of the cell and contains a larger amount of chromatin. In the development of flagella or microgameti from microgametocytes, the rods of chromatin are seen to wander out and to enter into the formation of the flagella. In tertian parasites the number of flagella is usually six or seven, in æstivo-autumnal parasites only four, as a rule. Fertilization of the parasites was never observed by them.

They described also the differences observed in the encysted forms of tertian and æstivo-autumnal parasites in the stomach-wall, differences which were characteristic of the two species, and by attention to which they claimed to be able readily to differentiate the tertian from the æstivo-autumnal encysted or coccidial form. They did not find the dark spores, first described by Ross in proteosoma, in the Anopheles.*

They recorded also three successful inoculation experiments, the first a double tertian infection caused by Anopheles claviger, the second a case of tertian produced by Anopheles claviger (both these cases had been previously recorded briefly), and the third, a very interesting case, as follows: Fifty Anopheles claviger, from Maccarese, were let loose in the sleeping-room of a man already infected with æstivo-autumnal malaria, and whose blood contained crescents. After about eighteen days this man developed a fresh tertian infection, and the æstivo-autumnal parasites disappeared from his blood. Most of the mosquitoes were subsequently found to be infected with crescents. Three of these mosquitoes were later allowed to feed on another man, who after an interval of nine to twelve days developed an æstivo-autumnal infection.

The latest available published reports from Grassi, Bignami, and Bastianelli[34] appeared May 7, 1899. They reported the development of both æstivo-autumnal and tertian parasites in Anopheles bifurcatus, just as in Anopheles claviger, and suggested that the Anopheles bifurcatus is perhaps only a variety of Anopheles nigripes. They thought it would probably be shown that all the Italian species of Anopheles may act as host to the malarial parasites. This rôle in Anopheles pseudo-pictus remained still to be proved. They failed to find sporozoits in the salivary glands of young Anopheles claviger raised from the eggs of adult Anopheles caught in malaria-infected houses, and the bites of these young Anopheles on men proved harmless. (The so-called brown spores obtained from Anopheles were swallowed in considerable number by one of the experimenters with negative results.)

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* They also described in the cells of the salivary gland certain peculiar bodies which they interpreted as degenerated sporozoits, but in a subsequent paper[34] they withdrew this idea, and stated that these forms were also found in the salivary glands of young uninfected Anopheles claviger, and therefore must be either artifacts or else the normal secretion of the gland cells.

* Since writing this paper, announcement has been made of the observation of all stages of development of the quartan encysted parasite in the stomach-wall of Anopheles.[42, 43, 44]

† They have since[42, 44] observed the "black spores" or "black bodies" in the mature, encysted forms in the stomach wall of Anopheles, and interpret them as "representing probably a product of degeneration of the contents of the sporozoon."

Several papers have appeared during the past year from Koch,[28, 37, 39] confirming, in general, the observations of Ross and the Italian investigators, though in his latest article[37] Koch expresses the belief (for reasons which appear indecisive) that Culex pipiens, in addition to the Anopheles, acts as host to the malarial parasite. Koch has also discovered an intra-corpuscular parasite in the blood of monkeys,[39, 40] which appears very similar to the tertian organism of human malaria.

At the present time, from week to week, reports are appearing in *The Lancet*[41] and the *British Medical Journal*[41] from the malarial expedition, headed by Ross, which was sent to Sierra Leone by the Liverpool School of Tropical Medicine. From these reports it appears that a new species of Anopheles has been found which acts as host to the malarial parasite, and that the quartan parasite was again, as it had been previously by the Italian investigators,[42, 44] found to develop in Anopheles.

From the foregoing summary it is seen that the theory of the inoculation of malaria by mosquitoes (at least certain species of the genus Anopheles) has been thoroughly established and can no longer admit of question. Practically every step of the process has been followed with the tertian and æstivo-autumnal parasites, as well as with proteosoma of birds. The quartan parasite has been followed up to its coccidial stage in mosquitoes, though it has not yet been made to return to its human host by the bite of mosquitoes. The demonstration of this last link in the chain of evidence we may confidently expect.

The question remains whether malarial infection is produced only by the bite of mosquitoes. This cannot be affirmed positively at the present time, but the cumulative evidence tends strongly to support this belief. All experiments hitherto made, and there have been many, to produce malaria experimentally, except by direct subcutaneous or intravenous inoculation and by the bite of the infected mosquito, have resulted negatively. The many attempts to cause malaria by infection through the ground-air and water of malarious regions have been unsuccessful. Even subcutaneous injection of water and dew from the malarious Roman Campagna has proved harmless. The possibility that a resistant spore form of the malarial parasite may be cast abroad by the mosquito, and may subsequently infect man through the air or water, cannot be denied, but the evidence thus far obtained weighs against this hypothesis. Nor is there any evidence that the mosquito may infect its eggs or its young directly or indirectly. Considerable investigation of this possibility has yielded only negative results. The facts thus far determined show only that the malarial parasite is removed from the blood of man by the bite of the female mosquito (the male is not known to bite), develops and reproduces in this same individual mosquito, and by its bite later may be returned to man in the form of spores.

The mosquito theory of malarial inoculation seems to correlate and explain all the various facts that have been observed in relation to the appearance and spread of malaria. The numerous conditions described as favoring or opposing the spread of malaria are found equally to favor or oppose the development, activity, and spread of mosquitoes. I have been able to find only one exception to this generalization, namely, in the asserted fact that, in exploring uninhabited lands, men among whom malaria did not previously exist may develop malaria. If this statement is unreservedly true, and no satisfactory explanation of it is forthcoming, it will require some modification of our present belief, as it seems to show that man is not a necessary host to the malarial parasite. But we must require absolute proof of this claim before we can admit it. There is, of course, a possibility that future investigations may show that the human malarial parasites may develop in other hosts than man and the mosquito.

The discovery of the method by which malaria is carried directs us to the rational means of combating the spread of the disease. The mosquito must be the object of attack. We need not attack all mosquitoes indiscriminately, but only such kinds as are known to act as host to the parasite, or, so far as yet shown, mosquitoes belonging to the genus Anopheles. The commonest house mosquito belongs to the genus Culex, and seems to be harmless. Various other genera of mosquitoes are recognized, but they are uncommon and are not known to be carriers of malaria.

Ross[36] is of the opinion that for practical purposes of attack, we need only to learn to distinguish between Anopheles and Culex, which have certain differential characteristics. A wholesale crusade to exterminate from a given locality the adult mosquito would prove ineffectual, but such an attempt against the eggs and larvæ, he thinks, promises practical results.

The harmless Culex lays its eggs on the surface of any artificial collection of water, such as pots, tubs, cisterns, wells, drains, and ditches, as well as in stagnant pools and ponds in the vicinity usually of houses. The Anopheles, on the contrary, seem to prefer, as a rule, natural collections of water on the outskirts of towns and in rural districts, as a place of deposit for its eggs. It would not be necessary, therefore, in attacking Anopheles to look to every bit of collected water, but rather to the occasional ponds and stagnant pools outside of towns.

According to Ross, the larvæ of Culex are readily distinguished from those of Anopheles by the fact that the former are seen floating head downward on the surface of water, due to the fact that they are provided with a breathing-tube which is inserted in the rear end of the body, whereas the larvæ of Anopheles, which are not so provided, float flat on the surface of the water, like sticks. This difference "enables us to distinguish the grubs at a glance, and therefore the pools in which they breed." The practical importance of this, however, seems to be partly negatived by the fact that this rear-end breathing tube of the larval stage of Culex disappears in the next stage, the pupal stage,[11] and in this stage the Culex floats flat on the surface of the water, a fact of which Ross makes no mention.

It is a surprising fact that comparatively little is known by entomologists in regard to the distribution and habits of the different kinds of mosquitoes, and it is therefore necessary for us largely to develop our knowledge of mosquitoes in this direction.

There are three principal methods of waging a war of extermination against mosquitoes: first, by drainage of the breeding-pools; second, by the introduction of fish into them; and third, by scattering petroleum or other chemicals over them. The first method is well known for its effectiveness; the introduction of fish in the breeding-waters is of value, if they permit the growth of fish, for fish devour and destroy the grubs of mosquitoes; the use of petroleum or other chemical substances on the water has been found to destroy effectually the larvæ and pupæ of mosquitoes. Howard's[4] experiments show that one ounce of petroleum to fifteen square feet of water surface will destroy mosquito grubs and prevent their subsequent development for a considerable period, probably from two to four weeks.

In conclusion I wish to emphasize the fact that every case of malarial disease may be a menace to the public health, provided the Anopheles be also found in the same locality, by acting as a focus of infection for the spread of malaria in the immediate vicinity, and it is probable that the periodical appearance of malaria in regions usually free from it is explained in this way. It follows that cases of active malaria should be isolated by mosquito netting or otherwise, as a preventive of the dissemination of the disease.

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OBSERVATIONS ON THE SURGERY OF THE BRAIN, BASED ON CLINICAL AND EXPERIMENTAL EVIDENCE.

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Elasticity of the Brain.—Grashey has proved that the cerebral tissue is incompressible. The coefficient of compressibility is even less than that of water. In a series of experiments upon the elasticity of the brain by Horsley and Levy, they concluded that the recoil of the brain, after a given compression, was not at all proportionate to the height of the blood pressure at the time, but to the elasticity of the brain tissue itself. When the brain was subjected to a sudden pressure the recoil occurred within ten to thirty seconds after it, soon recovering its normal level. The recoil, however, was considerably dependent upon the height of the blood pressure.

On the Effect of Increased Intracranial Pressure.—The immediate effect of increased intracranial pressure is not marked until the brain is compressed from five to seven per cent. of its volume. The effect upon respiration is earlier noted and more pronounced than that upon the blood pressure. There is first a slowing of the respiratory rhythm, then arrest. Active expiration is affected, then active inspiration. The amount of pressure necessary to arrest respiration is somewhat dependent upon the height of the blood pressure. The higher the blood pressure the higher the intracranial pressure necessary to produce respiratory arrest. Even after arrest has taken place, if the blood pressure has increased, respiration may be resumed, and in fact the time when respirations will be resumed can often be foretold by noting the rise of the blood pressure. After respiratory arrest had taken place, if the vagi had been previously severed, thus causing a rise in blood pressure, respirations were sometimes renewed. In the presence of arrested respiration, if artificial respirations were produced, a rise in blood pressure usually followed, and the natural respiratory efforts appeared in the midst of the artificial.

The effect of increased intracranial pressure upon the heart was, first, a slowing of its rhythm, with sometimes intermission, then later a complete arrest. If the pressure was continued for a sufficient length of time, the cardio-inhibitory mechanism became exhausted and a very rapid heart action followed.

Pari passu with the increase of intracranial pressure, the blood pressure fell. In some instances there was a mechanical stimulation of the pressor action of the vasomotors, producing a temporary rise in blood pressure. As a rule, when the vagi were severed, allowing a very rapid heart action together with the normal rise of blood pressure attending such section, the application of pressure upon the brain produced an additional rise in the blood pressure which was still more increased by means of artificial respiration.

On the Relation of the Depth of Anæsthesia to the Foregoing Phenomena.—The deeper the anæsthesia the earlier and the more abruptly the respirations failed. Conversely, when the brain was under a considerable pressure, a less amount of anæsthesia was necessary to reduce the animal to the state of so-called surgical anæsthesia, while the effect of the increased pressure of the brain upon the heart and upon the blood pressure was also dependent upon the depth of the anæsthesia. It was not so marked in the case of the respiration.

Clinical.—Since having performed the experiments leading to the foregoing observations, I have had ample clinical opportunities for verifying them. Whenever, as the result of a hemorrhage, an abscess, a depressed fracture, or other cause of increased intracranial pressure, the respiration, or the circulation, or both, are modified by such pressure, it is fair to assume that the brain has been subjected to a compression amounting to about five per cent. of its volume. The exceptions to this deduction would appear in cases in which the pressure is exerted more directly upon the part of the brain representing the functions modified. The elastic recoil of the brain is observed in cases of depression due to hemorrhage on the removal of the clots, on elevating depressed fractures, and on evacuating abscesses. I have seen clinical proofs of the effect of increased intracranial pressure upon the circulation as striking as the experimental. There is scarcely any mistaking the slow, full "pressure" pulse, nor the active inspiratory phase, and finally the whole respiratory action under pressure. The great significance of a rapid pulse alternating with a very slow pulse at comparatively short intervals is obvious. This signifies the dissolution or breakdown of the cardiac centre. When this stage has been reached, there is scarcely a doubt as to the fatal termination. Operative procedures, undertaken under such conditions, are nearly always fatal, as in addition to the foregoing the vasomotor centre is almost invariably exhausted. If the circulation of the skin is studied, it will be found that the vasomotor action is lost, or nearly so, and under no circumstances should an operation then be undertaken. Experimental and clinical evidences are in accord as to the statement that the respiratory centre is far more sensitive than the cardiac centre, and gives an earlier indication of increased intracranial pressure. The expiratory phase of the respiratory act is first affected. In performing an operation upon the brain under the circumstances of an increased intracranial pressure, I usually detail an assistant who is to administer artificial respiration in case of sudden respiratory failure so likely to occur in the administration of an anæsthetic, before the stage of surgical anæsthesia is reached. I also have hot water and pieces of ice at hand, so that the assistant may, in the process of restoring respiration, apply cold alternating with heat upon the abdomen and chest. Ice is a powerful inspiratory stimulant and heat a powerful expiratory stimulant. Thus the alternating of the two extreme temperatures stimulates both sides of the centre. If respirations fail as above indicated, the operation should not be abandoned, but the skull should be opened with as much dispatch as is consistent with safety, the intracranial pressure being relieved by cutting away a sufficient amount of skull, when normal respirations will almost certainly be resumed.

On the Blood Supply of the Brain.—Sherrington and others have been able to demonstrate the presence of vasomotor nerves in the vessels of the brain. It is probable that the cerebral circulation is wholly dependent upon the general blood pressure, and, inasmuch as the general blood pressure is very markedly regulated by the capacious splanchnic area, it is obvious that the cerebral circulation may be better controlled by modifying the blood supply of the splanchnic area than by any attempts at the modification of the cerebral circulation itself. It is true that, as a result of certain drugs, the amount of blood flowing from the veins of the brain is increased, but this increase is due to an increase in the rapidity of the flow through the cerebral arteries and capillaries.

On the Immediate Effect of Traumatisms.—I have been able to demonstrate experimentally that the first effect of a blow upon the skull, of compound fractures, of rapidly increased intraventricular pressure, of gunshot injuries, etc., is respiratory failure. Gunshot wounds in a large proportion of the cases produce sudden respiratory failure. Introducing a needle connected with a pressure bottle raised to a considerable height and containing decinormal salt solution, and allowing the fluid rapidly to fill up the lateral ventricles, caused an almost immediate arrest of respiration. In one gunshot experiment, the animal was killed by a pure respiratory failure, and the ball did not even touch any portion of the brain but passed close to the medulla. This structure was not even touched by the bullet; the circulation was but little affected. The concussion imparted was sufficient to arrest respiration permanently. One of the earlier casualties in the Spanish-American war, in the navy, was that of a gunshot injury of the head. In the report of this case, the surgeon observed that respirations were arrested, but the heart continued to beat for some minutes afterward, and I wish to direct attention to the probable indication for administering artificial respirations as a first aid in brain injuries. It has been demonstrated experimentally and clinically that the respiratory centre is extremely sensitive, and that if artificial respirations are supplied for a time, natural respirations may be resumed. It is well to bear in mind that when respiratory failure does occur, natural respirations will be resumed earlier if blood pressure is increased, so that even though the circulation has not reached a dangerous depression, it should be restored to its normal or even increased on account of the favorable effect upon the respiratory action.

On the Cortical Respiratory Centres.—It is true that electrical or mechanical stimulation of any sensitive nerve may produce a change in the respiratory action, increasing the respiratory tonus, sometimes the respiratory clonus, and nearly always the respiratory rhythm. This occurs under surgical anæsthesia. There is in the dog an area of the cortex corresponding with the upper end of the supra-orbital sulcus, a stimulation of which produces a very marked increase in the respiratory rhythm. The animal, in fact, literally pants. An over-inspiratory clonus is produced by a stimulation of the cortex at the olfactory bulb and tract. A well-defined area for producing arrest of respiration is found on the outer side of the olfactory tract just in front of the junction of the tract with the uncinate. There is in this portion of the cortex a well-defined "arrest" area which, when subjected to electrical stimulation, causes a complete arrest of respiration. The arrest takes place usually in the inspiratory phase of the respiratory act. Now, this area is in relation with the base of the skull, and it rests upon a portion of the skull which is not well protected by the so-called water bed of the brain; therefore, in an injury of the brain in which the brain is thrown forcibly against the base of the skull, this portion is likely to be injured and may produce thereby a respiratory arrest due to a mechanical stimulation and injury of this centre. In a case under my observation, in which a patient in falling struck violently upon the bottom of the hold of a vessel, producing respiratory arrest, causing death in a short time, the autopsy showed that there was marked laceration of the portion of the brain corresponding with the cortical arrest area just described. I am, of course, not certain as to whether the local or the general injury caused the respiratory arrest.

On the Cerebellum.—It has been only within recent years that the physiology of the cerebellum has been fairly well worked out. One of the most striking facts, both clinically and experimentally, regarding the cerebellum, is the remarkable compensation which may take place after injuries and in disease. Luciani and Russell have shown that an animal may live after the ablation of the entire cerebellum. Owing to the remarkable range of compensation, clinically, the absence of characteristic cerebellar symptoms must always be borne in mind. Extensive disease of the cerebellum may exist with but little clinical evidence. The effects of the removal of the lateral lobe of the cerebellum are the following:

(*a*) There is a strabismus, such that the opposite eye is directed downward and outward, while the eye on the same side as the lesion is little, if at all, deviated.

(*b*) The consequent nystagmus is such that the lateral jerks of both globes are directed toward the side of the lesion.

(*c*) The motor phenomena consist of a paresis affecting chiefly the limbs of the same side as the lesion. There is also increased muscular rigidity on the same side as the lesion.

(*d*) There is inco-ordination, so that there are rotation and reeling toward the side opposite the lesion.

(*e*) The sensory phenomena include blunting of sensibility, chiefly of the limbs on the same side as the lesion.

(*f*) The reflexes are markedly increased, chiefly on the same side as the lesion.

There has been much confusion and many differences have arisen among experimenters and clinicians with regard to symptoms. Much of the confusion, in regard to the reeling, may be due to the fact that observers do not adopt the same rule in describing a reeling to the right or to the left, whether it applies to the observer or the observed. Both experimenters and clinicians are agreed as to the marvellous rapidity with which compensation takes place after disturbance of the functions of the cerebellum. This accounts for the destruction of large portions of this organ by the slow development of tumors without producing symptoms, for, inasmuch as the growth is slow, compensation takes place *pari passu* with the development of the tumor, but in cases of hemorrhage or of rapidly developing abscesses the cerebellar symptoms are more pronounced, and the earlier the observations the more clearly will the symptoms present themselves. I have been able to verify on the human subject, in three different instances, while performing operations on the cerebellum, the effect upon the eye of irritation of the cerebellum. In each of these cases I had occasion to explore the lateral lobe of the cerebellum, and in each instance I asked a colleague to watch the effect upon the eyes while exploring the structure of the cerebellum. In each of the cases the opposite eye was immediately deviated outward and resumed its normal position as soon as the irritation ended. In none of the cases was there any effect noted upon the eye after the actual irritation caused by the exploration had ended. From both experimental and clinical experience I regard the cerebellum as being a safe field for exploration, and would not hesitate to extend the operation to any portion of this organ. The cerebellum was formerly supposed to exert an important trophic influence, but this is now known to be untrue. The cerebellum was formerly believed to act as a whole, but it is now known that its division mesially does not interfere with the functions of either half of this organ. While the cerebellum has a crossed action on the brain, it has a direct action on the spinal cord.

On the Technique of Opening the Skull.—I have tried the trephine and the chisel each in a considerable number of cases, and have finally given almost unqualified preference to the chisel. Neither the circulation nor the respiration was appreciably affected while the skull was opened with a chisel and mallet. The observations were made by recording the results on smoked drums. With the use of the mallet and chisel there is a very great range of adaptibility which is not possible with the trephine. I use a very sharp chisel which cuts the bone with the lightest taps of the mallet, cuts it sharply and accurately, enabling the operator to enter the skull in much less time than by the trephine, and enabling him to control the size and shape of the opening. The opening of the skull may be without injury to the brain, either from jarring or from the chisel itself.

After the opening has been made, I prefer the use of a sharp bone forceps to any instrument of special design that I have yet used for the further removal of the skull. The prismatic-shaped, pointed forceps, devised by Mr. Horsley, answers the purpose admirably. The hemorrhage coming from the diploë, while never dangerous on account of its quantity, obscures so much the field of operation that it is important to obviate it. This is easily and readily done by the use of a ten-per-cent. solution of olive oil and beeswax, making a wax of sufficient consistency to press into the cut edges of the bone, instantly stopping local hemorrhage. This wax is harmless and may be allowed to remain.

I wish in conclusion to report a rather remarkable case of the destruction of the so-called "name centre" by a bullet wound. I will allude to it only briefly here, as it will be reported later in detail. The case is one in which a 22-calibre bullet took effect just above Reid's base line on a vertical plane with the anterior border of the ear. The force of the bullet was so far spent in traversing the bone that it was arrested at a depth of seven-eighths of an inch in the substance of the brain in the third inferior temporo-sphenoidal convolution, cutting a circular hole a little less than three-quarters of an inch in diameter and seven-eighths of an inch in depth, the lower margin resting on the base of the skull, the posterior border of the circular wound being in a vertical line with the anterior border of the external auditory meatus. The bone was cut away some distance around the point of entrance and lodgment of the bullet. The bullet was readily removed. No other portion of the brain was injured, neither was there any hemorrhage of consequence. The operation was performed on the eighth day after the injury. The only symptoms manifested were the patient's inability to name common objects. His conception and perception were perfect. Articulation was perfect, and no other function was either modified or destroyed, excepting the ability to speak common names. This case has been thoroughly worked up from every standpoint, and is very definite in pointing out the location of the centre.

The clinical observations upon which this paper is based consist of forty-seven operations on the brain and of a large series of experiments on animals, a part of which has been published, and the greater part is to be published in a later paper, the purpose of this paper being to call attention to the value of placing the experimental and clinical evidence side by side, each reinforcing the other.

SPLENIC EXTRACT AND THE SPLENIC FUNCTION.[1]

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GLANDULAR extracts have during the last few years attracted considerable attention in the domain of therapeutics; and it is the opinion of the writer that they are destined to play a rôle in the near future, the importance of which is but slightly appreciated at the present time. The thyroid extract is the best known, and until recently was almost the only one of this class that yielded any definite practical results. There is always danger of any new remedy being pushed into new fields by experimenters, and being lauded by them for effects which further investigation shows were merely incidental. It is certainly to be hoped that the new effects ascribed to thyroid extract in the field of gynæcology will not prove illusory. Its effects in cancer of the uterus have been reported to be astonishing and felicitous, and to hold out the hope at least that this dread condition may at last be met by the physician with a therapeutic weapon which he may wield with some assurance that his efforts will not be wholly in vain.

Still more recently we find the extracts of the parotid and mammary glands being used with similarly astonishing results in the intractable conditions of the ovary and other pelvic organs, which, up to the present time, have been relieved permanently only by total extirpation of those organs.

But the object of this paper is to speak of another extract with which the world is little acquainted, and incidentally to discuss the splenic function in its relation to infectious disease. The extract of the spleen has been made and used experimentally in various ways for a long time, but there is not at the present time any accessible record of its being used with success as a therapeutic agent. It is therefore with unusual pleasure that I make the statement to this society, and to the medical world, that my experience with the splenic extract has demonstrated that along certain lines it has a very decided and important therapeutic action, so important, in fact, that if the future bears out in any degree the promise of my experiments and observations, the use of the splenic extract will become as classical as the use of thyroid extract in myxœdema, or the antitoxin of diphtheria in that disease.

Some two years ago, I was led into a somewhat critical study of the conditions which prevail in typhoid fever, and, like every other physician who has ever given the matter any thought, was impressed with the utter helplessness of the vaunted science of medicine in its presence, so far as curing or aborting the disease was concerned.

"They also serve who only stand and wait," says the poet; and, unsatisfactory as it is, that is about the sum of the physician's services in typhoid fever. We ameliorate the conditions in various well-known ways, and sometimes imagine we have shortened its course, but no candid physician will claim that, with any treatment in general use at the present time, he can cure the disease. I do not say this to the disparagement of any one, but the fact remains that there is no specific treatment known to the profession for this disease. The use of the splenic extract in typhoid fever, however, produces such marked and rapid effects when given as hereafter stated, that when the philosophy of the treatment is considered, it seems to be as near a specific treatment as anything could be, provided time and experience show that these effects are uniform and always to be relied upon. So far, they have been unvarying when the conditions were complied with. Heretofore, when the disease has once declared itself, the patient has been practically turned over to the nurse. Systematic cold bathing, the milk diet, and slightly astringent intestinal antisepsis when the enteric symptoms are marked, have been most relied upon. On the whole, these measures give the best results, mitigate the severity of the symptoms, make the patient more comfortable, and reduce the mortality of the disease more than any other treatment heretofore recognized. I do not say this to the disparagement of Dr. Woodbridge or any one else, but beg to adhere to my opinion. The Brand treatment, when properly administered and accompanied by the milk diet, has been more and more recognized as the best treatment for typhoid fever.

Very well, why do the cold bath and the milk diet do so much for the typhoid-fever patient?

Intestinal antisepsis is well understood; it is unnecessary to dwell upon it here, except to say that, as a fundamental treatment, it has fallen far short of what the medical profession has expected from it, and at present it is not relied upon except as an adjuvant to the Brand treatment. The reason for this is to be found in the steadily increasing list of cases in which the intestinal lesions have been either absent or of trifling extent; and Osler's now famous observation that the intensity of the disease bears no relation to the intensity or extent of the intestinal lesions, is rapidly becoming the opinion of the profession.

But when the question is asked of almost any body of physicians, "Why does the cold bath produce its well-known beneficial effects in typhoid fever?" almost every one will respond unhesitatingly, "Because it reduces the temperature."

I beg to answer, "Not at all." To be sure it does reduce the temperature, but so do many other remedies which accomplish no good whatever, and do not mitigate the condition of the patient a particle. Quinine reduces the temperature unerringly and without a break until it reaches the normal, or even a point much below the normal; but what good does it do? None whatever. Acetanilid, phenacetin, and the whole list of the coal-tar series will do the same; but we all know that while some slight mitigation of the symptoms occurs, provided the heart is properly supported, it is much less marked than that which follows the Brand treatment.

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[1] Read before the Leavenworth City and County Medical Society.

Manifestly, then, the cold bath does something, produces in the physical economy some change in addition to the reduction of temperature which these other remedies do not and cannot produce. What is that change?

The only satisfactory answer to this question is to be found in a study of the conditions of the blood in typhoid fever as compared with the blood in the normal condition. Normally the blood contains from five to five and a half million red corpuscles, and about seventy-five hundred white corpuscles to the cubic millimetre. These numbers vary widely, however, in both health and disease. In certain physiological conditions, such as pregnancy and normal digestion, the relative number of white corpuscles or leucocytes is markedly and constantly increased. We find also that in nearly all inflammatory and infectious diseases there is a constant tendency to a similar increase of the leucocytes, or leucocytosis as it is called. Careful observation also shows that with the exception of a temporary decrease at the very beginning of the disease there is a constant ratio between the degree of leucocytosis and the severity of the disease. A mild disease with vigorous vital resistance will be accompanied by a marked leucocytosis; a more severe disease with good resistance, by a more marked leucocytosis; and a still more severe disease with still good resistance, by a still more marked leucocytosis. But, in a very severe disease, with lethal tendencies, we find leucocytosis absent (Cabot).

Now, what does all this mean?

The principle of phagocytosis enunciated by Metchnikoff is still under the searchlight of scientific investigation; different observers differ more or less as to whether the bactericidal action of the blood is due more to the vital action of the leucocytes themselves, or to a direct chemical action taking place in the blood serum. But investigation brings to light only more evidence that the blood does possess a bactericidal action, and whether or not this action is entirely due to the vital action of the leucocytes, the degree of leucocytosis is a fairly accurate index of the bactericidal power of the blood, and hence is an index also of the body's vital resistance to disease. This is an argument directly in favor of Metchnikoff's position, and since he and other observers have watched the actual process under the microscope, there can be no doubt that the leucocytes exercise a directly germicidal effect upon the invading germs.

We have here, then, an explanation of the leucocytosis found in so many diseases, increasing with the severity of the disease. The proliferating glandular system throws into the circulation, as it were, an opposing army to the invading host of the enemy. The more numerous the invading army of germs, and the more vicious their assault, the more numerous the defensive army necessary to meet them and hold them in check. But if the attack is so severe or is made in such a manner that the body's reserve forces cannot be called forth, the defence is a failure; leucocytosis does not take place and the disease at once assumes a grave if not a lethal aspect.

This seems to be true of most diseases; but there is a certain class of grave diseases that seem to be notable exceptions to this rule—that is, they are exceptional in that at no time is there any tendency to leucocytosis, except in the initial stage, or in case of some complication of an inflammatory character, or other condition such as hemorrhage when there is always a tendency to leucocytosis. But such a leucocytosis is incidental to the complication, and seems to have no good effect on the primary disease.

One of these diseases is typhoid fever. In the initial stage we find a very transient leucocytosis, and then begins a steady gradual diminution of the leucocytes from the normal number down to one or two thousand in some cases.

Again we ask, Why is this? Why, in a disease in which the body so much needs the help of its defensive army, does it fail even to put in an appearance? Unless we may construe the initial increase of leucocytes, transient as it is, to be a loyal effort on their part to do their duty; an effort which is quickly throttled by the disease. Is it not because the very citadel of the body where this defensive army is garrisoned, as it were, is besieged?

Whence comes this army of leucocytes?

We have intimated in a general way that the glandular system throws them into the circulation. Physiologists have not entirely determined the extent to which the different portions of the glandular system take part in the production of the leucocytes, but it is admitted by all that they are probably elaborated most largely in that great vascular gland, the spleen. An enormous amount of blood passes through this organ, and it has been shown that blood taken from the splenic vein is very rich in leucocytes, while that taken from the artery is not more so than blood taken from any other artery. This shows that leucocytes are produced in the spleen, and this flood of leucocytes passes from the splenic directly into the great portal vein, through the liver and into the general circulation.

In 1895 F. Bezançon delivered a thesis in Paris, in which he gave an exhaustive study of the spleen, and arrived at the conclusion that it exercised the function of elaborating the leucocytes and also acted as a defensive organ against disease.

We admit, then, that the spleen is the great laboratory in which the leucocytes are produced, although it must be admitted that they are produced also by the lymphatic glands; and we admit that it is from the spleen principally that they are ejected into the circulation when leucocytosis is produced. One of the constant features of the typhoid-fever autopsy is a softened, friable, and frequently enlarged spleen. In severe cases it is sometimes found after death in a totally disorganized condition. In other words, the citadel which should furnish to the body its defensive army has been captured and destroyed by the enemy. Or, to speak anatomically, the organ upon which the body must depend for its defence against disease is a more or less disorganized wreck, incapable of performing its vital function of producing leucocytosis. Now, correlate these facts and let us see what we have:

1. The white blood corpuscles or leucocytes constitute the body's defensive army against disease.
2. The spleen is the great laboratory in which the leucocytes are produced, and from which they are thrown into the blood through the portal circulation.
3. In typhoid fever there is an absence of leucocytosis during life, and a more or less diseased or disorganized spleen found after death.

Do not these facts point directly to the conclusion that the spleen is the vital point of attack in typhoid fever? Is it not reasonable to argue that the method of attack is to inhibit first and finally to destroy the vital function of the spleen of producing leucocytosis? And is not this destruction of function accomplished by a direct action of the germs or their toxin upon the organic structure of the spleen, producing progressive softening and ultimate breaking down of its substance?

As has been seen, while the intestinal symptoms have been so characteristic of typhoid fever as to mislead the whole medical world as to the etiology of the disease, and to give it the name "enteric fever," they are by no means constant; and many fatal cases have been recorded in which no intestinal ulceration was found. Many observers claim that the Eberth bacillus does not produce pus, and that suppuration, when it does take place, in Peyer's patches, the kidney, the liver, or anywhere else, is due to secondary infection from the staphylococcus pyogenes aureus or the streptococcus. Notwithstanding the presence of the bacillus in large numbers in the spleen, the formation of pus in that organ, so far as I know, is unknown; and all of the organs or glands where pus is known to form, and where ulceration or sloughing does take place, are more or less accessible to the pus forming cocci. Particularly is this true of the intestinal glands. The spleen on the other hand is a ductless gland, accessible only through the circulation, hence we have no suppuration there; but the suppression of the splenic function seems to work some change in, and render vulnerable all organs and glands that are accessible through their ducts to the pus-forming cocci. The intestinal glands being most accessible, and for some reason in this condition most sensitive, suffer most. With this elucidation of the pathological anatomy of the disease which has so long been overlooked or misconstrued, we are prepared to answer the question asked above, "Why do the cold bath and the milk diet do so much for a typhoid-fever patient?"

The experiments of Winternitz and Thayer in 1893 showed that the cold bath in health and disease produced, in the peripheral circulation at least, leucocytosis. The former detailed his observations to the Imperial Royal Medical Society of Vienna in February of that year, and Dr. Thayer in April of the same year reported in the *Johns Hopkins Medical Bulletin* twenty cases of typhoid fever in which an average of 7,724 leucocytes were counted before a cold bath, and 13,170 after the bath; an increase of nearly one hundred per cent. Cabot says, in his excellent work on the blood, in summing up the evidence on this subject, "Violent exercise, massage, and short cold baths have been shown to cause a temporary increase in the number of leucocytes in the peripheral blood, all varieties of the cell being represented." Prolonged cold baths, on the other hand, have been shown to produce the opposite effect. But Cabot follows his remark with the observation that "the explanation usually given is that the blood is concentrated by vasomotor contraction and rise of blood pressure"; intimating that the increase in the number of leucocytes is not real but only apparent. To this opinion I beg to offer the objection that it is illogical. By way of argument, take an example: Suppose you have a hollow rubber ball with a small hole in it, filled with blood, which we will suppose you have the power to preserve at the body temperature, in a normal fluid condition. Suppose you make a microscopical count of the leucocytes in this blood per cubic millimetre, and then squeeze out half or two thirds of the contents of the ball and make another count. Does any one suppose for a moment that the second count would differ from the first? Certainly not; and there is absolutely no more reason for supposing that any amount of vasomotor contraction could in itself change the count of the leucocytes in the blood. If there is an increase in the number of leucocytes in the blood after a cold bath, it must in the nature of things be a true leucocytosis, and this we submit is exactly the reason that the uniformly beneficial effects ensue which are always observed when the bath is properly given. It would be idle to expect beneficial effects from a leucocytosis that was only apparent, and in which there was no actual proliferation of the white cells; but it is reasonable to expect benefit when the leucocytosis is real and marked.

If this be true, have we not arrived at the point when we can justly say that any remedy which will produce a true leucocytosis in typhoid fever will be likely to produce at the same time an amelioration of the symptoms and a tendency to recovery? It seems to me we have.

A large number of experiments have been carried on with a view to showing what substances when taken into the body produce leucocytosis and what do not. Pohl showed, in 1889, that most of the so-called tonics and stomachics produce slight leucocytosis; and that iron, quinine, caffeine, and alcohol do not. Von Limbeck and Binz procured the same condition—that is, leucocytosis—by the administration of oil of peppermint, oil of anise seed, and camphor. Löwit experimented with a number of important organic compounds such as blood serum, peptone, pepsin, nucleinic acid, and nuclein, giving them subcutaneously or intravenously, and all of those mentioned produced leucocytosis.

In the light of our previous study of the blood, what do we learn from these experiments?

Quinine, iron, and alcohol do not produce leucocytosis; and they have all been dropped from the list of remedies likely to be of benefit in typhoid fever. Oil of peppermint and camphor produce leucocytosis, and the latter especially has been lauded as a remedy in typhoid fever, while the former has long been known as a powerful germicide, and I have myself used it with benefit in typhoid in the shape of its camphor, menthol.

Nuclein, again, is found in greater or less abundance in milk; and the milk diet is a part of the classical treatment for typhoid fever. The nuclein promotes leucocytosis, according to Löwit and others, and the watery portion of the milk supplies directly the vast amount of the watery portion of the blood eliminated and lost by high temperature and diarrhœa. When we remember that not a little of the restlessness, delirium, and general distress that exist during high temperature and diarrhœa is due directly to a condensation of the blood, and that in such patients the sensation of thirst is obtunded so that they do not call for a corresponding amount of water, we can understand how the regular supply of fluid obtained through the medium of a milk diet properly administered would mitigate this condition.

A vast number of substances have been experimented with, and almost without exception those substances which have been used with benefit in typhoid fever have been shown to produce leucocytosis; and those which do not produce leucocytosis have failed to be of benefit in that disease.

So we find that in 1893 Goldschneider and Jacob experimented with the various organic extracts, and found that extracts of the spleen, marrow, and thymus gland produced decided leucocytosis; while extracts of the pancreas, thyroid gland, kidney, and liver had no such effect.

Here we have a most pregnant fact.

The extract of the spleen produces leucocytosis. In typhoid fever the organic structure of the spleen is attacked; the vital function is impaired; and leucocytosis is absent. Without any other argument, what we have seen from the above experiments ought to lead us directly to the conclusion that the splenic extract would be of benefit in typhoid fever; but there is still another reason. Observation has shown that when the functions of the thyroid gland, the ovary, the testicle, or the spinal cord are impaired, the therapeutic administration of the extracts of those organs supplies the deficiency. Why not expect the same in the case of the spleen?

In 1898 two Frenchmen, Drs. Lépine and Lyonnet, detailed in the *Revue de Médecine* some experiments upon dogs, in which they injected intravenously a solution of the typhoid toxin. Among other things they noted that in such dogs if the spleen was heated, which increased its vitality, the dog revived from a dose that was otherwise fatal. Does not this show that the spleen, when artificially stimulated to exercise its function, resists the typhoid toxin? Why, then, should we not expect therapeutic action from the administration of the extract of the spleen?

In the early part of my studies, relating to the action of glandular extracts and the production of leucocytosis, I attributed this action to the nuclein contained in those extracts. But if the experiments of Goldschneider and Jacob are to be relied upon, the thyroid extract does not produce leucocytosis, although it contains relatively a large amount of nuclein. Other observers claim that it does produce leucocytosis; so the truth probably is that it produces some leucocytosis, but not a marked degree. But the splenic extract does produce marked leucocytosis, and when administered in typhoid fever in doses of gr. v. three times a day, rapidly and steadily reduces the temperature, without undue diaphoresis, ameliorates all the symptoms, and steadily and quickly restores the patient to the normal condition.

Such effects cannot be explained simply by the fact that the splenic extract contains a certain amount of nuclein; for it contains not any more, and some observers say much less than thyroid extract, which produces little or no leucocytosis. Not only this, but in one case in which I administered thyroid extract in typhoid fever, the effect was only a very slight reduction of temperature, and little or no effect was produced on the general condition. As I was out of the splenic extract at the time, I tried then to fill up the gap with parotid extract, but its effects were equally inconclusive, and I was obliged to come back to the splenic extract as soon as it was available in order to produce decided effects. We must therefore conclude that the splenic extract has a specific action entirely apart from the nuclein it contains; and its action in typhoid fever is so marked and so beneficial in its character that, although it has been used in less than half a dozen cases, it is impossible not to recognize it as a powerful and important means of controlling the disease. Indeed it is absolutely the only remedy known to the medical profession at the present time for which we can, with any reason, make the claim that it cures the disease. A recent article advocating the use of nuclein and protonuclein in typhoid fever distinctly admits that it does not shorten the disease or save any time for the patient. I wish as distinctly to assert that in my hands the splenic extract has shortened the disease in a most obvious manner, and reduced the period of convalescence to almost nothing. I wish also to make the statement that it is my belief that any uncomplicated case of typhoid fever may be aborted by the use of the splenic extract as I shall indicate. I do not know that any ordinary complication would furnish any obstacle to the treatment; indeed I know that malarial fever, which is the most frequent complication we meet with in this climate, furnishes no obstacle at all, as I have myself proved several times. Malarial fever indeed is one of the class of diseases in which leucocytosis is absent; and in which, therefore, the splenic extract is indicated, even if we did not know that an enlarged and evidently disordered spleen has from time immemorial been recognized as characteristic of malarial fever.

There is, however, one thing to be observed in the administration of this remedy, and that is, that its best effects are not produced if the percentage of hæmoglobin or the number of the red cells is much reduced. No matter how much the leucocytes are multiplied in number, unless the red cells and the hæmoglobin are kept up, the leucocytes lack defensive power. Indeed if we keep on multiplying the leucocytes under these conditions, we simply produce a condition of leukæmia, which is no improvement on the previous condition. This is easily understood when we remember that the leucocytes are produced in the spleen at the expense of the red cells. Whether the red cells which have arrived at an appropriate age and condition are entirely destroyed in the spleen, and the white cells are builded anew from the elements that previously entered into the composition of the red cells; or whether the Malpighian corpuscles have the power of selecting certain of the red cells of appropriate age and condition and elaborating them in some way to endow them with the vital characteristics of the leucocyte, while the rest of the red cells pass through unchanged, is a matter that further and closer study must determine. But, at any rate, the therapeutic action of the splenic extract under circumstances such as have been cited leaves no room to doubt, if there was doubt before, that the leucocytes are created at the expense of the red cells; and practically we may not disregard the therapeutic hint thus given. Hence, whenever I have had a case of this character, in which the splenic extract did not seem to act promptly, and the percentage of hæmoglobin was evidently deficient, it has been my custom to administer alternately with the extract one of the many excellent hæmatinic preparations on the market, and have always had the pleasure of seeing the characteristic effects of the extract begin to show themselves at once, and the patient quickly on the road to recovery. Theoretically it has seemed to me that a preparation or extract of the red bone marrow would fulfil the conditions here better than any other preparation, but as no stable preparation of this substance has yet come into my hands, I have not been able to carry out the theory.

As previously remarked, I have no long list of cases to report in connection with this paper; but the treatment is so simple and harmless in its character that there is absolutely no excuse for not trying it if you have an appropriate case. If the treatment cannot stand upon its own merits, it should not stand at all, and no report of cases will make it stand.

To recapitulate the treatment more precisely, when I make the diagnosis of typhoid fever, if the enteric symptoms are at all marked, I order the milk diet; and if the temperature is 104° to 105° F., and has persistently stayed at those figures, I order splenic extract gr. v. every three hours for the first twenty-four hours. By the end of the first twenty-four hours the temperature has dropped steadily to 102° or 103°. Then the extract is given in doses of gr. v. three times a day. If the hæmoglobin is deficient by actual test, or if the patient is anæmic in appearance, or whether he is or not, if the extract does not act promptly, I give a hæmatinic three times a day in addition. The temperature will oscillate up and down for a few days, but each oscillation bringing it lower, until in from four to seven days it will be normal and remain at that point. The period of convalescence will depend entirely upon the extent of the lesions produced by the disease before the splenic treatment was begun. If the diagnosis was made early, it will be *nil;* if made after extensive intestinal lesions have been produced, necessarily those lesions must heal after the disease has been checked, and the time necessary for the healing will be in proportion to the reconstructive power of the individual. But the time will be reduced to the minimum by continuing the hæmatinic treatment. After the functional activity of the spleen has been once restored by the destruction of the bacilli and their toxin it is no longer necessary to give the extract, but as long as the supply of hæmoglobin is kept up the spleen will effectively do its own work of reconstructing the leucocytes, which, in the period of convalescence, have ceased to be warriors and become peaceful laborers busily engaged in building up the physical economy weakened by the vanquished enemy.

Before I close I desire to say that the therapeutic principles here enunciated, in my opinion, will be found applicable to other diseases besides typhoid fever. I have myself found them very useful in malarial fever, and it is a question with me whether they do not apply in a greater or less degree to all that important class of grave diseases in which leucocytosis is either absent or ineffective. This class includes at present, as enumerated by Cabot, typhoid fever, malarial fever, influenza (most cases), measles, rötheln, and tuberculosis in all its forms. If only the first two and the last are found amenable to this treatment, the good accomplished by it would be simply incalculable. In tuberculosis I have had no opportunity to try the treatment, but it seems likely to me that, inasmuch as the lymphatic glands are so largely affected in this disease, it will be necessary to combine with the splenic extract an extract of the lymphatic glands. If, in conjunction with these, an extract of the red bone marrow is given or some easily assimilated hæmatinic, I firmly believe that the dread disease consumption, which has for ages been, and is to-day, the great scourge of the human race, would be robbed of its terrors. Unfortunately, for some reason I have seldom had a case of this disease in my practice, and so have had no opportunity to test the treatment of it.

There are two other grave diseases in which I should like to see the splenic treatment tried, although scientific investigation has not yet decided whether or not leucocytosis is absent. Some observers say one thing and some another, but most of them say nothing. I refer to cerebro-spinal meningitis and yellow fever. I have myself used the splenic extract in one case of cerebro-spinal meningitis, and the patient recovered with wonderful rapidity from a condition which at first seemed hopeless; but I used at the same time guaiacol, painted on the back of the neck and head, and I was unable to determine whether the good effect was due to one or the other or to both combined.

Observers differ also as to whether yellow fever belongs to this class. Jones, of New Orleans, found in a study of yellow-fever blood some diminution of the red cells, and profound changes in their appearance and character, but says nothing about the white cells. But when the red cells are so profoundly affected, it is impossible that leucocytosis, even if present, should be effective in resisting the disease. Hence it is my belief that the splenic extract with some good hæmatinic would prove effective in this dread disease. During the outbreak of yellow fever at the Soldiers' Home at Fortress Monroe this last summer, I suggested to Surgeon-General Sternberg the use of splenic extract, and was informed that my communication had been received, but I have no reason to believe that any further attention was given to the matter. If there is anything in this study of the blood and the splenic function, and I have reason to believe there is, it is only reasonable to expect that the use of the splenic extract in yellow fever, with some remedy to build up the hæmoglobin and red cells, would be found directly curative.

In fact, when one looks down the vista of possibilities which lie beyond the veil which we are just lifting in this study of the vital conditions of the blood and the splenic function, it seems as though we were approaching a wonderland in medicine and therapeutics where we may expect to meet with marvels of the very existence of which we had not dreamed.

Physiology of the Pharynx.—In an elaborate article C. Chauveau passes in review the deglutitory, phonatory, secretory, and protective functions of the pharynx. The article is chiefly historical and especially valuable from its extensive bibliography.—*Ann. des Mal. de l'Oreille, du Larynx, etc.*, Dec., 1899.

A Rare and Interesting Bullet Wound; the Bullet Splitting in Halves, as Shown by the Skiagraph.—Angus McLean reports this case, in which the bullet must have been nearing the end of its flight when it struck the humerus, probably at a downward angle, and divided itself over its margin.—*The Medical Age*, January 25, 1900.

Early Intubation in Laryngeal Diphtheria.—William E. Lower reviews his experience, and finds that in no small percentage death is due to obstruction. The advantages of early intubation are that the child is then stronger, the time for wearing the tube is shortened, and hence the amount of nourishment required is less, and less opportunity is given for the introduction of foreign matter into the trachea, diminishing the chances of septic pneumonia. Intubation should be done when the breathing becomes labored, not waiting for the cyanotic stage.—*The Cleveland Medical Gazette*, January, 1900.

Arterial Tension in Childhood.—H. L. K. Shaw calls attention to the lack of knowledge upon this subject, and describes a new and simple apparatus which easily affords the desired information. It is found that in anæmia the blood pressure is slightly raised above normal. In acute endocarditis it is somewhat depressed. In acute nephritis the increased tension so constant in adults does not appear so marked in children. In diphtheria with cyanosis and dyspnœa, with or without intubation, pressure is increased. Tension is not influenced in diphtheria cases without laryngeal complications.—*Albany Medical Annals*, February, 1900.

A New Method of Treatment of Carcinoma Œsophagi.—W. Zweig describes the plan suggested by Rosenheim, which is as follows: The œsophagus is first washed down to the point of stricture with not more than 150 gm. of water. Then 50 gm. of olive oil is poured in and the tube is taken out during the act of pouring, so as to coat over the mucosa with the oil. Eucaine (four per cent.) may be used instead of oil. After a few minutes the patient can eat solid food without much trouble, and the manœuvre can be repeated several times daily. The advantage is the moral effect on the patient: he believes he can eat. Increased ingesta delay the onset of cachexia, and the time is prolonged before the inevitable gastrotomia.—*Albany Medical Annals*, February, 1900.

Croupous Pneumonia in Children.—J. Park West says about one-third of the pneumonia in childhood is of the croupous variety. It is, as a rule, a primary disease, often beginning by vomiting, more rarely by convulsions, and still less frequently by chill. Frequently the signs cannot be made out until the second or third day, and may be absent altogether. One of the important signs is a perverted pulse-respiration ratio. In health there are about ten respirations to thirty-five pulse beats, while here there may be ten respirations to twenty beats. The left lower lobe is most frequently affected next the right apex. The crepitant râle is oftener absent than present. He considers the gastric, cerebral, and migratory types, and differentiates from bronchitis, pleurisy, and broncho-pneumonia. Under treatment, he says, poultices have here no place. There is no routine treatment, and often no drugs are called for—a small quantity of whiskey and weakened milk are the preferable foods. In depression following the crisis, nitroglycerin frequently repeated is very valuable. For the fever nothing meets the indications as well as the bath of 95° to 100° F., with gentle rubbing for ten minutes, repeated as needed. Rarely one or two cooler or cold baths will be required.—*The Cleveland Medical Gazette*, January, 1900.

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OVER-PRESSURE THE BANE OF MODERN EDUCATION.

THE harm done to children by the present methods of education is too real to be ignored. The conditions of civilized life have so completely changed within the past half-century that it becomes daily more and more evident that measures must be taken to meet the new situation and to endeavor to propagate and raise a race better fitted to withstand the strain of modern existence. When children were brought up in the country, spending the greater part of their time in the fresh, open air, considerations as to physical development did not enter into the question. The environment being healthy, and food plentiful and nutritious, the natural sequence was that the human product grew up hardy and robust, well equipped for the battle of life. The ever-increasing tendency to desert the country for the town has placed a fresh problem before our scientific men and sanitarians. Children are born and pass their youth amid unhealthy surroundings, in many instances improperly and irregularly fed. In addition to these serious disadvantages they are still further handicapped by the undue stress of school life. The sole aim of modern education would seem to consist in the attempt to develop the mind at the expense of the body. The necessity of exercise and fresh air as a part of a child's training is strangely overlooked. Mental and physical education should go hand-in-hand. Wherever possible playgrounds of ample scope should be attached to schools, and, above all, young children should never be expected to work longer than two hours at a stretch.

Dr. J. S. Lankford, of San Antonio, Tex., read at the annual meeting of the Western Texas Medical Society, held in October, 1899, a paper dealing with the evils of present methods of education. Among other home truths to which he gave expression were: "What shall we say of the death-dealing mental burdens placed upon our children? We impart to the child by heredity and example an ambition to know everything, or if he doesn't happen to have that ambition, we proceed to hammer everything into him. We reach out eagerly to grasp and incorporate all the affairs of the universe in our course of instruction. Regardless of aptitude or natural tendency of mind we group the pupils in enormous classes and give them all just the same. . . . The burden is too heavy, and just as sure as effect follows cause in natural law, our generation of children is being weakened and unbalanced, and a still weaker generation will follow. Our great public-school system, designed to bless the nation, will become a national curse. This is not a false alarm or an idle prophecy. Visit the schools and see the careworn teachers, always working beyond nature's reasonable limits, and you can better understand why she or he seeks your aid before the middle of the term in order to be able to continue work. And here in this broken-down condition of the teacher we see an index to the heavy course and wrong classification."

The health of the young is a matter of vital importance to a nation. As with individuals, so it is with races in the struggle for predominance, the weakest will go to the wall. To insure the physical and mental well-being of the rising generation considerable modifications in our existing system of education will be necessary. Physical culture is not inconsistent with mental culture, and when this significant fact is thoroughly grasped by our boards of education, the present faulty methods of training the young will be changed to those more in harmony with the laws of nature.

COMPENSATORY PROCESSES IN DISEASE.

WERE not the animal organism endowed with structure and function in excess of its ordinary needs, disease would obviously be wellnigh universal. Nature has, however, been almost prodigal in this respect, so that destruction of tissue in one situation or loss of function in one organ may be compensated for, in whole or in part, by a readjustment to the new conditions. This result may be brought about in one or more of three ways, as is pointed out by Leube (*Deutsches Archiv für klinische Medicin*, 66 B., p. 80): (1) Portions of a diseased organ may remain healthy, and this residuum may assume the increased function; or one of azygous organs, as for instance the kidneys, may take up the work of the other, if this be diseased or otherwise incapacitated. This form of compensation is illustrated by the hypertrophy of the heart that takes place when the circulation is in any way obstructed, by the hypertrophy of the muscular coat of the stomach when obstruction to the movement of its contents exists, and by the transformation of yellow into red bone-marrow in the presence of anæmic states.

(2) One set of organs or tissues may perform the functions of another set of organs or tissues having a like action. Such reciprocity of function exists, for instance, between the skin and the kidneys, the stomach and the intestine, the spleen and the lymphatic glands. A distinctly reciprocal relation exists between the action of the kidneys and that of the skin, as pertains to both water and solids, and this fact is often availed of in the treatment of nephritis. Only in the presence of marked cutaneous œdema does Leube consider sweating as contraindicated, as the excrementitious matters left behind by the escape of

the fluid may be absorbed and thus give rise to toxic symptoms. Instead, he recommends multiple capillary puncture of the skin. The salivary glands and the bronchial mucous membrane are also capable in some degree of assuming the functions of the kidneys, and the gastro-intestinal tract also, but only in very small degree. There is abundant evidence that the intestines are fully capable of replacing the activity of the stomach if this be diminished or abolished from any cause. A mutually reciprocal relation exists between the blood-forming organs: the bone-marrow, the lymphatic glands, and the spleen. In cases of profound anæmia and in the sequence of profuse hemorrhage, evidence of increased hæmogenesis in the bone-marrow becomes appreciable from the change in color from yellow to red, and in the presence of nucleated red corpuscles. The spleen at times undergoes hyperplasia under such conditions, and is often found enlarged. Leube has observed such enlargement in a considerable proportion of cases of chlorosis, and these cases have pursued a more favorable course than those unattended with splenic enlargement. With regard to the white blood-cells, the spleen and the lymphatic glands appear to be concerned especially in the production of lymphocytes, and the bone-marrow principally in that of the granular and amœboid leucocytes. Following splenectomy the lymphatic glands become enlarged, and the number of lymphocytes in the blood becomes increased.

(3) Organs and tissues may assume the functions of other organs and tissues having a different action. Of this fact application is made therapeutically, diuresis, diaphoresis, and catharsis often being induced with the objeet of causing absorption of exudates. Having observed rapid disappearance of an accumulation of fluid in the abdominal cavity in the sequence of salivation occurring spontaneously, Leube suggests that at times ptyalism might be induced artificially with the same object in view, and he reports four of five cases of pleurisy with effusion and one of two cases of ascites in which rapid absorption of the fluid took place in connection with profuse salivation excited by the chewing of gum.

MARINE-HOSPITAL SERVICE REPORT.

The surgeon-general of the Marine-Hospital service has recently issued his report for the year ending June 30, 1899, which contains matter of general and special interest. The service now owns and operates twenty-two marine hospitals, and there are besides one hundred and seven stations where patients receive hospital or dispensary treatment. The statement is made that during the fiscal year 1899 the total number of patients was 55,489, of which number 12,610 were treated in hospital. A sanatorium has been established for the use of consumptive patients of the Marine-Hospital service at Fort Stanton, New Mexico, the abandoned military reservation at that place having been handed over by the government for that purpose. The surgeon-general again dwells upon the need of a marine hospital for the port of New York, pointing out that the present arrangement for the care of sick and disabled seamen is unsatisfactory and unworthy of the principal port of the United States. Many useful scientific investigations have been carried out in the hygienic laboratory during the past year, notably those in connection with the pollution of the Potomac River water, and car sanitation. The experiments with regard to the immunization of a horse against typhoid are said to have been progressing satisfactorily, and the value of the serum obtained from the animal is now being tested.

Of course the national quarantine service is the most important department of the Marine-Hospital service, and from the report it will be gathered that on the whole this branch is in good working order. At the various stations 3,838 vessels were inspected and 370 disinfected during the fiscal year. The regulations enforced for the suppression of yellow fever had the desired effect, and it was chiefly due to the arduous labors of the Marine-Hospital service that the disease was kept so well under control. In January, 1899, the maritime quarantine of Cuba and Puerto Rico was transferred to the Marine-Hospital service, which naturally has largely increased the duties of the department. At the present time there are some thirty officers of the service in Cuba and seven in Puerto Rico. Valuable investigations with regard to the cause of yellow fever have been made by a commission of medical officers of the Marine-Hospital service, who have delivered a report on the subject. They verify the findings of Sanarelli in his discovery of the bacillus icteroides, and further demonstrate that this disease is received into the human system through the respiratory tract, holding out hopes that a protective and curative serum may shortly be discovered. At the same time attention is drawn to the fact that sanitation plays an essential rôle in checking the prevalence of the malady. Every effort is being put forth to safeguard America against an incursion of the plague, but the surgeon-general regrets that the bills introduced into the Senate and House of Representatives with the object of strengthening the national quarantine failed to pass.

The Marine-Hospital service has now been in existence for one hundred and one years, but the lapse of time has only served to exhibit in a more and more decided manner the value of its work.

SANATORIA FOR SAILORS.

At a meeting of St. John's, New Brunswick, Medical Society, held at that place in June, 1898, Dr. J. E. March, a Canadian quarantine officer, read a paper entitled "Tuberculosis and the Forecastle," in which he expressed his opinions regarding the measures to be taken with cases of tuberculosis occurring among sailors on shipboard. There has been for some time much discussion on the subject, so that views of experts are especially welcome.

The author of the paper in question, after alluding to the circumstance that tuberculosis is a disease to which seamen in a general way are particularly liable, points out that their mode of life is peculiarly calculated to spread the malady, and quotes numerous instances in which the unavoidable proximity of the crew would appear to have been by far the most potent if not the sole factor in disseminating the germs of infection. Attention is drawn to the undoubted truth that the older the ship the greater the chance of her having become infected. But the subsequent suggestion possesses the merit of novelty, namely, that owing to the presence of a quantity of wet cloth in the forecastle, and taking into consideration the fact that the bacillus not only lives but multiplies and flourishes on the surface of wet cloth, many forecastles are therefore necessarily infected with the bacillus tuberculosis. This theory sounds plausible, and is decidedly worthy of notice. The situation to be faced is consequently this, that consumption is a prevalent disease with sailors, chiefly owing to their manner of life, which is highly conducive to the fostering and spread of the disease. What, then, is the remedy? Dr. March's panacea for, or rather palliative of, the evil is that tuberculosis should be scheduled as a quarantinable disease.

The MEDICAL RECORD, always allowing that it has been demonstrated beyond a doubt that tuberculosis is under certain conditions communicable, at the same time has taken somewhat conservative views as to the degree and scope of its infectivity. We know now that the spread of tuberculosis is to be largely attributed to the inhalation of dried sputum distributed in the atmosphere of houses and rooms in which sufferers from phthisis live and in which sufficient ventilation is lacking; but the argument that consumption is a virulently infectious malady after the same manner or to the same extent as the exanthemata will assuredly not be put forward by any physician in the world. In an editorial which appeared in a recent number of the MEDICAL RECORD the scheduling of tuberculosis was adversely commented on as being a too radical measure, and one that did not altogether appear as likely to have the magical preventive effects claimed for it by its advocates. Notwithstanding these statements, to which, although at all times open to conviction, we still adhere, Dr. March is undoubtedly right when he asserts that the more expeditiously consumptive sailors are removed from the ship the better will it be for the health of the remainder of the crew, and if the fact can be conclusively proven that this event can be brought about only by the scheduling of tuberculosis as a quarantinable disease, then by all means let this be done.

There is, moreover, another phase of the case which is, perhaps, quite as important to the health of the consumptive and to that of his fellow-men as the prompt removal of the sufferer from the ship. Where shall he be taken when removed? If he is transported to the general wards of a hospital, the change will be, as the old saying has it, but "jumping out of the frying-pan into the fire." The hospitals themselves are foci of infection, and the consumptive man is as great a source of danger there as he would be on board ship. The proposition advanced by many physicians of experience, that sanatoria should be established for phthisical seamen, has much to be said in its favor. Passed Assistant Surgeon J. O. Cobb, writing in the annual report of the Marine-Hospital service for 1898, is a strong advocate of this proposal, and says: "Granting the most liberal allowance for faulty conclusions from the data at hand, it is quite probable that the government can build sanatoria for these men, transport them to these places, and take care of them to a termination of the illness, for the amount that would be expended on their care at hospitals. The sanatorium is the ideal method of administration for these cases. At the sanatorium these cases can be closely studied, and all kinds of treatment tried. Taking that, then, to be a fact, the eventual outcome would, from a medical standpoint, be an ideal one." Many difficulties will surely have to be surmounted ere sanatoria for sailors are erected, but, when the hardships of the seafaring class are considered, no trouble or expense should be spared to better the lot of the ailing seaman.

WILL THERE BE CONSCRIPTION IN GREAT BRITAIN?

WHATEVER may be the ultimate result of the Transvaal war, whether the issue will be that a Dutch republic is formed on the ashes of the British colony, or that Great Britain establishes "*vi et armis*" her paramountcy in South Africa, one fact stands out with striking prominence, namely, that the British military system must undergo radical reforms. With the justice or otherwise of the British claims we have no concern, but the comparative breakdown of the methods controlling the management of the British army, and the consequent suggestions thrown out on all sides that some form of conscription should be adopted in the United Kingdom, is a matter of great interest to America. Treating the subject from the standpoint of health and disregarding its influence on the commercial status of Great Britain, there is much to be said in favor of partial conscription. The system in the first instance inculcates habits of discipline and method, and further is calculated to improve the physical well-being of those who practise it. The great argument against conscription in Great Britain itself has always been that it would seriously injure the trade of the country, and is besides directly opposed to that love of freedom inherent in all those of the Anglo-Saxon race. But, as is well pointed out in an editorial in the London *Lancet* of December 23d, the trade of Germany does not appear to have been disastrously handicapped by her military system, and in so far as the physique and general health of her population are concerned has greatly benefited by conscription. The greater part of the inhabitants of Great Britain live in cities and towns, and the melancholy truth that the population as a whole has deteriorated physically owing to this cause is too obvious to be lightly ignored. Two or three years of healthy army life, followed at just that age when a man especially needs to live under favorable sanitary conditions, would do much toward improving the British town-dweller mentally and physically. That the question of conscription is thought worthy of consideration even in Great Britain is a sign of the trend of public opinion, and the Boer war, be the result what it may, will have the effect of making the British "place their house in order."

News of the Week.

What's in a Name?—A Berlin physician recently published an article in the *Therapeutische Monatshefte* extolling the virtues of the "Backhaus-Milch" for infants.

The Death Rate of Dublin has reached such an excessive figure (49 per 1,000) that the lord-lieutenant of Ireland has ordered an official inquiry into its causes.

Professor Schenk, who was recently requested to leave the University of Vienna, has announced his intention to go to some other country, possibly America, and establish himself as a specialist in sex regulation.

"Monatsschrift für Geburtshülfe und Gynäkologie."—The January number of this journal is a "Festschrift" dedicated to Dr. Friedrich Schauta, professor of obstetrical gynæcology at the University of Vienna, in honor of his twenty-five years of medical life.

Measles on David's Island.—A small epidemic has broken out among the soldiers at Fort Slocum, David's Island. There were ten cases the first week. All the patients have been placed in quarantine. There are fifteen hundred men and about one hundred officers on the island waiting for transportation to the Philippines.

Thermometer Fever.—Dr. Benjamin K. Hays, of Oxford, N. C., writes that the physician to a certain female college in South Carolina recently found that the temperature of thirteen young ladies was two degrees above normal, did not vary through the day, and was uninfluenced by quinine. The young ladies felt no inconvenience from this rise of temperature, but the physician forbade their attending school duties, and kept them in the infirmary for two weeks. At the end of this time it was discovered that the thermometer registered two degrees high, whereupon the young ladies were permitted to return to their duties.

The National Pure Food and Drug Congress.—The third annual meeting of this association will be held in Washington on March 7th and following days. The executive committee of the congress in issuing this call directs especial attention to the fact that the National Pure Food and Drug Congress through its authorized committees and officers has since the last meeting of the congress used every effort to secure the passage of the "national pure food bill," indorsed by the congress and introduced in the House of Representatives by Hon. Marriott Brosius, of Pennsylvania. The same bill has also been introduced in the Senate by both Senator Hansbrough and Senator Allen. It is believed that with a united effort the bill can be passed and a national pure food law be enacted during the present session of Congress. It is therefore greatly to be desired that any interest entitled to representation in the congress should be represented at the third annual session.

The Game of the German Emperor.—A cable despatch from Berlin conveys the important information that since 1872 Emperor William has killed 40,822 pieces of game. The list includes 34,813 small game and 6,009 big game, besides 121 chamois, 7 elks, 3 reindeer, 3 bears, and 1 whale. If there happens to be an antivivisection society in Germany, we would commend the German Emperor to the particular attention of its members whenever they may enjoy an interval of rest from baiting scientists.

The Eighteenth German Congress for Internal Medicine will be held at Wiesbaden on April 18–21, 1900, under the presidency of Dr. v. Jaksch, of Prague. The subjects announced for set discussion are "Endocarditis and its Relation to Other Diseases," to be introduced by Litter, of Berlin, and "The Treatment of Pneumonia," to be introduced by Korányi, of Budapest, and Pel, of Amsterdam.

Fysician is the way the agricultural editor of the *East Aurora Journal* is now pleased to designate the practitioner of the noble art of healing. Though advancing in years, he continues to have his monthly periodicals of protest, and doubtless things to protest against grow fewer every year in East Aurora. He is himself, however, such a "Filistine" that he continues to spell the name of his journal with a Ph.

Leprosy in Crete.—Drs. Ehlers, of Copenhagen, and Cahnheim, of Dresden, who made a careful study of leprosy in Iceland in 1894–95, have been requested by Prince George of Greece, the governor-general of Crete, to visit that island the coming spring to study leprosy conditions there. They will go in March and remain about three months, studying especially the origin and spread of the disease in the interior of the island, and making suggestions as to the best means of keeping it in check.

A Discussion of Tuberculosis.—It is announced that a congress for the discussion of tuberculosis will be held in this city on February 21 and 22, 1900, under the auspices of the Medico-Legal Society. The first session will be held at the Hotel St. Andrews, Seventy-second Street and Broadway, at 9 P.M. It will be preceded by a dinner at the same place at 7 P.M., at which it is hoped most of the members will assist.

College of Physicians of Philadelphia.—At a stated meeting held February 7th, Dr. Thomas G. Morton read a memoir of the late Dr. Albert Frické. Dr. J. Dutton Steele read a paper entitled "A Contribution to the Pathology and Diagnosis of Retroperitoneal Sarcoma." He reported the case of a child, in which in the sequence of a fall upon a fence an abdominal tumor developed. The neoplasm was thought to be a sarcoma of the kidney. An operation was performed, and the growth found to be an endothelioma of the retroperitoneal glands. Dr. Arthur V. Meigs made a verbal communication upon the subject of the placarding of houses for contagious diseases. He contended that the present practice of placarding houses in which are cases of contagious disease conduced to concealment and deception in order to avoid the inconveniences attendant upon the quarantine restrictions enforced.

New York State Medical Examinations.—In the examinations for medical license, held in this State in September, 1899, one hundred and sixty-two candidates presented themselves, of which one hundred and twenty-seven, or 78.4 per cent., were successful. Eight men passed with honors. The highest general average was 93.3.

Fecundity.—Dr. W. S. Hulbert, of Winsted, Conn., writes that on February 3d he delivered a woman of her tenth child. The ten children, all delivered singly and at full term, were born within a period of exactly ten years, ten months, and ten days. In this last confinement the patient nearly lost her life from post-partum hemorrhage.

Influenza is evidently pandemic in Europe. It has been reported as seriously prevalent in England, Spain, and Italy, and now it has invaded Central Europe. In Berlin the hospitals are crowded, and there is scarcely a house in which there are not several victims. In Munich the sufferers are numbered by thousands.

Pathological Society of Philadelphia.—At a stated meeting held February 8th, Dr. F. A. Packard presented a specimen of hemorrhagic pancreatitis from an elderly man, who had suffered from abdominal pain, and in whom death had occurred suddenly. Dr. J. Hendrie Lloyd presented sections from a case of hæmatomyelia, the condition having resulted in consequence of a fall down-stairs. There was no fracture or luxation of the vertebræ, although there was paralysis of all four extremities and of the respiratory muscles, except the diaphragm. Drs. M. P. Ravenel and C. Y. White presented specimens exhibiting experimental tuberculosis in a goat. Infection had been induced by intrapulmonary injection of tubercle bacilli, pneumonia developing, and tubercle bacilli being easily found in all of the parenchymatous organs. Typical tuberculosis lesions were wanting. Dr. M. P. Ravenel reported the results of experimental inoculation of calves with syphilitic virus. Two animals treated with the products of active syphilitic lesions failed to develop the slightest indication of syphilis. Drs. H. D. Jump and J. D. Steele exhibited specimens of thrombosis of a coronary artery, contracted kidneys, and malformation of the liver. There had been no symptoms of angina pectoris, and death had resulted from uræmia. A portion of the left lobe of the liver was reflected upon itself.

Red Cross Work in the Philippines.—The special committee appointed by Auxiliary No. 3 of the Red Cross Society to continue in the Philippine Islands the work of selecting and maintaining trained nurses met recently at the residence of Mrs. Whitelaw Reid, in this city. The auxiliary, which was organized for work in Cuba, and was dissolved a year ago, was resuscitated when it was found that there would be work for it in the Philippines. Under the authorization of the Secretary of War, four Red Cross nurses were sent on each of the transports *Grant*, *Sherman*, and *Sheridan*. They cared for five hundred and fifty-two patients during the voyage, and, upon reaching the Philippines, found their services so much in demand that the committee sent a second detachment selected in San Francisco, and later a third detachment selected in New York. At one time over one thousand sick and wounded men were under the sole charge of these nurses. The auxiliary is now sending out libraries to the hospitals in Manila.

Opposition to Reciprocity in Pharmacy Licenses.—The Ontario College of Pharmacy has been notified by the board of pharmacy of Greater New York that in future foreign diplomas in pharmacy will not be recognized in this city, and that candidates for registration here must pass an examination. The reciprocal privileges heretofore extended to New York graduates in Ontario are to be withdrawn.

Rough Voyage of a Hospital Ship.—The hospital ship *Missouri*, which sailed from Manila on January 11th for San Francisco, with two hundred and seventy-two sick and wounded soldiers, had a very unpleasant weather experience after leaving Japan. During the greater part of the trip from Nagasaki to Honolulu no meals could be served at the cabin tables, and the passengers and crew were obliged to receive their food at the galley and eat it standing. Sixteen of the sick men died during the voyage.

New Quarantine Regulations.—A bill has been introduced into the legislature of this State making more stringent the quarantine rules for the port of New York, and giving the health officer and the commissioners of quarantine additional powers to protect the public health in cases of emergency. The health officer is required to live at quarantine. The time during which suspected persons may be detained is extended from ten to twenty days. A vessel found to be in a condition dangerous to public health may be held, and treated as the health officer deems necessary. At present the mayor may order a vessel to quarantine, but the new bill gives the health officer sole power in that respect, and he is to have the aid of the health and police departments in enforcing orders.

Smallpox has appeared in a number of counties in New Brunswick, having been brought there from Quebec, and the authorities are enforcing the health regulations in the hope of preventing the further spread of the epidemic. The disease, which exists chiefly among the employees of the Intercolonial Railroad, is in very mild form, and few deaths have occurred. About sixty cases are under treatment.—In the island of Luzon there has been some increase in the number of cases of smallpox, as is usual at this time of year. Two officers of the Thirty-sixth Volunteer Infantry have died of the disease, and one other is ill. During February and March the disease always becomes more virulent in the Philippines, but there is nothing alarming in the situation. Orders have been issued for the vaccination of the troops, and also of the natives wherever possible.

Competition among Undertakers.—The department of charities of New York City has instituted an investigation of the alleged practice by the employees of the department, of selling information to undertakers concerning the deaths of patients in city institutions. The investigation was begun on the complaint of an undertaker, who was losing trade because, as he said, his rivals were willing to pay high prices for early information.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending February 10, 1900. February 3d.—Passed Assistant Surgeon M. S. Elliott commissioned passed assistant surgeon from October 6, 1899. February 8th.—Medical Director J. A. Hawke commissioned medical director from September 24, 1899. Medical Director R. A. Marmion commissioned medical director from October 23, 1899. Medical Director D. Dickinson commissioned medical director from November 11, 1899. Medical Director M. C. Drennan commissioned medical director from February 5, 1900. Medical Inspector T. H. Streets commissioned medical inspector from April 16, 1899. Medical Inspector G. E. H. Harmon commissioned medical inspector from November 11, 1899. Medical Inspector J. W. Waggener commissioned medical inspector from February 8, 1899. Surgeon T. A. Berryhill commissioned surgeon from April 9, 1899. Surgeon E. P. Stone commissioned surgeon from April 16, 1899. Passed Assistant Surgeon R. K. Smith commissioned passed assistant surgeon from April 3, 1899. Passed Assistant Surgeon R. S. Blakeman commissioned passed assistant surgeon from May 27, 1899. Passed Assistant Surgeon J. C. Rosenbleuth commissioned passed assistant surgeon from October 14, 1899. Passed Assistant Surgeon G. W. Costigan commissioned passed assistant surgeon from February 8, 1900. Passed Assistant Surgeon G. H. Barber detached from the Naval Academy, February 10th, and ordered home and to be ready for orders to sea duty.

The Plague is believed to have been arrested in Honolulu by the extensive fire in the Oriental quarter, no new cases having appeared during the eight days preceding February 2d, the date of the last advices. In all there were forty-six deaths. Ten other blocks outside of Chinatown were burned by order of the board of health, and about fifty isolated buildings were also destroyed. Following the destruction of Chinatown and other similar places the number of deaths from all causes fell off remarkably. The work of inspection was most thorough. The sanitary committee divided Honolulu into forty inspection districts, with a volunteer inspector in charge of each. Each district was divided into sections or apanas, each containing from seventy-five to one hundred and fifty inhabitants, and a volunteer sub-inspector was placed over each. Each sub-inspector went over his apana twice a day, and personally saw each inhabitant, reporting every case of illness, however trivial, to the board of health, which sent a physician at once, and if any plague symptoms were discovered the patient was isolated, and all who had come in contact with the premises were quarantined.—In Manila the disease is reported to be gaining headway. It is said that this is the first visitation of plague the city has ever had. It was undoubtedly brought from Hong Kong, where during 1899 there were 1,486 cases with 1,428 deaths.—In Bombay the conditions are growing worse owing to the influx of famine sufferers, who present a fertile soil for disease of every kind. The number of deaths in that city in one day last week was 408, not all from the plague, however.

The Late Dr. Samuel Ketch.—At a stated meeting of the medical board of the Montefiore Home for Chronic Invalids, held January 16th, the following resolution was passed regarding the death of Dr. Samuel Ketch:

"The medical board of the Montefiore Home expresses profound sorrow at the death of Dr. Samuel Ketch, consulting orthopædic surgeon. As a surgeon Dr. Ketch was skilful, clear-headed, conscientious, and able; as a man, genial, courteous, frank, and loyal. The board records in its minutes with profound grief the death of a valued counsellor, an expert surgeon, an honest man.

"V. P. GIBNEY, JOSEPH FRAENKEL, GEORGE R. ELLIOTT."

Obituary Notes.—DR. T. DANA FITZSIMMONS died at his home in Brooklyn on February 4th, at the age of twenty-six years. He was a graduate of the Long Island College Hospital Medical School in 1897, and later served on the house staff of St. Mary's Hospital.

DR. CHARLES CARROLL SMITH, formerly a surgeon in the navy of the United States, died at his home in Philadelphia on February 5th, aged sixty years. Death was due to locomotor ataxia. He was at one time in charge of the government medical stores at League Island. He was a graduate of the medical department of the University of Pennsylvania.

DR. FRANK STANDISH BRADFORD died on February 8th, at his home in Morristown, N. J., at the age of seventy years. He was a graduate of the Jefferson Medical College in 1858. He practised first in Providence, R. I., then in Charleston, S. C., and served as surgeon of a Rhode Island battery during the civil war. Then he removed to this city, where he remained until 1887, when he went to Morristown. For seventeen years he was professor of the practice of medicine in the Homœopathic Medical College, and for ten years secretary of the faculty.

DR. ABBIE HAMLIN MACIVOR, a homœopathic practitioner of this city, died on February 8th. She was born in 1842, and obtained her medical degree in 1886.

Progress of Medical Science.

Journal of the American Medical Ass'n, Feb. 10, 1900.

A Preliminary Investigation of the Theory of the Inoculation of Malarial Fever through the Agency of Mosquitos.—Albert Woldert gives some results from his study of different species of mosquitos collected in eastern and central Texas, eastern Pennsylvania, and the eastern coast of New Jersey. The writer has made some two thousand sections and examined them microscopically. In determining the relations of mosquitos to malarial infection he considers the study of entomology very important, and says that there is much room for improvement in the classification of mosquitos.

Family Diseases.—F. Savary Pearce divides his subject broadly into: (1) Hereditary maladies; (2) family tendency to a certain disease in special generations without hereditary taint; and (3) special family types of nervous disease, as Friedreich's disease and Huntingdon's chorea. The writer presents notes of over fifty cases, and says that this study leads us to surer ground as to modifications of family disease in making statements about expectation of life in certain classes of them. It also teaches in a negative way the importance of the so-called individual element being given a high place in sociological considerations in health and disease.

The Value of Cycloplegia in Optometric Examination.—C. M. Culver from a review of the records of examination of one thousand eyes deduces the following conclusions: (1) A solution of 2.5 per cent. of homatropine hydrobromate, instilled six times at intervals of five minutes, provides trustworthy cycloplegia in the average healthy human eye in from one to three hours from the first installation; (2) as a rule the protracted use of a one-per-cent. solution of atropine sulphate is no more effective than is the 1 : 40 solution of the alkaloid above mentioned; (3) in ten per cent. of patients it is desirable to produce artificial cycloplegia.

Uncommon Pyogenic Infection of the Middle Ear.—Robert Sattler reports a case illustrating the dangers attending the cauterization of posterior and middle nasal hypertrophies. This danger is especially great in the destruction of posterior hypertrophy, which often results in a fierce resentment on the part of the cauterized region out of all proportion to the slight local injury inflicted.

Clinical and Pathological Notes on Sympathetic Ophthalmia.—H. Gifford reports three cases, each of which indicates three important points, viz.: (1) The absence of premonitory symptoms; (2) the importance of daily tests of vision, and (3) the value of large doses of salicylate of sodium.

Improve the Species.—In this address H. C. Crowell argues from the results obtained through the scientific breeding of domestic animals. He would have certain restrictions and limitations enforced to this end, and concludes by saying: "Degeneracy is the result of fostering or permitting the perpetuation of weakness, moral, mental, or physical."

Foreign Body in the Urethra.—L. M. Greene reports the case of a man who, while using a lead pencil for purposes of masturbation, allowed it to escape into the urethra. After operation and drainage the patient recovered.

Centrifugal Analysis of Urine.—Charles W. Purdy presents tables and describes the necessary equipment and process for this mode of analysis. He claims rapidity, precision, and facility for his method.

Contribution to the Treatment of Spinal Caries, with Special Reference to the Woven Wire Corset.—By George R. Elliott. See MEDICAL RECORD, vol. lv., p. 834.

Contributions of the Medical Profession to General Literature and Collateral Sciences.—By George R. Highsmith. An historical sketch.

Strangulated Hernia; Some Practical Remarks Concerning its Diagnosis and its Proper Management.—By Parker Syms. See MEDICAL RECORD, vol. lvii., p. 299.

Radical Cure of Strangulated Inguinal and Femoral Herniæ.—By Irving S. Haynes. See MEDICAL RECORD, vol. lvii., p. 300.

Treatment of Strangulated Hernia.—By John F. Erdmann. See MEDICAL RECORD, vol. lvii., p. 300.

Diagnosis of Strangulated Hernia.—By Henry Roth. See MEDICAL RECORD, vol. lvii., p. 299.

New York Medical Journal, February 10, 1900.

A Few Clinical Studies of Cardiac Diseases in Infancy and Childhood.—J. Zahorsky narrates a series of clinical histories illustrative of the points brought out in the paper. Endocarditis is often, he believes, diagnosticated as malaria. Pain in the præcordial region is not uncommon in childhood, and tonsillitis may be a frequent cause of pains in the chest. Rarely the agonizing pain resembling angina is found. Visible pulsation he regards as indicative of hypertrophy unless extreme emaciation is present. An accentuated second sound is unreliable in infants but becomes significant in older children. The author advocates the practice of calculating the area of dulness in square centimetres.

Malarial Hæmaturia.—B. Smith closes a continued article upon this subject. He does not believe in cinchonizing the patient as is the general custom, but prefers to rely on mercury and on diaphoresis to eliminate the poison. He believes that the administration of quinine is a source of possible danger, and it has become the custom of the physicians of his section (Texas) carefully to avoid the remedy in malarial hæmaturia. During convalescence it is well to give tincture of cinchona in the cold infusion of wild-cherry bark, to which may be added later small doses of nitro-muriatic acid. The blood state calls for the phosphates of sodium, calcium, and potassium.

The Benefits of Medical School Inspection.—H. G. McAdam describes the system as carried out in New York City. From the quarterly report of the board of health, it is seen that out of 139,965 pupils examined, 7,606 were found to be suffering from communicable diseases.

A Case of Mixed Typhoid and Malarial Fevers.—The patient, whose history is given by J. L. Bevans, was a soldier in the army which had been in Cuba. The blood responded to the Widal test. The malarial organisms were of the æstivo-autumnal type.

A Suggestion for Tablet-Triturate Manufacturers.—C. J. Proben thinks that all triturates containing the more narcotic drugs should be colored red in order to prevent mistakes in dispensing.

Athletics in the Public Schools.—J. Gardner Smith gives an account of the establishment of this department of instruction in the schools of New York City. He believes that half an hour out of every school day should be given to pure bodily improvement.

Fracture of the Patella.—J. B. Bissell reports a case of a man aged forty-eight years in whom complete union was obtained by open operation seven months after the injury.

Recovered Consumptives Who Remain Well.—Paul Paquin tells of twenty-eight persons who have been treated for phthisis during the last few years and are still alive and seemingly well.

Medical News, February 10, 1900.

Atresia Vaginæ; Solid Uterus; Hæmatoma of Left Ovary.—H. J. Garrigues reports the case of a girl twenty years of age who had never menstruated. Every four weeks the patient suffered severe pain. Epileptic convulsions also occurred. Laparotomy disclosed a solid uterus of normal size and shape, with the right ovary slightly enlarged, having a fresh corpus luteum filled with blood. The left ovary was changed into a hæmatoma, containing ten ounces of dark inspissated blood.

The Justo-Major Pelvis as a Factor in the Causation of Perineal Injuries.—Joseph Brown Cooke believes that the frequency of lacerated perinei in patients with justo-major pelves is most rationally explained by the fact that the head does not "mould." It has all the characteristics of a head in a breech delivery.

The Policy of the State Relative to the Spread of Tuberculosis.—By Enoch V. Stoddard. See MEDICAL RECORD, vol. lvii., p. 210.

Report of Bacteriological Investigations upon Yellow Fever.—By Aristides Agramonte. A continued article.

Boston Medical and Surgical Journal, Feb. 8, 1900.

Bradycardia.—Richard F. Chase reports a case with the following conclusions: A pulse rate under 60, synchronous with the heart's systole, constitutes a bradycardia according to Grob. The condition is of common occurrence, especially in men. There are three types: (1) Physiological. (2) Idiopathic, embracing those cases of persistent slow pulse, usually seen in advanced life, and more commonly in male subjects. It is rarely attended by any discoverable cause. The termination is usually fatal, though the patient may live several years. (3) Symptomatic bradycardia accompanies some usually apparent condition, ordinarily of temporary duration. It may, however, complicate cases terminating fatally from injuries, sunstroke, and other serious conditions.

Grave Abdominal Lesions which Often Defy Diagnosis.—Thomas H. Manley believes that immediate section for violent contusions of the abdomen should be discouraged, unless we are sure that a large rent or rupture of a hollow organ is involved. It is a desperate resource of very questionable expediency under any circumstances before reaction is established.

The Massachusetts State Hospital for Consumptives at Rutland.—Vincent Y. Bowditch gives a description of this institution. The work accomplished during the first year has been very satisfactory.

Multiple Cerebral Hemorrhages from Chronic Lead Poisoning.—J. W. Courtney reports a case of this nature and gives in detail the autopsical findings.

Philadelphia Medical Journal, February 10, 1900.

Albuminuria, its Significance and Detection.—Thomas P. Prout discusses first the five proteids found at times in the urine, viz., serum albumin, serum globulin, nucleo-albumin or mucin, peptone, and albumose or propeptone, and then describes six tests which he is accustomed to employ.

Locomotor Ataxia, Recovery in a Case Repeatedly so Diagnosed.—David S. Booth reports a case in a man thirty-seven years old who presented many of the symptoms of tabes. He was under treatment, the nature of which is not stated, for a year, and his symptoms disappeared.

Some Casual Remarks on Prostitution and Venereal Diseases in their Relation to the Public.—Isadore Dyer discusses the means of reducing prostitution and venereal disease—two evils which must be combated together or at least simultaneously.

Celluloid Yarn.—J. Pagenstecher describes a new material for sutures and ligatures. It is linen thread impregnated with a solution of celluloid.

Syphilitic Fever.—A. C. Morgan reports a case of evening pyrexia (100.5°–103° F.) which disappeared after the exhibition of potassium iodide.

Position Symptoms in Joint Disease.—By Harry M. Sherman. See MEDICAL RECORD, vol. lvi., p. 494.

British Medical Journal, February 3, 1900.

Dilatation of the Stomach from the Surgical Aspect.—William H. Bennett says that dilatation of the stomach is now generally admitted for all practical purposes to be a surgical complaint. He believes that the cause of persistent dilatation will be found to lie in permanent pyloric obstruction, in adhesions, or in some other condition outside the stomach interfering with its power of contraction. The writer calls special attention to a class of cases in which exploratory abdominal section having been performed no evidence of obstruction can be made out by manipulating the organ from its external surface, yet in many of these cases pyloric obstruction, sometimes to an extreme degree, exists and is remediable. In all cases, therefore, after abdominal section, the viscus should be opened so that the condition of the pyloric sphincter may be examined.

A Case of Gastrostomy Treated by Franck's Method.—Colon Macvicar thinks that this method is practicable only when little or no cicatricial contraction of the stomach exists. In the case he reports there was no contraction at the time of operation, but probably considerable secondary contraction from the invasion of the cardiac end of the stomach, so much pain resulting from the traction that the operation was a questional gain. The patient lived four months after operation, two or three months longer than the average expectation in malignant cases.

Renal Papillectomy.—E. Hurry Fenwick gives some results of ten years' study of cases of unilateral, painless renal hemorrhages in the young adult. The author is convinced that ignorance of the cause of the hemorrhage is due to faulty operative technique. He says that an examination with the finger is futile; that the pelvis must be opened and every part examined by a strong light.

Removal of a Submucous Fibroid by Section of the Uterus (Myomectomy).—James Braithwaite reports this case. He says that although there are only two other cases of the kind on record, he thinks time and experience will show that it is the proper mode of removing tumors which cannot be removed per vaginam, or which are so large as to require the uterus, or part of it, to be removed with the tumor.

On Removal of the Cancerous Uterus by the Abdominal Route.—T. Henderson Pounds predicts that the operation of the future for the cancerous uterus will be the abdominal one. He says that although this operation has a slightly higher immediate mortality than that by the vaginal route, this is greatly counterbalanced by a much longer respite to the patient in successful cases.

On Suture of Fractured Patella by an Improved Method.—R. Glasgow Patteson thinks that the causes of failure of the various methods of suturing fractured patella may be classed under two heads: (1) The adoption of a subcutaneous method, and (2) the use of unsuitable materials, and a faulty method of open treatment. The author says that in young, healthy subjects the ideal operation is primary suture.

The Disposition of the Utero-Vesical Pouch of Peritoneum in Cases of Distention of the Vagina and Uterus.—Arguing from cases observed W. McAdam Eccles says that when the vagina is distended with fluid, the bladder is drawn up out of the pelvis, the uterus also rising on the summit of the vagina, and thus the natural relationship of the utero-vesical reflection of peritoneum is preserved.

Hemorrhage through the Lacrymal Duct after Plugging the Nares.—D. Richmond reports this case in which the patient suffered from a severe attack of typhoid fever. A sudden fall in temperature from 104° to 98° F. was accompanied by severe hemorrhage from both nostrils. When the nostrils were plugged the hemorrhage took place through the lacrymal duct.

Two Cases of Colectomy.—F. T. Paul describes a mode of operation involving the establishment of a temporary or permanent artificial anus, which he prefers to any of the various methods in vogue for immediately restoring the continuity of the bowel. He reports two cases in which the method has been entirely successful.

A Case of Abdominal Nephrectomy for Renal Sarcoma in a Young Child.—Charles A. Morton reports this case, in which the patient, a child aged eighteen months, was operated on successfully and discharged in good health. There was no local recurrence, but two months after the child succumbed to tuberculosis.

A Case of Sodium-Salicylate Poisoning.—In this case, reported by H. Ainslie Scott, the patient purposely doubled the dose ordered, taking about gr. lxxx. in fourteen hours. She was treated with warm drinks, potassium bromide, and aromatic spirits of ammonia. Until the drug was eliminated there was considerable hallucination.

Complete Atresia Vaginæ.—A case reported by W. E. Fothergill in which careful examination failed to reveal the presence of uterine body, of tubes, or of ovaries. The writer says an artificial vagina will be made should the patient care to undertake the trouble of keeping it open during cicatrization.

Note on a Splint for Use after Amputation.—A. Marmaduke Sheild describes a splint he has devised which, in most cases, may be left on through the whole healing-process, thus obviating the pain and trouble which result from the removal of the usual splint for each dressing.

Kernig's Symptom in Meningitis.—W. J. Buchanan reports a case in which this symptom occurred, and remarks on its great diagnostic value in cases of meningitis.

Cases of Operation for Intestinal Obstruction.—James Taylor reports seven cases of operation for intestinal obstruction. Of these cases three resulted in recovery.

The Lancet, February 3, 1900.

The Value of Eye Symptoms in the Diagnosis of General Diseases.—A series of cases is described by H. F. Juler showing the intimate connection between various eye symptoms and lesions in other parts of the body. A purulent conjunctivitis may prove on examination of the pus to be gonorrhœal. Diphtheria frequently affects the eye muscles and sometimes the globe coverings. Syphilis may show itself as chancre of the lids, inflammation of the iris, and keratitis. Renal affections are frequently inaugurated by an albuminuric retinitis, and the eye symptoms may be the most prominent feature of many maladies of the nervous system.

Some Complications following Injuries about the Elbow-Joint and their Treatment.—In a clinical lecture by H. Littlewood he describes a peculiar deformity following elbow injuries which he has never seen mentioned in the books. The deformity is this: when the wrist is extended, then the interphalangeal joints of the fingers and thumb are strongly flexed so that the tips of the fingers touch the lower part of the palm and no reasonable amount of force appears capable of straightening them, but as soon as the wrist joint is flexed at a right angle then the interphalangeal joints can be easily extended.

Septic Lymphangitis Along the Ureters Affecting the Kidneys, Treated with Anti-Streptococcic Serum: Recovery.—J. W. Stenhouse gives the history of a woman aged twenty-eight years. The disease followed a urethritis of several years' standing and a later cystitis. The use of the serum gave prompt results, and it is recommended to combine with it the administration of full doses of quinine.

The Treatment of Imperforate Rectum.—W. P. Montgomery analyzes ten cases, in nine of which colotomy was performed. Seven of the patients died within seven days after operation. The others were living at last accounts. The relative advantages and disadvantages of the perineal and iliac operations are fully discussed.

Some Reflections upon Appendicitis.—J. O'Connor takes the usual surgical position in regard to operative intervention. He finds in an adherent appendix, and in an abnormally short meso-appendix, explanations of many of the symptoms of the relapsing cases not operated on at the time of first attack.

Some Experiments on the Sterilizing Properties of Unconfined Superheated Steam.—L. Cobbett and J. H. C. Dalton show by a series of experiments that this agent may be used to disinfect bedding, that it leaves it dryer than before, and that the time required for the process is not inconveniently long.

Day-Terrors.—G. F. Still describes a condition analogous to night-terrors which is due to a rheumatic inheritance, fright, and mucous colitis. In such children all forcing must be avoided and a careful search made for the exciting cause.

Further Observations on Pernicious Anæmia as a Chronic Infective Disease.—By W. Hunter. A continued article.

Berliner klinische Wochenschrift, January 22, 1900.

On the Poisonous Effects of Normal Urine.—C. Posner and M. Vertun call attention to the experiments of Bouchard, who found that the introduction into the veins of animals of urine at blood heat caused myosis, dyspnœa, lowering of temperature, and somnolence, the animal dying without convulsions. The introduction of the fluid mass itself regardless of its nature may be fatal from thrombus in the right heart or from lung embolus. Their own experiments lead to the same general conclusions, but account must also be taken of the degree of toxicity of the urine as well as of its bulk. Furthermore, results vary according to the saline percentages in any given urine.

Pneumatic Therapy from 1875 to 1900.—J. Lazarus describes the measures employed along this line in one of the Berlin hospitals, and finds from the experience of the last quarter-century that pneumatic therapy gives definite results in pleurisy, lung retraction, and chronic infiltration, chronic bronchial catarrh, consecutive circulatory disturbances without organic cardiac disease, and in certain anomalies of nutrition, as chlorosis and anæmia. The limitations and contraindications of the method are clearly pointed out. Cases of hæmoptysis especially are not to be subjected to this plan of treatment.

The Bacterial Contents of Milk Products and Other Nutritive Media.—Dr. Bloch has investigated this question with reference to preparations called plasmon, nutrose, eulactol, hygiama, tropon, etc., also including in his researches meal and oatmeal. In no instance did he fail to find large numbers of bacteria, but says that the utility and safety of a food product are to be based not on the number but the kind of bacteria found therein. Condemnation is rightfully made with reference to those substances which contain micro-organisms which are definitely known to be injurious to the human body.

The Development of Ophthalmology in the Nineteenth Century.—J. Hirschberg closes a historical article with the statement that a large and grateful field of activity awaits the physician who devotes his energies to ophthalmological practice, and expresses the hope that the coming century will see the members of the profession better acquainted with its principles.

Simultaneous Gunshot Wounds of the Thoracic and Abdominal Cavities.—By F. Koenig. A continued article.

Deutsche medicinische Wochenschrift, January 18, 1900.

Further Investigations of Arrow Poison.—Brieger, having previously studied the arrow poison of the Vakamba in East Africa, now reports on that used by the Vagogo in the same part of the world. He thinks these two poisons, as well as that of the Somali, are practically the same. He had not sufficient material to enable him to identify the poison with certainty, but it is probably composed in great part of the juice of a species of euphorbia.

Traumatic Tetanus Cured by Means of Orrhotherapy.—Crone reports a case of tetanus in an eight-year-old boy who, in a fall, received a scalp wound. The first symptoms appeared ten days later. It was four days after the disease declared itself before the tetanus antitoxin was procured. Four injections in as many days were made before any improvement was noted, but then the boy began to grow better, and finally recovered entirely.

A New Method for the Quantitative Estimation of Mercury in the Urine.—Friedrich Eschbaum obtains a union of the mercury in the urine with copper in the usual way, breaks up this union by heat, and then removes the mercury from the sides of the test-tube by means of a little plate of metallic silver. The difference in weight of this piece of silver before and after the amalgamation gives the amount of mercury.

Further Contributions to the Study of the Osmotic Pressure of Animal Fluids.—M. Senator studies the density of the urine and of the blood in health and disease by means of observation of the varying freezing-point of these fluids.

Clinical and Experimental Studies of Dural Infusion.—By Paul Jacobi. A continued article.

Münchener medicinische Wochenschrift, Jan. 23, 1900.

Pathology of Miliary Tuberculosis.—Georg Mayer cites the case of a man twenty-one years old, who when first seen had a slight cough with expectoration and shortness of breath on exertion. There were fine bubbling râles over the left upper lung. The pulse was soft and weak. On the right wrist was a small, bright-red area exuding a yellowish-white secretion. No tubercle bacilli were found in the sputum. In less than three weeks there were a severe cough, vomiting, and rise of temperature. There was swelling of the skin of both thighs. Both liver and spleen were palpable. The blood count showed white to red corpuscles as 1 : 720. Later, there were abundant râles over both lungs. The heart became weak and irregular. On the day of death the heart sounds were almost obscured by a loud friction murmur. The patient had no subjective discomfort till shortly before death, which occurred about a month after he was first seen. Section disclosed miliary tubercles throughout the lungs. In the pericardium were 200 c.c. of serous fluid. Both endocardium and myocardium were affected. In the heart cavity were thrombi. Mayer appends photographs showing a tuberculous hair follicle, a tubercle of the cephalic vein, and an organizing thrombus of the right ventricle.

Treatment of Chronic Constipation in Childhood.—Heinrich Doerfler has for the last six years met with flattering success in the treatment of chronic constipation in children by the administration of butter. It should be fresh and of the best quality. It should be given in the natural state and not by means of any vehicle. For the first month clysmata may be given; in the second and third month from a half to a whole coffee-spoonful of butter daily, morning and evening, till the stools are normal; then only every two days. The dose is further increased according to the age.

Local Disposition, Cold, and Hardening.—Carl Kisskalt, in reviewing the results of experiments on animals, says that arterial hyperæmia increases the tendency to illness. Such increased disposition through arterial hyperæmia of the internal organs, including the mucous membrane of the respiratory tract, occurs through the contraction of the skin vessels by cold. Hardening against the influence of cold brings about a condition in which the skin vessels do not contract so quickly, and thus disposition to disease is not so great.

The Separation of Carbonic Acid by Repeated Cold Baths.—A. Lode and A. Durig report as the result of their experiments an extraordinary increase of the production of carbonic acid during and after cold baths. The amount increased when the temperature of the water was lowered, and *vice versa*.

The Œsophagoscopic Diagnosis of Diverticula of the Œsophagus.—Gustav Killiar, in using the œsophagoscope, always has the patient in a sitting position. He then inserts the tube into the sac, then down into the œsophagus, then again into the sac, thus obtaining a clear idea of all the anatomical relations.

A Case of Potassium-Iodide Parotitis.—G. Trautmann states that symptoms of poisoning by the iodine preparations can be caused by their local application as well as by their internal administration. He then cites two cases of parotitis caused by potassium iodide. One of these he takes from the literature; one came under his own treatment.

Father Bernhard, a Predecessor of Kneipp. A Chapter from the History of the Water Cure.—Julian Marcuse relates that Father Bernhard believed in the use of fresh water mixed with ice or snow in three ways: (1) External application of cloths saturated in the liquid, or as a kind of massage by rubbing with pieces of ice; (2) as a drink; (3) as clysmata.

Tuberculosis of the Lymph Glands.—Von Noorden shows by statistics how common this affection is, and declares that the association of tuberculosis of the lymph glands and pulmonary tuberculosis is extremely common.

The Measure of Blood Pressure by Gärtner's Tonometer.—Hugo Weiss believes Gärtner's tonometer to be of great clinical use, and he calls attention to its simplicity.

Wiener klinische Wochenschrift, January 25, 1900.

The Radical Operation for Varicocele.—Albert Narath describes this operation and gives some of its advantages. The incision is made above Poupart's ligament, and thus is in a region more easily sterilized and less liable to infection than the scrotum. The circulation in the internal spermatic vein is entirely interrupted and the high blood pressure is suspended at the origin of the veins. The injury of the internal spermatic artery can be more easily avoided than in other methods. The external spermatic veins are much expanded, so they can be easily resected. At the same time inguinal herniæ and lipomata can be operated. The inguinal canal can be securely closed. The spermatic cord can be raised and embedded in a narrow canal. The operation is very neat; the venous plexus remains intact, the loss of blood is small.

Multiple Stenoses of the Small Intestine of Tuberculous Origin.—Sigmund Erdheim has observed in a short time five cases of this nature and has operated on some of them. In four of the cases the position of the stricture was entirely in the small intestine, in the fifth it was combined with a tuberculous stricture of the ascending colon. Combination with tuberculous stenoses of the large intestine, especially of the cæcum, is often observed. All five of Erdheim's cases were secondary infections.

The Technique of Gastrostomy.—Robert Lucke describes this method thus: First a purse-string suture is made in the stomach wall. A trocar is inserted, and after its withdrawal a rubber tube is substituted and the suture drawn up and tied.

Wiener klinische Rundschau, January 21, 1900.

Indication for Employment Therapy in Functional Nervous Diseases.—Oskar Vogt declares that work as a therapeutic measure can be considered only when it is effectual in distracting the patient's attention from himself and when he is happy in its performance. Work is indicated in nervous prostration when it tends to relieve this condition. It is not of much benefit in akinesia algera according to Vogt's experience. But for neurasthenics with hypochondriacal tendencies and for such affections as are allied to neurasthenia it is admirably adapted.

Epiploitis following Operation.—Julius Schnitzler tabulates twenty-eight cases, the patients ranging in age from seven years to sixty-nine years. Both sexes are represented. Some of these terminated by spontaneous healing, some were subjected to further operative interference.

Two Cases of Tuberculosis of the Serous Membranes in Man, with the Macroscopical as well as the Microscopical Picture of Bovine Tuberculosis.—By Josef Pelnár. A continued article.

French Journals.

Hemiplegia and Aphasia in Intestinal Helminthiasis.—E. Maragliano makes an exhaustive study of a patient found unconscious on the street with no history obtainable. Melæna passed was examined and found to contain the larvæ and eggs of the ankylostoma. There was right hemiplegia with aphasia. The literature of anæmia from ankylostomiasis is passed in review. The worm in the intestines exercises its perturbing action on the circulation in absorbing the blood directly through the mucous membrane; in setting up hemorrhages and in secreting toxins. The various possibilities in the case in point are analyzed, and the conclusion is reached that morphological changes in the red globules were produced, which in turn determined a cerebral hemorrhage. The treatment consisted in a tannin injection in one-per-cent solution, followed the next day by a 2-gm. cachet of thymol every three hours for four doses, and two injections daily of 1 gm. of ergotin.—*La Médecine Moderne*, January 28, 1900.

Surgical Treatment of Club-Foot by Astragalectomy.—P. Mauclaire relates an instance of varus equinus of paralytic origin coming on at the age of eleven months. Infantile paralysis implicated both legs and compelled rest in bed for seven months, at the end of which time there was considerable turning in of the right foot. At the age of three years tenotomy of the tendo Achillis was done without benefit. The condition was in reality due to paralysis, the club-foot becoming fixed because of tendinous retractions and of subluxation of the astragalus forward and inward. Radiography made a positive diagnosis possible, and this procedure, the writer thinks, should be the guide to treatment in all cases. In the present instance, after the impeding bone was removed, the foot was put into good position and a plaster bandage applied for twenty-five days. The results were good.—*La Presse Médicale*, January 31, 1900.

Acute Pott's Paralysis Without Changes in the Spinal Cord.—H. Verger and Ant. Laubie give the observation of a man, aged fifty-six years, without deformity of the vertebral column, who suffered from retention and weakness of the limbs followed by complete paraplegia and death about a month later. At the autopsy large tuberculous lesions of the bodies of the seventh, eighth, and ninth dorsal vertebræ were found. The cord was not compressed, and there was no change to be seen by the naked eye nor by the microscope.—*Le Progrès Médical*, January 27, 1900.

Mental Pathology at the End of the Nineteenth Century.—Roubinovitch studies the pathogeny of mental alienation, its pathological anatomy, methods, types, curability, and medico-legal aspects. Purely medical methods of study founded on general pathology are advocated, while the newer psychological methods are useful as contributing aids. Insanity is a material disease of the brain or of the entire organism; it is not a disease of the spirit or of the soul, which being immaterial cannot be diseased.—*Le Bulletin Médical*, January 25, 1900.

The Plague in Ancient and Modern Times and its Future in Europe.—Ph. Hauser makes a historical study of plague, which appeared in continental Europe in 543, and traces its march down to recent outbreaks. In its early pandemic form it was fatal in ninety per cent. of those attacked. From 1720 on the plague disappeared from Europe without known cause, but remained endemic and epidemic in Asia Minor, Syria, and Egypt until 1845. The Hong Kong epidemic of 1894 and the Bombay outbreak receive especial attention.—*La Médecine Moderne*, January 31, 1900.

Appendicitis and Gastrorrhagia.—E. Kirmisson refers to a similar instance reported last month by Piéchaud, and relates the history of a girl of seven years upon whom he had operated. A few hours afterward there was vomiting of blood and eight hours later death occurred. There was no hæmophilia to account for this outcome, and the most probable hypothesis was thought to be that of septicæmia.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, January 31, 1900.

The Cure of Drunkenness by Anti-Alcoholic Serum.—Legrain reviews the various quack and other methods which have been in vogue in alcoholomania, and concludes that they all depend largely if not wholly upon the patients' own efforts for their success. The best prescription is "an infusion of a little will power and earnest desire in an abundance of water."—*La Presse Médicale*, January 28, 1900.

Annals of Gynecology and Pediatry, January, 1900.

Cervical Flexions—their Importance and Means of Curing them.—T. J. Bell believes that cervical flexions do not command the attention which their importance demands. Dysmenorrhœa in unmarried and married women, with sterility in those who are married, should raise a suspicion of flexion at the internal os. Correction of flexions at the earliest possible moment should be advised, and the method employed should be thorough.

Beef-Gall Enemata in the Treatment of Post-Operative Obstinate Constipation and Intestinal Obstruction.—F. C. Ameiss declares that, after the failure of simple means, enemata of eight ounces of beef-gall and eight ounces of water have in several of his cases obviated the necessity of reopening the abdomen.

New Applications of the Undulating Current in Gynecology.—G. Apostoli affirms, after an experience of three years with this current, that while being harmless and well borne, it deserves to take rank in the therapeutics of conservative gynecology because of its two chief actions, on the one side analgesic, on the other tending to resolution and the relief of congestion.

Two Cases of Vesico-Vaginal Fistula.—John O. Polak very carefully describes the closure of these two fistulæ. The first consisted of several plastic operations at different sittings. The second patient was kept in bed in the right latero-prone position. The edges of the fistula were stimulated with fused silver nitrate. Both results were satisfactory.

The Different Phases of Electric Treatment.—J. McFadden Gaston speaks of the various sources of electricity and mentions the favorable results of its use in extra-uterine pregnancy, its application in the case of tumors and of goitre, varicocele, and hydrocele. He speaks of the *x*-ray in the treatment of diseased organs.

Tubal Pregnancy with Report of Cases.—J. M. Black writes that the etiology of this condition is still shrouded in mystery. It may occur at any age, and in a woman who has borne several children, or it may happen in the first pregnancy a few months after marriage.

The Treatment of Congenital Dislocations of the Hip by the Bloodless Method.—M. P. Redard states that this method ought to be tried on patients from two to twelve years of age. In young patients the method, with proper technique, is free from danger and generally gives excellent results.

Some Remarks on Heredity.—A. Macswain declares that no marriage should ever be contracted without a clean health record involving both male and female. He believes that man is not what environment makes him, but is to a large degree what heredity makes him.

Multiple Pregnancy with Report of Cases.—A. W. Shea states that heredity is an important factor in multiple pregnancy. In a few over seven hundred cases, he finds nine instances—eight of twins and one of triplets.

Gastro-Enteritis Complicating Congenital Syphilis.—Robert W. Hastings reviews four cases which he observed in the Boston Floating Hospital last summer, all of which resulted fatally.

Experience in Operations for Typhoid Perforation.—By Hugh M. Taylor. See Medical Record, vol. lvi., p. 910.

A Brief Summary of the Indications for Operations upon the Stomach.—By Max Einhorn. See Medical Record, vol. lvi., p. 637.

Ureterectomy.—By J. Wesley Bovée. See Medical Record, vol. lvi., p. 905.

Canadian Journal of Med. and Surgery, Feb., 1900.

Extreme Emaciation in Hysteria, with Notes of a Case.—T. Beath reports the case of a young girl, who, in heavy clothing, weighed forty-three and three-quarter pounds. She had never menstruated. Her organs were normal, but she complained of deafness without apparent cause. In the fecal evacuations for the first two weeks was tough, slimy mucus. Four weeks of partial segregation and Weir Mitchell treatment saw her well on the way to recovery. Beath, in reviewing this case, calls attention to: (1) The extreme emaciation; (2) the comparative absence of other symptoms; (3) the nosological place of mucous colitis. He emphasizes the fact that there is an hysterical symptom (indefinite abdominal pain associated with the discharge of long strings of mucus per anum and usually constipation) which is in no way associated with colitis.

The Relation of Insanity to Pelvic and Other Lesions.—A. T. Hobbs, after discussing this subject, notes the relative value which the various lesions have in the production or in the maintenance of cerebral disturbance: 1. Utero-ovarian disease of an inflammatory origin received attention in ninety-six cases. The recovery rate following the elimination of these derangements was exactly fifty per cent. 2. Utero-ovarian displacements being corrected in forty-seven cases were followed by thirty-six per cent. of recoveries. 3. Utero-ovarian tumors and vaginal lesions of a non-inflammatory type being attended to in thirty cases were succeeded by twenty-six per cent. of mental recoveries.

The Smallpox Outbreak in Essex.—P. H. Brice sums up four remarkable facts from the statistics of this outbreak: (1) The practically absolute protection of a previous attack; (2) the practically absolute protection of a prior vaccination when a good cicatrix is present; (3) the power of a recent vaccination running concurrently in the system to modify greatly the severity of the disease; (4) a lymph of attenuated virulence does not seem to have done more than modify the severity of the disease.

A New Epoch in Hospital Evolution.—Ernest Hall advocates the development of an institution specially adapted for the treatment of those who have manifested psychic abnormality and have marked physical lesion. While not conflicting with the general hospital nor the asylum, its purpose would be to receive and treat (1) aggravated forms of nervous disease, and (2) cases of insanity in which a definite local lesion could be found.

Address in Surgery.—By W. B. Coley. See Medical Record, vol. lvi., p. 427.

Medicine, February, 1900.

Curability of Epilepsy, and How it May be Accomplished.—William B. Spratling gives the treatment of cases of idiopathic epilepsy at the Craig Colony. The patient is under the entire control of authority. First, he is to be reconstructed physically. For this various means are employed—medicines, systematic occupation, gymnastic exercises, baths, special feeding, and moral agencies. All the while he is being studied for aura and the cause of the disease. He must not overeat, nor use tobacco to excess. Alcoholic stimulants are forbidden. His former manner of life is changed as much as possible. If he cares for any particular work, he is encouraged in its pursuit. Excellent results have followed this treatment.

Gastro-Intestinal Infections in Infants. I. A. Abt states that the opinion is general among bacteriologists and clinicians that: 1. The acute gastro-intestinal disorders of children cannot be attributed to a specific form of bacteria. 2. The toxic symptoms of such infection depend upon the introduction into the alimentary canal of poisonous substances contained in food. 3. Bacteria may be introduced from without; or the ordinary saprophytic bacteria in the canal may assume special virulence. 4. The most severe disturbances are caused by the metabolism of bacteria. 5. Specific intestinal infection may occur in infants. Typhoid fever, though infrequent, may occur.

A Case of Blastomycetic Dermatitis—Clinically and Histologically, an Epithelioma.—W. E. Coates declares that the so-called blastomycetic growths occupy a position closely akin to tumor growths both malignant and benign. He presents the case of a man thirty-seven years of age who exemplifies the statements he makes.

The Topical Application of Iodoform in the Treatment of Tuberculous Affection of Serous Membrane, with Cases.—By Zera J. Lusk. See Medical Record, vol. lvi., p. 684.

Immunization through Vaccination.—By D. P. Austin. See Medical Record, vol. lvi., p. 643.

The Montreal Medical Journal, January, 1900.

West African Medicine.—Charles G. L. Wolf states that in malaria hot spirits and quinine are given, with perhaps antipyrin or phenacetin. The treatment of severe cases of malaria is practically identical with that of Brand. "Craw-craw" is a very interesting disease which has afflicted the white population and is one of the most difficult things in the world to cure. The most frequently used toxic agent on the coast has been till recently the Calabar bean. It is used to poison human beings as well as horses. The two poisons next in use are those of sasswood and the strychnos bean. Two other methods used by the assassin are the mixture of powdered glass in the victim's food and the introduction of mud containing tetanus bacilli together with grit into the victim's shoes.

Report of a Case of Colles' Fracture which Led to a Suit for Malpractice and Prolonged Litigation.—T. M. Conerty gives the history of a case of Colles' fracture treated by him. Some time after the accident a "sore" developed on the patient's arm—a strumous boy—due to the devitalization of tissue from the fall and subsequent infection from gross negligence on the part of the parents. There is now a slight deformity due to cicatricial contraction. The father of the boy, who has sued for damages, was at the time he began the action under an order of commitment to jail for debt. No matter, therefore, how successful the defence may be, the physician must pay the costs of defence.

Electrical Burns.—J. M. Elder gives Dr. Sharpe's description of such injuries, adding any differences he has himself noticed. 1. The burn is at first dried and crisp, the site being bloodless; later, oozing occurs. All the symptoms of moist gangrene will be present. 2. Pain in some patients is slight, in others severe. 3. Some patients experience shock, some do not. 4. As to prognosis, recovery is from one and one-half to five times as long as in the case of other burns. 5. The ascending degeneration following these burns affects chiefly the striped muscle tissue, and is often extensive. Treatment is very unsatisfactory—excision, amputation, and skin-grafting being often necessary.

A Case of Hæmatometra.—William Gardner operated on such a case, the microscopical examination of which excluded all malignant characteristics. The most probable explanation of the occlusion of the cervix which led to the accumulation of the menstrual flow seemed to be adhesive inflammation due to the prolonged pressure of the cup of the prolapsus pessary.

Some Retinal Complications in Chlorosis.—H. McL. Kinghorn reports three cases in which the most important points are: 1. Only one eye was affected. 2. The onset was sudden. 3. Improvement was rapid under iron. 4. The neuro-retinitis and hemorrhages occurred well on in the disease. 5. Hypermetropia was present in both the cases with neuro-retinitis.

A Case of Janiceps.—Andrew Macphail describes this monster which was sent to him from Jamaica, of which place the parents are natives. The specimen shows the spinal columns and backs of the crania to be separate, while the thoraces and faces coalesce anteriorly.

A Rare Form of Pyosalpinx Complicating Uterine Myoma.—William Gardner and Maude E. Abbott report the interesting features of this case to be: (1) The existence of pyosalpinx without any signs of inflammation of the surrounding parts; (2) the combination of pyosalpinx with myoma; (3) excentric hypertrophy of the tube.

The Place of Physical Training in a School System.—R. Tait McKenzie emphasizes the necessity of scientific physical training in schools. The years of most rapid growth are those of school life between eight and seventeen years.

On the Etiology and Symptomatology of Goitre.—By J. George Adami. See Medical Record, vol. lvii., p. 119.

Surgical Gleanings from Abroad.—By L. Coyteux Prevost.

Dublin Journal of Medical Sciences, February, 1900.

The Clinical Features of Beri-Beri.—C. Norman enumerates and discusses the following features of beri-beri: Disturbances of sensation, exaggerated reflexes, later diminished; paresis of the peroneal muscles and foot flexors, affections of other muscles, eye symptoms, absence of sphincter paralysis, later muscular atrophy; joint relaxation, cardiac palpitation, gastric weight and discomfort, and finally œdema. The great danger always present in this disease is sudden heart failure.

On the Examination of Sick Children.—L. Symes recommends the following routine: Facies, head, frame, bones and joints, reflexes, eyes, glands, abdomen, heart, lungs, spine, neck, mouth, and nervous system. We frequently make mistakes, he says, not because we do not know, but because we do not examine, and this is eminently the case in diseases of children. Under each of the above headings he mentions the various abnormal conditions to be looked for.

Hospitals; their Origin and History.—R. Dalton gives a historical sketch of the establishment of hospitals and their characteristics in the early centuries.

Zeitschrift für klinische Medicin, Vol. xxxix., 1900.

Excretion of Pepsin in Diseases of the Stomach.—Roth concludes that: (1) In private practice Mett's method is most practical for quantitative analysis of pepsin; (2) the variations in excretion are as great normally as that of hydrochloric acid; (3) examinations must be conducted under the same conditions of gastric contents; (4) some gastric juices contain more pepsin than the normal (hyperpepsia); (5) the greatest amount is found in gastric ulcer, the least in atrophy of the stomach due to chronic catarrh, carcinoma, or neurosis.

Transitory Spinal Paralysis.—L. Krewer states that clinically there exists a group of spinal paralyses which remind us of acute myelitis, which differs from it pathologically and anatomically. Hence they must be excluded and labelled as transitory spinal paralysis. These paralyses occur as a rule suddenly without any apparent cause and without previous predisposition. Sensory disturbances are entirely absent; painless muscular twitchings are observed in the paralyzed limb, and trophic disturbances are apparently wanting. In a few days the condition improves first in the paralyzed extremities, later in the bladder and rectum. The entire condition lasts from one to two months.

Changes in the Central Nervous System in Leukæmia.—E. Bloch and Hans Hirschfeld say that in leukæmia lymphomatous masses in the form of heteroplastic tumors occur in the meninges; symptoms of compression may appear or there may be no clinical evidence of the existence. Leukæmic cerebral hemorrhages are not uncommon: these may be of various sizes. Degenerative changes in the spinal cord are rare, though they do occur. A pure leukæmic infiltration may take place within the spinal cord.

Chronic Myocarditis and Cardiac Aneurism in Childhood.—Paul Rosenstein gives the history and post-mortem findings of a case of chronic cardiac aneurism in childhood and its very probable connection with tuberculosis.

Glycolysis.—F. Umber concludes that the rôle of the pancreas in diabetes is to-day just as indefinite as in the days of Mering and Minkowski. The article presents a series of careful tables and experiments.

Monatsschrift f. Geburtsh. und Gynäk., January, 1900.

Ovariotomy in the Schauta Clinic.—Oskar Bürger discusses ovariotomy very thoroughly, basing his conclusions on the observations of three hundred and ninety-four cases. He describes both the abdominal and vaginal methods, comparing their respective advantages, and believes the former to be advisable in case of adhesions, intraligamentary position of the tumor, twisted pedicle, or malignity, while in simple, benign growths the vaginal route is preferable.

Peripheral Tubal Sacks and their Significance in the Etiology of Tubo-Ovarian Cysts.—Edmund Waldstein explains these sacks as cystic growths which have developed at the ends of the tubes. They are enveloped by a connective-tissue wall and contain either serous or sero-purulent contents. The tube opens into it by its fimbriæ. These sacks have a very important influence on the development of certain tubo-ovarian cysts.

Report on Cases of Prolapse-Operation Performed in the Schauta Clinic with Especial Regard to the Lasting Results.—H. Schmit carefully tabulates these cases of prolapse operations, which fall into the following groups: (1) Vaginal total extirpation; (2) vaginal hysteropexy; (3) abdominal hysteropexy.

Artificial Premature Labor and its Final Results.—Ludwig Skovscheban reports that of thirty-three mothers only two died, or six per cent. One was a case of paratyphlitic abscess, so if this was not counted the deaths would be three per cent. There were thirty-four children born, twenty-seven of whom were living, or 79.4 per cent.

Contribution to the Therapy of Extra-Uterine Pregnancy.—Otto Th. Lindenthal thinks operation is indicated in all cases of uninterrupted extra-uterine pregnancy; in all cases in which through abortion or rupture a dangerous hemorrhage takes place, or when as result of infection fever and septic appearances exist.

The End-Results of Operative Treatment of Retroversio-Flexion of the Uterus. — Josef Halban gives the results of the three methods of operation as follows: Ventrofixation gave the best, 87.5 per cent.; vagino-fixation, eighty per cent.; vaginal shortening of the round ligaments, seventy-six per cent.

A New Method of Internal Measurement of the Living Woman.—Julius Neumann and Hugo Ehrenfest describe their method and instrument for measuring the pelvis. This latter they call the pelvigraph; it consists of two parts, the indicating arm and the exploring arm.

Clinical and Anatomical Contributions to the Question of Complete Tubal Abortion.—Ludwig Mandl, at the close of his dissertation on this subject, quotes Schauta's opinion that the abdominal method is pre-eminently the best in the operation for extra-uterine pregnancy.

Contribution to Surgery of the Ureter.—E. Wertheim declares that it is more difficult to obtain sufficient material to close old ureteral fistulæ than recent ones. In cases in which the defect cannot be repaired on account of lack of material, nephrectomy is necessary whether the kidney be sound or not.

Determination of the Pelvic Inclination in the Living Woman.—Julius Neumann and Hugo Ehrenfest give a diagram and cuts to describe their instrument, the kliseometer, which consists of a rigid bow. One end carries the indicator, and rests against the back, while the other marks a point on the symphysis.

Indications for Cæsarean Section.—Eduard Frank says that Cæsarean section is undoubtedly the easiest cœliotomy, and he adds that it is the duty of every obstetrician to be able to define his position in the case of perforation of a living child.

Decidual Polyp of the Uterus.—Fritz Hitschmann describes a tumor which came away spontaneously at the normal end of an eventful pregnancy. It consisted almost entirely of glands. It had no connection with the chorion.

Manual Treatment (Thure-Brandt-Schauta) in Gynæcology.—Oscar Piering writes of the efficacy of massage in gynæcological affections. He speaks also of the good results of the manual treatment of floating kidney.

The Anatomical Proof of Loss of Virginity.—Albin Haberda declares that in some cases the elasticity of the hymen preserves its integrity after coitus. In other cases there are scars left which constitute an undeniable proof.

Emphysema of the Uterus and Gas-Sepsis.—Josef Halban states that the histological examination of the case under his observation showed the chief changes to be necrosis of the uterine musculature with an absolute lack of inflammatory infiltration.

Researches Concerning Tuberculosis of the Female Sexual Organs.—Lucius Stolper declares that the diagnosis of genital tuberculosis is very difficult. The subjective symptoms are often slight or wanting altogether.

Melanosarcoma of the Female Pudenda.—Franz Torggler reviews the literature of this subject, and cites twenty cases. As to age, three-quarters of the cases observed were after the menopause. The malignancy of the disease is frightful.

Information concerning Carcinoma Psammosum of the Uterus.—H. Schmit gives an account of this tumor, which is characterized by its calcareous concretions. Its metastases also possess this peculiarity.

Contribution to the Theory of Fetal Cystic Kidney.—Sigm. Mirabeau concludes that the fetal cystic kidney is not very different from that of the adult.

Diseases of the Pericardium and of the Cardiac Vessels.—By G. Strube-Bremen. A review of recent advances.

Die Therapie der Gegenwart, January, 1900.

Treatment of Carcinomatous Œsophageal Stricture with Permanent Sounds.—H. Curschmann states that when carcinomatous stricture of the œsophagus renders deglutition difficult the regular daily passage of a tube is indicated, and feeding occasionally through it maintains the strength and nutrition. Gradual dilatation is not productive of much good in carcinoma. Permanent sounds are advisable only in the case of strictures situated in the middle or lower third; in strictures high up, surgical intervention is more beneficial. If the sound is well placed, feeding is easy, provided we use only fluid and semi-solid food.

Castration in Tuberculous Epididymitis.—E. Albert says that castration is contraindicated, because many patients live in comparatively good condition for many years with a tuberculous testicle, and also because despite double castration the tuberculous process is not stopped. If patients desire operation, incision of the nodules with subsequent curettage is all that is necessary.

Observations with the Stomach Tube in Infants.—O. Heubner demonstrates his method of determining the motor power of diseased stomachs; this also gives a clew as to the intestinal function. The tube is mainly useful for the removal of stagnating and decomposing contents, in cases of acute dyspepsia, chronic gastro-enteritis, pyloric stenosis, etc.

Observations upon the Therapeutic and Diagnostic Value of the Old Tuberculin.—A. Neisser presents his experience in cutaneous tuberculosis. If a typical local reaction occurs after tuberculin injection, then tuberculosis exists, and when it is constantly absent after a given dose, tuberculosis does not exist.

A Rare Operation.—Under this title, J. Hirschberg describes with illustrations a magnet operation for the removal of an iron fragment from the vitreous humor.

Annales de Dermatologie et Syphiligraphie, Dec., 1899.

Hyperkeratosic Interdigital Eczema.—W. Dubreuilh describes a chronic dermatosis of which he has seen four examples, the histories being given. The interdigital spaces of the toes are chiefly affected, but it may occur upon the hands. The skin between the toes is covered with a shining white, thickened, horny layer, which is detached in layers. There is not much pain or itching. Excessive sweating is not noted, though the macerated appearances would suggest hyperidrosis as one of the causes. Treatment is unsatisfactory; but ichthyol in alcohol has caused improvement, and chrysarobin ointment has been used with some success.

Treatment of Ulcer of the Leg.—Yaroslav Bukovsky has experimented with the products of the pyocyanic bacillus. In one hundred cases complete cure was effected in a relatively short time, when other measures had failed. Compresses wet with the toxin are changed two or three times daily. The beneficial action is shown by the rapid cleansing of the ulcer, epidermization, and healing with a solid cicatrix more quickly than by other forms of treatment.

Annales de Gynécologie, January, 1900.

So-Called Therapeutic Fœticide.—Pinard believes that the practitioner has no moral, legal, nor scientific right to practise embryotomy on a living child, and that to sacrifice a child in the mother's interests is a legendary form of practice which ought to disappear with other myths. The decision of life or death to the child does not belong to any one, and the doctor's only right of decision relates to the choice of the operation to be performed. A physician must always endeavor to save life, never to take it.

The Practice of Obstetrics.—F. J. Herrgott reviews a recent work by Henri Varnier, which he says is so truly descriptive that in reading it one truly seems to be present at a labor.

The Value of Oxygenated Water in Uterine Hemorrhage.—Dr. Platon has used this remedy successfully, when ergot and ergotin, hot injections, and tampons with the perchloride of iron had failed.

Annales de Méd. et de Chirurgie Infantiles, Jan. 1, 1900.

Contribution to the Study of Malignant Tumors of the Kidney in Children.—P. Sorgente says that the preponderance of the round-celled variety of sarcoma explains the rapid development of the majority of renal tumors in children. Epithelioma is very rare. Renal tumors are generally primary growths. They are almost always unilateral, and the right seems more often affected than the left. The kidney is the organ in children most frequently attacked by malignant neoplasm. As to age, the first year of life furnishes the largest number of examples. Sarcoma in all its varieties is the most usual form. In summing up the results of operated cases, it is found that death by operation is frequent, recurrence is very frequent, and a definite cure is exceptional. However, the results of recent operations have been happier than the earlier ones were.

Eczema in Young Children.—E. Périer gives the history of an eczematous child who serves as a type in this trouble. Baths were stopped, sponging with tepid marshmallow water being substituted. For three days local compresses of cold boiled water were applied, covered with oiled silk. After three days the child was washed in olive oil, and then a coating of zinc paste containing a little menthol was applied to diminish the itching. Internally it was given from two to three glasses of hot boiled water in which was a small pinch of bicarbonate of soda.

Congenital Ocular Lesions in a Child Born of a Mother Attacked with Typhoid Fever toward the End of her Pregnancy.—A. Antonelli cites a case of optic neuritis together with chorio-retinitis in a child whose mother had typhoid fever in pregnancy. He states that this disease often provokes profound ocular complications.

Contribution to the Study of Paroxysmal Hæmoglobinuria.—R. Guita and C. Valvassori Peroni, in reviewing a case of this kind, think that atmospheric influence played considerable part in the causation of this curious malady.

Russki Arkhiv Patologii, etc., December 31, 1899.

Chyluria Nostras and its Causes.—V. E. Predtechenski says that chyluria is not an exclusively tropical affection. About twenty cases are on record in persons who had never been outside of Europe. The author reports the first case seen in Russia. Examination of the urine showed the presence of large numbers of small lymphocytes which could have escaped only through some solution of continuity of the walls of the lymphatics. The eggs of tænia nana were also found in the urine. The parasites which cause tropical chyluria are filaria sanguinis hominis and distoma hæmatobium; those accused of inducing chyluria nostras are eustrongylus gigas and possibly tænia nana. Among the causes which may provoke non-parasitic chyluria are probably tumors, peritoneal adhesions, and other pathological processes which may obstruct the lymphatic vessels and produce stagnation of the chyle. The author obtained favorable results in his case by the administration of gr. xv. of gallic acid three times a day.

Meteorism in Typhoid Fever and its Treatment.—V. E. Chernoff says that this occurs under two conditions: (1) When there is greatly increased formation of gas in the intestine; and (2) when there is atony or paresis of the intestinal wall, a result of local poisoning of the nervo-motor apparatus by the products of abnormal fermentation of the intestinal contents. Inflammation of Peyer's patches and of the mucous tunic in general is the usual cause of the abnormal fermentation, and often the extent and depth of the inflammation occasion a localized peritonitis, which in turn increases the meteorism. By limiting the inflammation by means of the local application of cold, reducing by the same means intestinal fermentation, and exciting the peristaltic movements, we better and more speedily succeed than in any other way in overcoming the meteorism with its attendant dangers.

Etiology and Pathological Anatomy of Werlhof's Disease.—V. N. Konstantinovitch reports a case of purpura hæmorrhagica occurring in a laborer, eighteen years of age. At the autopsy he found hyperplasia of the aorta, old tuberculous lesions of the bronchial glands, pigmentation of Peyer's patches and the solitary glands (probably due to a former typhoid fever), small spleen, hemorrhages in various tissues and organs, and anæmia. Bacteriological examination was negative. Histological examination showed fatty degeneration of the endothelium of the capillaries in all the organs—even in those in which no hemorrhage had occurred, as the brain for example. The author had no theory as to the cause of this fatty degeneration of the capillary vessels, upon which the petechial eruption depended, but thought there was possibly some form of auto-intoxication.

Myoœdema and its Pathological Significance in Mental and Nervous Diseases.—N. Bernstein has found this phenomenon present in twenty-eight cases of general paralysis, in forty-four out of forty-six cases of precocious dementia, and in eight of idiocy, but in none of five cases of mental confusion of Meynert, or of eleven of mania and melancholia. He found it also in all cases examined of epilepsy and cerebrospinal syphilis, and in three out of four cases of tabes. He believes that there is in these affections a special form of auto-intoxication which acts directly upon the muscular tissue.

Terpinol in Hæmoptysis.—Th. G. Yanovski asserts as the result of his experience that terpinol is useless in hæmoptysis from pulmonary congestion, but renders signal service in many cases of hemorrhage dependent upon tuberculosis. The good effects were usually noted after from five to seven doses of three drops each every two hours.

The Influence of the Toxins of Tetanus and Diphtheria on Metabolism.—L. Sverzhevski studies the alterations in the gaseous and nitrogenous exchange produced in dogs and rabbits by the action of the toxins of tetanus and diphtheria.

Correspondence.

THE STUDY OF MALARIA IN ROME.

(From an Occasional Correspondent.)

THE ÆSTIVO-AUTUMNAL PARASITE IN MAN AND THE MOSQUITO—THE ROMANOWSKY STAIN—MALARIA IN THE CAMPAGNA.

Professors Bignami and Bastianelli do most of their work on the malarial organism in the laboratories of the Hospital Santo Spirito, on the left bank of the Tiber, and it is worth a good climb up that old spiral staircase to get a view of the mounted specimens they are studying at present.

One morning last week I had the pleasure of going over them with the professors, who are most enthusiastic in their research and who are doing some splendid work here. At present they have complete sets of mounted specimens showing the morphology of the parasite of the æstivo-autumnal variety—the only one which they have yet been able to follow through its entire life history; that is to say, from the time it is taken into the human blood, through its various cycles there with which we are all familiar, until it is taken into the stomach of the mosquito; its rest in the stomach walls, and thence to the salivary glands, ready for transmission to man.

Among the most interesting slides are those showing the parasite in the stomach walls of the Anopheles claviger, usually lying in the muscular layer between the fibres, but one very pretty specimen showed the organism resting in the mucous membrane between the epithelial cells. Other slides demonstrated very clearly the sporulation of the organism and the fecundation of the female.

The Romanowsky method is the only one used in staining specimens, and Professors Bastianelli and Bignami consider it the only one whereby it is possible to demonstrate the structure of the malarial organism. As they use it, it is very simple, consuming little time and yielding most excellent and certain results. They had the same difficulty with it at first that we have had in America, but they find no trouble whatever if they use the medicinal methylene blue and the eosin B (brom-eosin). The proper solutions are:

I. Methylene-blue saturated solution (10 gm. methylene blue added to 100 gm. of water): keep for twenty-four hours at a common temperature—near 20 C.—and filter. The filtration fluid is immediately ready for use.

II. Eosin. 1 gm. of eosin B to 100 gm. of water; filtration is not needed.

Staining: Add 2 cm. of the methylene-blue solution to 5 cm. of eosin solution: place in a proper glass, and, the slide having been prepared in the usual way and fixed in absolute alcohol for twenty-five minutes, stain for from thirty minutes to one hour. It is useful to employ the glass recommended by Lieman. Professor Bastianelli says that by following these directions one is sure to have good results with every slide.

The laboratory boy here is popularly known as "Romanowsky," from the amount of this stain he is employed in making up, its preparation being entirely left to him.

Stained in this way the chromatin elements stand out clearly and sharply, excellently differentiated, and the structure of the nucleus and its nucleolus (as Professor Bastianelli considers it should be called) shows as perfectly as could be desired for purposes of study.

There are abundant opportunities here for the study of malaria in all its manifestations, both clinically and in the laboratory, and the physicians and directors of the laboratories are most hospitably inclined toward students from all countries, particularly America. The pernicious forms of the disease abound, and the hospitals get a very large share of the neglected cases. The peasants of the Campagna suffer most of all, as is natural from their mode of life. A straw hut without a floor except that afforded by Mother Earth, generally built on the lowest possible level for protection in winter, is the abode of the average farmer or shepherd. They go through the summer with their regular or irregular chills as the case may be, accepting them as part of their lives. This goes on until the malarial cachexia or a particularly heavy infection in their debilitated condition makes it imperative to visit the Sancto Bambino, who is the oldest physician in Rome—being a wooden doll crowned at the Vatican, supposedly possessed of wonderful power of healing. When this treatment fails the patient is brought to the hospital, and quinine and arsenic get their turn. Quinine subcutaneously is the method generally adhered to in Rome. It is rarely given by the mouth. The results are excellent, even in the very bad cases, but of course there is also plenty of opportunity to study post-mortem the effects of the malarial infections in a country where the mosquito is rampant and the average hygienic conditions so bad as they are in Italy.

THE STATIC INDUCED CURRENT AND DR. ROCKWELL.

To the Editor of the Medical Record.

Sir: It is impossible to confine Dr. Rockwell with logic or facts; cuttlefish-like, he scurries off in a cloud of speculative verbiage. In your issue of December 23d he volunteered an entirely gratuitous attack upon me, my methods of treatment, my cases, deductions, and inventions. In your issue of January 6th, I perforce answered his letter, ignoring, however, as trivial everything except the one question of the invention of the static induced current. On this point he had stated that he had in his possession "an old book in which is given both in description and illustrative detail what is now called the static induced current." Now here was a definite assertion. I challenged him to prove it, and even went further and said that if he would prove it, I would withdraw any claim to originality in the invention I had ever made. But what is his reply? We have it in your issue of January 20th. Not a scintilla of proof of his position is brought forward; not a word to substantiate his charge; not a line is quoted from his ancient book. And simply because there is not a word in this book to show that the ancients ever knew of "what is now called the static induced current." Having no proof to offer of his initial assertion, he shifts his ground and claims that "the principle upon which the whole subject is based" is given in these books. He changes his base from a specific assertion to a glittering generality. "It needs but a glance," he writes, "at these old illustrations to make it evident that these more recent ones of Dr. Morton are in their essential characteristics absolutely the same, and that from the arrangements represented by these illustrations the spark-gap *could* be so adjusted as to produce the so-called static induced current with the power to induce continuous muscular contractions." I have underscored the word *could*. This single word betrays Dr. Rockwell and all his sophistry.

And such is the specific reply which readers of the Medical Record are asked to accept. "The ancients could have produced the static induced current." It takes patience to say, in reply to such childishness, that no doubt they could have done so, but that they didn't do so. On lines of argument of this sort, one could prove that every discovery and invention is ancient or has been anticipated by some one else. The ancients had zinc and copper and sulphuric acid, and water and receptacles, and they could have adjusted these things so as to produce a galvanic current; but they didn't, until Galvani and Volta did it. They had frictional electric machines, and Leyden jars, and sparks and spark-gaps, and even adjusted these parts to give measured and graduated individual shocks one by one to the patient, but they never used these parts nor these adjustments to produce any sort of a current. Of course the principle upon which the whole subject is based is in these books and in many technical books. I never said that it was not, nor that I discovered it. But, utilizing the principle, I did discover and produce currents before unknown and unrecorded. To make an invention or to discover something does not by any means require a very big jump. Reiss invented the singing telephone, in which the electrodes just failed to touch, and Bell by a turn of a millionth of an inch of a screw, thus bringing the electrodes into actual and continuous contact, invented the speaking telephone. Reiss didn't do quite enough, little as what he failed to do was, and, similarly, the ancient electricians might or could have invented or discovered the static induced current, but they didn't.

According to my critic's line of argument, Reiss was the inventor of the speaking telephone and not Bell. The instrument and the adjustments, in short "the principle upon which the whole subject was based," were there, but Reiss unfortunately failed to make his instrument speak, just as my critic's ancients had machines, spark-gaps, and "arrangements," but failed to produce a static induced or any other current, and made no mention of the subject of currents. These ancient writers on electricity described every effect of their administrations and discoveries with the minutest detail. One is constantly surprised at the accuracy of their descriptions. Is it to be supposed for an instant that an effect like the static induced current, so different from anything they do record, would not have been recorded? It is incredible. But, incredible or not, they didn't record it, and that ends honest and sane discussion. For what the ancients might have done or could have done does not concern us. They might have invented all the coming inventions of the twentieth century; but we know they didn't. Dr. Rockwell would have us believe that they universally and by a sort of conspiracy refrained from describing a thing so salient as a tetanizing effect upon a muscle, and a method and the current which produced this effect.

Now a word more to my assailant, since he says I "divert attention from the main points of contention."

First, "he" (the writer) "has persistently exploited his own originality at the expense of the originality of others." As to the originality of others, this is what I am still waiting to hear about from Dr. Rockwell. Practically no one disputes my humble claims. As for persistence, it is indeed a pity to fight persistently for one's own. In this respect, I am reminded of the doggerel:

> "It is a very good world to live in,
> To lend, or to spend, or to give in;
> But to beg, or to borrow, or to get a man's own,
> It is the very worst world that ever was known."

Second, and finally, "he" (the present writer) "makes extravagant and utterly unjustifiable therapeutic claims." All I can say to that is that it is a matter of opinion, and furthermore, that I do not agree with my very amiable critic. He reminds me of an anecdote. After the entire Copernican and Newtonian philosophy of the rotation of the earth around the sun had been explained to Brother Jasper, he walked off, we are told, triumphantly remarking, "But, after all, the sun do move." Now, to tell the truth, I never did expect to have Brother Rockwell understand what I write. Perhaps there are more things in heaven and earth, and, say, in electro-therapeutics, than Brother Rockwell's philosophy dreams of.

William J. Morton, M.D.

New York, January 27, 1900.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From Our Special Correspondent.)

When the attempt of Sir Redvers Buller's relieving force to get to Ladysmith by turning the right flank of the Boers, or by carrying their intrenchments on that side, failed, after the previous failure of the point-blank attack at Colenso, it became at once apparent that the plight of Ladysmith was very serious. Even before this reaches you, it is possible that the beleaguered city may have fallen. If Sir George White is forced to capitulate, the blow to the English empire will be comparable only to that sustained a hundred and twenty years ago (or so) by the fall of Yorktown, and there are some who think that the consequences will be no less far-reaching. The present population of Ladysmith is over ten thousand; there are a good many women and children, and a very large number of horses, and the accommodation generally is unfitted for such numbers. The water supply is imperfect though not actually scanty, and it is generally believed that, if the city has to surrender, it will be because of the ravages of typhoid fever, and not because either of scantiness of supplies or ammunition or loss of courage. By the third week in January the fatal cases of typhoid fever amounted to ten per diem, and although this figure afterward abated a little, every day of confinement, under circumstances of such bitter chagrin and apprehension as the garrison are now undergoing, must tell against their *morale* and render them less able to resist the attacks of disease. If the city is to be saved, it must be saved soon.

A New Hospital Ship.—Up to the end of the second week in January, two thousand men of all ranks, officers, non-commissioned officers, and privates, had been admitted to the two big general hospitals at Wynberg. With the unfortunate turn for British interests that affairs have so far taken, it became clear that another hospital ship would be wanted, and one of the transport vessels belonging to Sir Donald Currie's line, the *Lismore Castle*, was chosen for conversion. The tonnage of the *Lismore Castle* is 4,000, and now that she is a hospital ship, she can accommodate two hundred and fifty sick. On the main deck are situated an officers' ward, an orderly room, an operating-theatre, fifteen convalescent officers' cabins, a dining-saloon, and three bath-rooms. On the lower deck there is accommodation in four wards for two hundred and twenty-five men. Each ward runs from side to side of the ship, and is ventilated by electric fans. The cost of this complete conversion of a mail steamer employed as a transport into a hospital ship was considerable, and the work was done by the admiralty at Durban, with some civilian assistance, in four and a half days. The new hospital ship is under the command of Dr. Brodie, a civil surgeon, who is assisted by three other civil surgeons—for the supply of officers of the Royal Army Medical Corps has run short—and who has under him one army nursing-sister, four civilian nurses, thirty civilian male medical attendants, two dispensers, and one sergeant with nine privates to be used as fatigue men or guards.

Some Remarkable Recoveries.—The list of remarkable recoveries from injuries, which by all the accepted canons of surgery should have been fatal, is very large; indeed it is becoming abundantly evident that at one thousand yards the modern rifle bullet makes a wound that is serious only if the most vital structures are perforated, and not always then. The wounds of entrance and exit are small, and the track is marked by none of the rending, splintering, and crushing that were wont to make of the old bullet wound so serious an affair. Accounts have been given of the following extraordinary recoveries, and they are only a type of others every whit as wonderful:

A man was shot below the left clavicle. The bullet emerged two and one-half inches above the angle of the left scapula, *i.e.*, at the level of the ninth rib. After some hemorrhage, there was an empyema, but the patient recovered.

A man was shot from behind through the right sacro-iliac synchondrosis. The bullet emerged halfway between the anterior superior spine of the ilium and the ninth costal cartilage, wounding the cæcum in two places. There was extravasation of fæces, but the patient recovered.

A man was shot one inch above the right clavicle in the line of the posterior border of the sterno-mastoid muscle. The bullet emerged at the corresponding spot on the left side. He could not swallow or speak when picked up, but gradually his symptoms subsided, and no complication ensued.

A man was shot an inch to the right, and the same distance above the symphysis pubis. The bullet emerged through the right buttock two and one-half inches external to the anus. He ran one-third of a mile, completing a long charge, after being wounded, and recovered without any serious symptoms.

A man was shot half an inch external to the posterior superior spine of the left ilium. The bullet traversed the stomach, and emerged at the ensiform cartilage. The wound healed by first intention.

A man was shot in the right side of the nape of the neck, at the level of the third cervical spine. The bullet emerged at the inner canthus of the left eye, loose portions of ethmoid being picked out of the wound. He recovered without symptoms.

These are only specimens of the cases among both the Boers and the British, which have been recorded by Sir William MacCormac and Mr. Treves, whose respective letters in the *The Lancet* and *British Medical Journal* have done great work in restoring in England the full confidence in the work of the Royal Army Medical Corps which the supercilious attitude and parsimonious behavior of the War Office toward that branch of the service had done so much to destroy. At the present time, the R. A. M. C. is practically the only department of the British army against which serious charges of failure cannot be levelled.

The Heroism of a Member of the R. A. M. C.—After the battle of Colenso—the first unfortunate attempt to relieve Ladysmith—an officer of the Royal Army Medical Corps, Major Babtie, distinguished himself by a feat of courage and daring which it is to be hoped will be recognized by the military authorities. The R. A. M. C. already possess more Victoria Crosses than any other branch of the service, and it now seems possible that Major Babtie's name will be added to the list of holders of this much-coveted honor. During the thickest of the fight Major Babtie rode into the donga — the dried-up watercourse in which the British losses were most severe, and where Colonel Long's guns had to be abandoned—and remained with the wounded through a hail of bullets, doing what he could for them. Among others whom he attended under these terrible circumstances was Lieutenant the Honorable Frederick Roberts, the only son of Lord Roberts, V.C., the commander-in-chief of the British army in South Africa. Major Babtie's horse was killed under him, but he remained in the donga until firing ceased, doling out minim doses of water from his water bottle, and rendering such first aid as was possible. It was extremely sad that Lieutenant Roberts' life could not be saved, but he was shot in the forearm, wounded in the knee by a shell, and had in addition a perforating wound of the abdomen. When Major Babtie brought him back, he was pulseless, and died without rallying. He had behaved with conspicuous gallantry throughout the engagement, and had been recommended for the Victoria Cross, a decoration which his distinguished father gained in 1858.

OUR LONDON LETTER.

(From our Special Correspondent.)

INFLUENZA — OPHTHALMOPLEGIA IN TABES AND IN GRAVES' DISEASE—TETANUS TOXIN—PAROXYSMAL HÆMOGLOBINURIA—MALIGNANT GROWTHS OF THYROID—ARTHRECTOMY OF KNEE—DUBLIN MORTALITY —SALVATION ARMY SHELTERS.

LONDON, January 19, 1900.

INFLUENZA has made a further advance all along the line. The deaths from the epidemic reported last week rose to 340. The deaths from all respiratory diseases, which I last week said had risen to 1,221, fell to 994, but that is 260 above the average for the decade. Of course with so many fatal cases the number of mild ones and even severe ones that result in recovery is enormous, and the widespread sickness keeps the doctors very busy. Many are themselves victims. London's total mortality last week was 2,930, being 642 above the average of ten years. The deaths exceeded the births by 164. The epidemic seems to have swept our island almost from south to north. In some of the southern towns it is already abating, and we are hoping London has seen the worst. The following death rates for the last two weeks are significant: Birmingham, 27.0, 33.6; Brighton, 44.9, 28.6; Croydon, 40.5, 37.4; Liverpool, 34.4, 34.6; Norwich, 32.7, 43.6; Nottingham, 40.8, 44.9.

Ophthalmoplegia often has a certain association with tabes; at any rate it has frequently been observed to precede ataxia. Such cases naturally come first under the notice of oculists, and may subside long before signs of tabes appear. Dr. Guthrie related a case at the Harveian Society which he had had under observation some six months. At first there was doubt as to the diagnosis, but at length it became obvious.

Mr. Juler, president, and Dr. James Taylor agreed as to the frequency of ocular paralysis in early tabes. The paralysis is usually transitory and the knee jerks still present.

Cases of ocular paralysis occurring in Graves' disease have been recorded by several observers, and Ballet's monograph on the subject makes three groups, viz., ophthalmoplegia with Graves' disease; with hysteria; with both Graves' disease and hysteria. A case observed by Dr. Warner was related at the Medico-Chirurgical Society on the 9th inst., and reference was made to another case brought forward in 1882, the sequel of which is given in Bristowe's "Diseases of the Nervous System."

Mr. James Berry said he thought hysteria played a very important part in these cases, and made some interesting remarks on the pathology of Graves' disease. He held the theory of its sympathetic origin to be entirely erroneous, and pointed out that experiments on animals in this domain must be very fallacious. One advocate of division of the sympathetic had said he would only employ it when the cornea was in danger of sloughing, but there was one case in which it had sloughed after the operation. There were still men who believed exophthalmos to be due to dilatation of blood-vessels behind the globe; but the conjunctiva was not more vascular than normal, which it is whenever congestion of the orbit can be proved to be present.

Mr. Foulerton and Dr. Campbell Thomson communicated to the Medico-Chirurgical Society at the last meeting the results of an investigation into the nature of the changes in the nerve cells of the cortex produced by the tetanus toxin. They had carried out a number of experiments in which the cerebral cortex was examined after the inoculation of tetanus toxin in rabbits, guinea-pigs, and mice, the doses being varied and the animals killed at different periods after inoculation. Certain definite histological changes had been found in the motor cells, though the appearances varied somewhat with differences as to dose and time. The research had been conducted more particularly with reference to the nerve cells of the motor area of the cerebrum, but evidence had been obtained that similar changes occurred in cells of other portions of the cerebral cortex and also in the cerebellar cortex. The changes were readily distinguished from those produced by other bacterial toxins, and the motor disturbance in tetanus seemed to be due to these changes; so that the incubation period must be regarded as the time required for sufficient toxin to be taken up by the blood and fixed in the cell substance.

Mr. Foulerton in reply to questions said every care had been taken to exclude fallacy from post-mortem changes or those which might arise from pyrexia. As to the latter point, the temperature, taken three times daily, had never risen more than 1.5° F.

A case of paroxysmal hæmoglobinuria in a girl, aged six years, was shown at the Clinical Society by Mr. Lunn. She was the tenth of twenty-four children, of whom fourteen are living. From the age of one year she had at intervals passed urine containing normal red cells. The proportion of red to white in her blood is about half normal. A sister had interstitial keratitis.

Mr. Spencer referred to a case in a boy he had formerly shown, and remarked that in early life many such cases ended in uræmia or apoplexy.

Dr. Voelcker said that, as in this case, there was usually evidence of inherited syphilis. In one case he had found a history of acquired syphilis. He had noticed an undue tendency to cohesion of the red corpuscles, forming snake-like coils, the corpuscles themselves being elongated, lemon-shaped. Dr. Sutherland remarked that paroxysmal hæmoglobinuria and albuminuria had been observed to alternate. Excess of oxalates was often present and persisted some time after the hæmoglobinuria had ceased.

Mr. Lunn said oxalates had been noted in his case, but the intermediate urine seemed normal. He added that the girl usually had a rise of temperature with chill and collapse when an attack was imminent. Her health seemed good between the attacks.

Among other interesting cases shown at the same meeting was one of malignant growth of thyroid in a woman aged fifty-eight years, supervening after nine years' enlargement which had necessitated two operations on account of pressure on the windpipe. Mr. Barker remarked on this that malignant growths of the thyroid were usually very chronic; one of his had lasted eighteen years. Mr. Symons said one of his lasted over ten years, but another only twelve months.

Mr. Eve showed a girl, aged thirteen years, on whom he had performed arthrectomy of the knee for tuberculous disease. The semilunar cartilages were removed and one crucial ligament had to be divided, but was afterward refixed to the bone. The lower end of the condyle, being ulcerated, was scraped. The result was free movement almost to a right angle. Mr. Eve was congratulated on this. He admitted the case was subacute, and when there were much ulceration and caseation he would not attempt so much. He hoped to show the patient again later on.

The death-rate of Dublin has lately been so high that the lord-lieutenant proposes to hold an inquiry into its cause by a committee on which the local government board, the College of Physicians and Surgeons, and the corporation of the city shall have representatives. *The Medical Press and Circular* has called attention to the high mortality again and again, attributing it largely to a disgraceful condition of the poorest tenements, and urging the corporation to provide improved dwellings on sites said to be obtainable at low prices.

The Queen's Bench has given a decision on a case stated by the chief London magistrate, which will bring the Salvation Army shelters under sanitary supervision. No doubt the night shelters have been a benefit to some of the poorest, and no one imputes any but good motives to General Booth and his followers. But very few will defend him for engaging in obstructive litigation for the sake of defying the sanitary authorities. It was a gross blunder in tactics, and there was no justification for thus using the funds of the army. The shelters will now come under the common lodging-house acts.

SMALLPOX IN THE PHILIPPINES.

To the Editor of the Medical Record.

Sir: Although I only see a medical journal here occasionally, I have been struck with the widespread occurrence of variola throughout the United States during the last year, and it seems to me that our relations with these islands have probably had something to do with its spread. Smallpox may be truly said to be universal here among all classes of natives, as is attested by the fact that nearly every one is more or less pockmarked. I doubt if many natives reach the adult age without having had an attack. So common is it that the people take it as a matter of course and make no effort to guard against it in any way. Now, these people have their own looms in their homes. and they manufacture many varieties of fine "Josi" and "Piña" cloth, which are much sought after by American soldiers as souvenirs, and by them sent through the mails to their friends. When it is borne in mind that ten to twelve natives often live, sleep, and eat, and manufacture and store cloth all in one small, dirty room, the result is obvious; their cases of smallpox, leprosy, or any other illness are never isolated in the slightest degree. To illustrate, I recently had personal knowledge of the following incident: A native woman who had been in the habit of bringing specimens of "Josi" to the home of an officer for sale failed for a little while to come with her usual regularity; after a few days she did return, and when questioned as to her absence casually explained that she had been too busy with several cases of smallpox in her family! She, however, brought a goodly supply of "Josi" from the infected room! Besides this source of infection, the thousands of returning soldiers have all brought with them and scattered over the country souvenirs of one sort or another taken from these same places.

Charles F. Mason, M.D.,
Major and Surgeon U.S.V.

Iloilo, Panay, P. I., December 25, 1899.

Empyema of Tuberculous Origin, or from lung abscesses, is benefited by a surgical operation only to the extent of temporary relief.—Samuel C. Benedict.

Society Reports.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, January 15, 1900.

FREDERICK HOLME WIGGIN, M.D., PRESIDENT.

Secondary Osteoplasty.—DR. THOMAS H. MANLEY presented a patient illustrating what might be accomplished in some severe and complicated fractures by secondary osteoplasty. About fourteen months ago this man had been knocked down by a broken belt, and had sustained a fracture of the ulna in its upper third, and a dislocation of the head of the radius on to the acromion process. He had been treated at a hospital by an eminent surgeon for five or six weeks, and then had been treated as an out-patient for some time longer. The arm had remained practically useless, being insensible, cold, and wasted, and the fingers contracted rigidly so as to make a claw-shaped hand. Rather curiously he had been advised not to submit to further operation. He had, however, come to the speaker in the hope that a better functional result could be secured. This was two months ago. Dr. Manley had laid open the injured region and had resected the head of the radius, thus securing pronation and supination. The median nerve had been greatly reduced in size as a result of the compression to which it had been subjected. Within two weeks the man had been out of bed. Sensation had returned quickly, and mobility had rapidly increased.

Gangrenous Perforation of the Sigmoid Flexure.—Dr. Manley then presented a specimen removed from a man who had entered the Harlem Hospital with a history of having, in apparently good health, been suddenly seized with severe abdominal cramps, especially violent in the left iliac fossa. An enema had been returned with almost no result. On admission to hospital the same evening the man had been in a condition of profound collapse, and the abdomen greatly distended. On percussion, there was greater flatness in the left iliac region. A large oil enema had failed to move the bowel. He had then performed abdominal section, and at once a large quantity of soapsuds and sweet oil had gushed out. Examination showed a gangrenous perforation of the sigmoid flexure.

Large Omental Hernia.—Dr. Manley also presented a portion of omentum weighing twenty-seven ounces that he had removed in an operation upon an omental hernia. Three weeks before coming under observation, while lifting a barrel of beer, the patient had felt something give way, and had then become conscious of an enlargement along the course of the inguinal canal. The operator opened up the inguinal canal throughout its whole extent, and, after dragging out the mass of omentum, had divided it slowly, securing each vessel as it was cut. He had firmly fixed the stump at the external ring in order to secure good control of the parts in case of hemorrhage, and in the event of infection to make it extraperitoneal. The man had made a rapid recovery.

Fibroid Uterus.—DR. FREDERICK HOLME WIGGIN presented a fibroid uterus which he had removed a few hours before by the intraperitoneal method.

A New Method of Retroperitoneal Drainage of Pyosalpinx, with a Report of Five Cases.—DR. LEON F. GARRIGUES read a paper with this title. He expressed the belief that all pelvic suppuration should be drained through the vagina, vaginal drainage itself being almost free from danger to life. As a rule, after vaginal incision in cases of pyosalpinx the temperature dropped to normal, the pain ceased, and convalescence was rapid. On the other hand, after laparatomy in these cases there were often considerable shock and pain for a long period, and the patient remained in bed at least a month. It was not uncommon for a woman to be an invalid for the greater part of a year after such an operation. Then there was the danger of ventral hernia. It seemed to him irrational to ligate and excise a tube when the part left might contain virulent bacteria. Under such circumstances the patient might be worse after than before operation. Howard Kelly and others had advised puncture of the abscess and packing the cavity with iodoform gauze. This technique seemed to him faulty because he had seen serious hemorrhage follow this procedure. Moreover, the gauze packing was not only painful, but being compressed it failed to drain the cavity properly. It should not be forgotten that about half of all cases of pyosalpinx operated upon were found to contain virulent bacilli in the tube.

The Technique.—The technique recommended was as follows: An incision was made at the anterior vaginal junction, beginning behind the transverse line drawn through the cervical canal on the side corresponding to the pyosalpinx, and following the contour of the cervix for three-fourths of an inch. This incision extended through the thickness of the vaginal wall. The forefinger of the operator was next introduced through the opening and pushed upward. The peritoneum usually stripped readily from the uterus, and it should be stripped off gently until the origin of the Fallopian tube was reached. The tube should be opened at this point only if it was the prominent part of the sac. While an assistant pressed down from above, blunt scissors should be pushed into the pyosalpinx. With the finger a thorough exploration should be made, and then a T-shaped rubber drainage tube was to be inserted. The abscess should not be irrigated at the time of the operation for fear of a minute opening being made, and infectious matter be carried into the peritoneal cavity. As a preliminary step all cases were curetted. In all of the five cases reported the patients had been out of bed within a week after operation, and all had recovered completely. Four out of the five had been operated upon in tenement houses, and had received only unskilled nursing. This method of retroperitoneal drainage was not difficult of performance.

Another Method Preferred.—DR. RIDDLE GOFFE said that he was a persistent advocate of the vaginal route in attacking pelvic disease, and believed that no one was justified in doing a laparatomy until the effort had been first made to reach the disease within the pelvis by the vaginal route. He had never tried the method advocated in the paper, and could not speak of it critically until he had studied the details of the histories reported. He objected strongly to the opening up of the broad ligament for the purpose of reaching pus in the pelvis. This was a layer of cellular tissue unusually rich in lymphatic vessels, and there was danger of opening up a cavity filled with virulent pus and infecting this area. He was also opposed to the method described, for the reason that it was a temporizing measure. In cases of this kind a woman should not be subjected to more than one operation to effect a cure. It seemed to him preferable to open the pelvic cavity freely and ascertain the extent of the disease, and then radically treat it. His own method was to open freely into Douglas' pouch, and carefully explore the region. Later on he opened the anterior portion of the vagina, and brought down the uterus and its appendages through this vaginal incision. If the abscess was large it was necessary to puncture it and drain the cavity before delivering the uterus and its appendages in this way through the anterior fornix.

Previous to doing this the peritoneal cavity should be protected from infection by proper gauze packing. He never removed the appendages of both sides when it was possible to leave even a small fragment of one ovary. By leaving such a portion behind, the woman was relieved from many unpleasant nervous disturbances.

Dr. J. E. Janvrin said that his own practice had been to make a puncture through the posterior cul-de-sac, inserting a tube, and securing free drainage. He did not think that, as a rule, there was much danger of peritonitis from such an operation, and in the majority of cases it would effect a cure. The objections to Dr. Garrigues' technique made by the last speaker seemed to him important and valid, though he had not had any personal experience with the method. It seemed to him that the danger of such method was fully as great as from making the posterior opening. The method recommended by Dr. Goffe was certainly radical and thoroughly successful, as he could testify from personal observation. He did not feel disposed to criticise Dr. Garrigues' method until he had had an opportunity to observe its workings personally.

Dr. H. J. Boldt said that he too had had no experience with the method described in the paper, having been in the habit of employing the posterior incision. It seemed to him extremely difficult, if not impossible, to remove a pyosalpinx located high up in the pelvis in the manner described by the reader of the paper. One trouble was that these abscesses were usually sacculated; another was that the Fallopian tube was not very greatly enlarged in many cases, so that much difficulty would be experienced in opening and draining the tube. His own practice had been to open up the cul-de-sac widely enough to admit the hand, and so be sure that he was actually dealing with the Fallopian tube, and not with another collection of pus in the pelvic cavity.

Dr. Garrigues said that the objections made to his method seemed to him rather theoretical than practical. In every case the temperature had dropped to normal within a few days, and hence there was no reason to believe that the lymphatics had absorbed the poison. He had been using this technique for the past two years, and could speak confidently regarding the radical cure effected in at least two of the most difficult and severe cases. He made it a rule to explore the region with the finger to be sure that every portion was drained. All the cases in which he had operated in this way had been large pus tubes, and he could not say how the procedure would succeed when the tubes were quite small.

Strangulated Hernia; Some Practical Remarks Concerning its Diagnosis and its Proper Management.—Dr. Parker Syms read this paper. He said that the arrangement of the vascular system of the intestine was such that strangulation of only a small portion of the intestine led to the derangement of the blood supply to the whole bowel. The symptoms of strangulation were those of acute intestinal obstruction, and in no way resembled those of ordinary constipation. The more prominent symptoms were pain, tenderness, vomiting, obstipation, tympanites, local changes, disturbance of the pulse and temperature, a peculiar facial expression and mental condition. The pain usually radiated at first from the umbilicus, but afterward became general. Tenderness was accompanied by pain, and both continued until reduction had been accomplished, or gangrene had occurred. Sudden cessation of pain and tenderness without reduction of the hernia betokened gangrene. The vomiting was at first reflex; later on it became projectile, and was the result of obstruction of the intestine and interference with the waves of peristalsis. Obstipation was present from first to last. The tympanites increased until relief had been obtained. The local symptoms, aside from those of hernia, were those of acute inflammation, to which were added loss of impulse on coughing and loss of tympanitic resonance. The pulse became rapid, irregular, weak, and thready. The temperature was often subnormal from shock. When systemic infection took place the temperature was elevated. The facial expression was the drawn and pinched appearance characteristic of abdominal injury, and known as the Hippocratic face. The capillary circulation was always disturbed, as evidenced by pallor and slight cyanosis of the extremities. Shock was always present to a greater or less degree, and was an important clew to the correct diagnosis. Hiccough might come on at any time, or might be absent altogether. Strangulated hernia unrelieved always proved fatal; on the other hand, its early recognition and proper treatment almost always resulted in saving life.

Treatment.—Sometimes cold was applied to the part, the pelvis being elevated and food withheld for a short time in the hope that spontaneous reduction might take place; but this seldom occurred. The large mortality recorded against the surgery of strangulated hernia was entirely owing to the use of prolonged taxis, and the postponement of operation until a late stage. In no case could taxis be looked upon as free from danger, no matter how gentle the manipulations, and it should be unreservedly condemned. When the vomiting was persistent and severe, local anæsthesia was needed. It was his rule to administer a full dose of morphine and one ounce of whiskey, and then use cocaine locally in weak solution. After having made a free incision down to the sac, the dissection must be carried on cautiously. Having opened the hernial sac, the constricting band should be sought with the finger, and with this as a guide the point should be fully divided. In all cases the bowel was dark and ecchymotic, necessitating the exercise of good judgment in determining whether or not the vitality of the intestine had been impaired beyond repair. Careful search should also be made for any perforation. The intestine should not be returned to the abdomen until the surgeon had satisfied himself that no other point of constriction remained, and that the intestine was not gangrenous. If the condition of the patient permitted a prolongation of the operation, the radical cure of the hernia should be attempted. If the intestine was gangrenous, and the condition of the patient was very bad, an artificial anus should be established; if, however, the patient's strength was fair, it was better to make an end-to-end anastomosis.

Diagnosis of Strangulated Hernia.—Dr. Henry Roth opened the discussion by a consideration of this topic. He said that the interference with the blood supply accounted for the tension, irreducibility, pain, tenderness, dulness on percussion, and the absence of impulse on coughing. The cardinal symptoms were those of shock or collapse, and were very similar to those of any acute intra-abdominal disease or injury. The pain was referred to the hernia or to the umbilical region. It was colicky in nature, and was due to injury of the peritoneum, distention of the intestine, and active peristalsis. Vomiting was frequent, but afforded no relief, and soon gave rise to intense thirst. From the very onset there was complete constipation, as a result of reflex paralysis of the intestine. Indol, not being discharged from the intestinal canal, was changed into indican, and was found in the urine. The urine was diminished because of the low arterial pressure resulting from irritation of the abdominal plexus of nerves. The presence of tension and the absence of impulse were characteristic of strangulated hernia, and were not found in simple obstructed and irreducible or inflamed herniæ. An inflamed hernia was tender and painful, and presented the signs of a local inflammation. While there was a rise of temperature, as a rule there were little or no vomiting and none of the signs of collapse so obvious in strangulated hernia.

Treatment of Strangulated Hernia.—Dr. John F. Erdmann said that modern surgery had made the treatment of strangulated hernia at the present day a simple matter. He did not practise taxis for more than a few minutes, and not at all if it had been tried by others previously, or if a hard mass could be felt at the seat of obstruction. Half an hour before trying taxis he was accustomed to give a full dose of morphine, and to apply heat over the hernia. In his opinion, heat was more relaxing than cold. The surgeon should always obtain permission to operate at once if taxis failed. His experience had taught him to discard general anæsthesia, and rely entirely on the local anæsthesia produced by a one- or two-per-cent. solution of eucaine. Should the condition of the gut after relief of the strangulation be questionable, and the patient be not too feeble, hot towels should be applied to the bowel, and efforts made to restore the circulation for half an hour before deciding upon returning the bowel to the abdomen. An end-to-end anastomosis was preferable if the bowel was gangrenous, and the patient in fair condition. Whenever possible a radical cure should be performed.

Radical Cure in Operations for Strangulated Hernia.—Dr. Irving S. Haynes discussed this part of the subject. The sac, he said, should be carefully isolated from the spermatic cord. This should be easy if the sac was an acquired one; it would be more difficult if the hernia was congenital. Tearing a slit in the sac, even though it extended into the abdomen, need cause no apprehension, for it could be easily closed by suture. Having exposed the canal, traction should be made on the sac, the peritoneum around the ring loosened, and the sac ligated and cut away. He was opposed to retaining the sac because such a pad, instead of preventing recurrence of the hernia, would actually invite this very complication. The more closely the construction of the normal body could be imitated, the more lasting would be the result. All the veins but one or two should be removed with an excess of loose tissue. In children the internal ring was nearly behind the external ring. If a hernia was present the infantile condition would be found; therefore the inguinal canal must be reconstructed. The first step in this direction had been taken in the preliminary division of the internal oblique and transversalis muscles, and the transversalis fascia. The sutures should be applied from without inward behind the cord, about half an inch apart, and should be of chromicized catgut. The first suture was the most important; it should be placed close enough to the cord so that when tied the fibres of the fascia would hug the cord tightly, but not obstruct the circulation in it. Bassini's operation, in his opinion, was improved by constructing an internal ring. Silkworm gut and silver wire were the most objectionable materials, he thought, for sutures in these cases. Too much handling of the tissue, failure to remove masses of fat, and failure to check oozing were common causes of a poor result.

Femoral Hernia.—There were greater natural difficulties attendant upon operating on femoral hernia. Theoretically one had only to bring the inner end of Poupart's ligament down to the horizontal ramus of the pubic bone and fasten it there, but, no matter how skilfully this was done, there remained alongside the obliterated ring and canal large veins which could not be greatly compressed. This led to an inherent structural weakness. The sac should be separated from the surrounding parts, a ligature applied as high as possible, and the sac removed. Interrupted sutures of chromic gut, No. 2, should be used, and they should be applied from the vein inward.

Truss Management of Hernia.—Dr. William B. De Garmo took up this subject. He stated that the profession had unfortunately been very negligent regarding the prescribing and application of trusses. Patients who could wear light trusses, and whose herniæ never protruded under such support, were safe under such management; in those cases presenting occasional symptoms of strangulation, or when the patient was careless about keeping on the truss, operation was certainly indicated. He believed the operation for the radical cure should be done in almost every case of strangulated hernia. The post-operative treatment of such a case, in his practice, consisted simply in the use of a bandage for four or five weeks, and then dismissing the patient from observation. This showed his great confidence in the present method of operating for the radical cure of hernia. The author of the paper had very justly spoken against taxis; nevertheless, many would persist in employing it. In this connection he desired to say that, in performing taxis, instead of trying to put the hernia back, the effort of the surgeon should be to draw it further down. This did not imply the use of any violence, but if this little procedure was tried reduction would follow in many cases.

Age No Bar to Operation.—Dr. Charles N. Dowd opened the general discussion. He said that in glancing over the literature of this subject one could not fail to be impressed with the disastrous results attending delay in operating. This error was so common and so flagrant that it was a source of astonishment. Regarding the age of the patient, the speaker said that this was no bar to prompt operation. Recently he had seen a man, seventy-five years old, in a very feeble condition, and suffering from a strangulated hernia. When first seen there had been no constitutional disturbance, simply a painful and tender lump near Poupart's ligament. Exploratory incision was not permitted until the next morning, and then, on cutting down upon this mass under cocaine anæsthesia, a strangulated femoral hernia had been disclosed, and the constriction had been easily relieved. The operation for radical cure had then been done. This man, in his very feeble state, could not possibly have survived strangulation many hours. Dr. Dowd said that he had also operated easily and successfully for strangulated hernia on two infants, one four and the other six months old. These little ones had stood the operation just as well as adults.

The Operation Very Simple.—Physicians often hesitated to operate on a strangulated hernia, because they had a vivid recollection of the difficulties experienced as medical students in grasping the anatomy of hernia. This was unfortunate, for the operation was simple. The chief point to remember was to cut down to the aponeurosis of the external oblique muscle, and divide this tissue above the strangulation.

Dr. Lucius W. Hotchkiss indorsed what had been said by the last speaker regarding the comparative safety and simplicity of the operation if done at an early stage of the strangulation, and even at the extremes of life. He had himself operated for strangulated hernia upon a lady aged eighty-one years, and under full anæsthesia, with a perfectly satisfactory result. He had had equally good success in operating upon infants. There should be no delay in resorting to operation, except in those cases in which the diagnosis was in doubt, and in which, owing to the peculiar variety of the hernia, it was difficult to clear it up. When such uncertainty existed, it was well to remember that it was safer to operate than to wait and wonder.

Dr. Syms, in closing the discussion, said that while it was true that in a few exceptional cases taxis had succeeded, this result occurred so very rarely, and the usual consequences of taxis were so disastrous, that it seemed to him that the only safe rule was to discard taxis altogether.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 13, 1899.

W. H. Park, M.D., Vice-President, in the Chair.

A Case of Elephantiasis of Both Ears.—Dr. J. H. Larkin presented for Dr. Hodenpyl the specimens and photographs from a case of elephantiasis of the lobes of both ears, apparently produced by the irritation arising from the wearing of earrings. The removed portion measured 1.4 by 4 by 2 cm., and it had been taken from a lady aged thirty-seven years who was in good health. She stated that they had been enlarging for the past year and a half. Microscopical examination showed hyperplasia and a moderate exudate in the neighborhood of the blood-vessels. The speaker said that while elephantiasis of the lobes of the ears from wearing earrings was not unusual, the increase in size in this instance had been excessive.

Papilloma of the Larynx; Suffocation.—Dr. James Ewing presented the larynx taken from a woman, forty years of age, who had apparently been in good health until about ten days before death, when she had begun to suffer from very severe dyspnœa. She had been seen at the dispensary of Bellevue Hospital, and it had been noted that the obstruction to breathing was extreme. The woman had been admitted to the medical side of the hospital, but no definite diagnosis had been made. The peculiar character of the dyspnœa had led one of the house staff to suspect obstruction in the trachea. The laryngoscopic examination was negative, but had to be performed under difficulties. She had died in a few hours. The autopsy had shown the organs normal with the exception of an extensive chronic diffuse nephritis. On opening the larynx, just below the vocal cords was to be seen a gray and apparently necrotic mass, about 2 by 3 cm., attached by a small pedicle to the mucous membrane below the right ventricle posteriorly, and lying somewhat loose in the cavity of the larynx. It had caused an acute catarrhal inflammation in the upper half of the larynx and a necrotic inflammation of the mucosa immediately surrounding it. It almost completely obstructed the air passages, and fully explained the cause of death. It had been difficult at first to determine the nature of this body. It had been necrotic throughout, but on staining it in various ways remnants of an epithelial layer could be made out, and, in general, the outlines of a papilloma. The diagnosis, therefore, was papilloma of the subglottic mucosa; necrosis of this papilloma and suffocation. The speaker said that one or two laryngologists had seen this case before a microscopical examination had been made, and they had stated that papilloma of the larynx never caused death in this way. If this was true, the case must be looked upon as unique.

Tuberculous Ulcer at the Base of the Epiglottis.—Dr. Ewing also presented a larynx from a case of chronic miliary tuberculosis. It exhibited an ulceration of considerable extent at the base of the epiglottis. There were no gross lesions of the mucosa, but the entire base of the epiglottis was infiltrated with tuberculous tissue, and the base itself was the seat of an ulcer about 2 by 1 cm. Tubercle bacilli were found in this ulcer. This was a rather rare localization of tuberculosis of the upper air passages.

General Miliary Tuberculosis; Thrombosis of Superior Mesenteric Artery.—Dr. Ewing next exhibited specimens taken from a girl aged seventeen years, whose health had been failing for some months before her death. The chief symptom had been an irregular diarrhœa. About ten days before death this diarrhœa had been more severe, and had been associated with abdominal pain. The temperature had then risen, and the case had afterward followed the usual course of general miliary tuberculosis. At the autopsy the colon had been found to be the seat of a few rather old and not very extensive tuberculous ulcers, which were partly healed. There were also an acute catarrhal inflammation of the ileum and jejunum, and a considerable swelling of the lymphatic tissues throughout the lower ileum, but there were no tuberculous ulcers of the small intestine and no involvement of Peyer's patches. Beneath the stomach was a large mass partly adherent to the adjoining viscera. When dissected out it was found to consist of the mesentery in a state of extensive bloody-infiltration. There were thrombosis of the superior mesenteric artery, and suppurative arteritis with miliary tubercles surrounding the vessel, but not involving the clot. Besides the lesions of general miliary tuberculosis in this case, the lymph nodes at the root of the lung were very slightly involved; on the side of the neck were one or two which were slightly caseous. With the exception of the chain in the neck the chief seat of the lesions was the upper mesenteric region. The infection had probably arisen from the initial ulcers in the large intestine, and had lodged in these particular lymph nodes, and death had resulted from infection of the superior mesenteric artery, dissemination of the bacilli through this artery, and a complete general miliary tuberculosis.

Dr. Jonathan Wright said that if this growth of the larynx was simply a papilloma, the case was, so far as he knew, entirely unique. In tuberculous and syphilitic lesions there were apt to be papillomatous growths all over the mucous membrane of the larynx. Sometimes on removing these there would be left a deep ulcer beneath, and very frequently with syphilis there would be an involvement of the cartilage. He had seen these papillomatous masses in a case of tuberculosis of the larynx so marked that laryngectomy had been done and the inside of the larynx thoroughly scraped out, with the idea that the patient would recover with a sound larynx. Unfortunately the patient had died as a result of an accident. He would be very sceptical indeed as to a non-specific condition in the case just reported; it would be interesting to have sections made immediately around the ulceration and deeper down in the tissues with the object of searching for syphilitic lesions. The history pointed very strongly to syphilis of the larynx. Such patients often presented for a long time few, if any, symptoms until the onset of dyspnœa, which would then increase so rapidly that unless the treatment was prompt and effective the patient would be liable to die. A recent case was cited in which, although the dyspnœa had not been urgent, he had sent the patient to the hospital. The patient had, however, lost the note, and consequently there had been some delay. As a result, the man had nearly died before tracheotomy could be done. In that case there had been nothing but an abscess of the larynx of syphilitic origin. After having had an opportunity of examining macroscopically the specimen of papilloma of the larynx, Dr. Wright was ready to admit that he could discover no evidence of a syphilitic or tuberculous base to it. He had seen several cases of tuberculosis at the base of the epiglottis; while not very common they were not extremely rare. They were occasionally mistaken for syphilis, but the finding of the tubercle bacilli would easily settle that question.

Dr. W. H. Park asked if Dr. Ewing felt fairly confident that he could usually detect the primary lesion in cases of tuberculosis. He thought there might be cases of incipient pulmonary tuberculosis in which bacilli were swallowed, and thus intestinal lesions started, making it difficult to determine which lesions occurred first.

Dr. J. S. Thacher asked if there had been no further appearance of interference with the circulation of the intestine as a result of the cutting off of the superior mesenteric artery; under such circumstances there were usually very striking necrotic changes.

Dr. Ewing replied that whatever syphilis might have had to do with the first case of papilloma, he could not understand how a constitutional disease could produce a mass of this sort in the trachea. If syphilis was present it must have been entirely secondary as a cause of death. The anatomical condition was such as could hardly have been produced by syphilis. An interesting feature of the case was the absence of cyanosis and the presence of extreme pallor in spite of the marked obstruction in the trachea. Several cases which had been presented to this society seemed to emphasize this fact, namely, that slow asphyxia was apt to be associated with extreme pallor and not with cyanosis. It was, of course, impossible to say definitely which lesions had developed first, but in the case presented he thought it was highly probable that the intestinal tuberculosis had been primary. With regard to the condition of the intestine as a result of the thrombosis of this large vessel, he said that it was a matter for surprise that the changes had been so slight. There had been no areas of necrosis and no ulcerations, although the blood content of the intestinal wall was considerably increased. The thrombosis was complete, and partly organized.

A Case of Carcinoma of the Antrum of Highmore.—Dr. Leon T. Le Wald presented specimens from a man forty-five years of age. The condition had not been diagnosed before death; indeed, it was difficult to detect the presence of these tumors in the antrum of Highmore. The autopsy had disclosed a tumor obstructing the nasal fossæ, and growing apparently from the left antrum of Highmore into the nasal fossa on that side. From thence it had apparently extended upward through the sphenoid and ethmoid bones into the skull in the anterior fossa, and had produced a growth measuring about 2 by 1.5 cm. This had pressed on the left frontal lobe. The growth had also passed through the orbital plate of the frontal bone and back through the sphenoidal fissure into the middle fossa of the skull, producing a growth measuring 1 by 0.5 cm. This had pressed on the temporosphenoidal lobe of the brain. The tumor had also extended downward through the hard palate and had involved the mucous membrane of the mouth, and extending down the pharynx had involved the lymph nodes of the neck and even the bronchial lymph nodes. There were also growths in the lungs, apparently of a metastatic nature. Two nodules were also found in the upper surface of the liver. The primary growth appeared to have started from the left antrum, although there was some difference of opinion on this point. A number of sections of the tumor had been examined by Dr. Dunham, and had been found to be carcinoma.

Dr. E. K. Dunham said that the chief points of interest in this specimen were in connection with the lesions of the lung, where the neoplasm seemed to have appropriated the stroma of the lung tissue for its own purposes, and not to have developed any stroma in that organ. The microscopical examination had not been completed, but the specimen appeared to be one of medullary carcinoma of poor nutrition, there being large areas of necrosis. In the brain it had had certain peculiar anatomical relations with the blood-vessels. Sections of the growth were exhibited under the microscope.

Dr. Ira Van Gieson asked if the hypophysis or the optic tracts had been destroyed.

Dr. Le Wald replied that it had not involved either of these regions.

Dr. Jonathan Wright said that there were on record in laryngological literature two or three cases which had begun in the antrum of Highmore. One of these he had seen clinically and had examined microscopically. There had been some doubt regarding the nature of the growth. It was a polyp of the antrum which had gone down through the tooth socket and had appeared in the mouth. The patient had been between forty-five and fifty years of age. The growth having been thought to be simply a polyp, an operation had been undertaken, but it had been found that the antrum was filled with grumous material. The tumor had been about the size of a black walnut, perfectly round, and having a rather large pedicle. It had evidently filled the whole antrum. Thick sections had been made through the whole polyp from one side to the other, and deep down on the stroma it had presented a perfect picture of epithelioma. Dr. Prudden had confirmed this diagnosis of epithelioma. The case had been followed for over a year, and there had been no recurrence. This, and one other case in literature, were the only ones he knew of in which it had been definitely stated that the growth had originated in the antrum of Highmore. It was quite possible that more cases were on record, as most of them came under the observation and care of the general surgeons.

A Case of Congenital Atresia of the Duodenum.—Dr. J. S. Thacher presented a specimen in which the small intestine appeared to be the continuation of the common bile duct. It had been taken from a child who had died at the age of six days, having been operated upon two days before for an imperforate anus. The child had vomited all food. No communication could be found between the duodenum and the stomach.

Extreme Stricture of the Urethra with Secondary Cystitis and Hydronephrosis.—Dr. Thacher also presented specimens from a case in which the immediate cause of death had been poisoning by carbolic acid taken with suicidal intent. The autopsy had, however, revealed extensive disease of the genito-urinary tract, and particularly a very narrow stricture of the urethra. An opening about the size of the shaft of a pin had been found after some searching, in the centre of an oblique membrane which had occluded the urethra. There had been no clinical history, but it had been assumed that the membrane was of a cicatricial nature.

Dr. Moschcowitz remarked that it was certainly not such a stricture as would arise from traumatism or from gonorrhœa, and consequently he would like to know more regarding its nature. Might not this stricture be congenital?

Dr. Thacher said that he had, perhaps hastily, assumed the stricture to be the result of inflammation, or possibly of inflammation aided by trauma.

Double Spleen.—Dr. Lewis A. Conner reported a case of double spleen and exhibited the specimens. Each spleen measured approximately 8 by 5 by 2.5 cm., and weighed 60 grams, and each had its own branch of the splenic artery, and was, in other respects, apparently normal. Of course, a small supernumerary spleen was very frequently met with, but he had never before seen two spleens of the same size.

A Case of Perforating Duodenal Ulcer.—Dr. Conner also presented a duodenal ulcer removed at an autopsy made a few hours previously. The patient had entered the Hudson Street Hospital with symptoms closely resembling those of appendicitis. Dr. Bolton had made the usual incision for appendicitis, and had found the right side of the abdomen filled with a thin, purulent secretion, and the appendix normal. Through a second incision the pus had been seen to come from the region of the liver and diaphragm. There had been no evidence of gas in the peritoneum at the time of operation. The man had lived for nearly a week after operation. The autopsy showed a severe peritonitis localized around the cæcum and along the ascending colon, but there was no general peritoneal infection. An old oblong ulcer was found immediately below the pylorus, which had had the peritoneal coat for its base for some time, and which had finally perforated by a minute opening. Near this was what appeared to be the scar of another ulcer. There was a history of a similar attack four years ago. Surgeons were beginning to realize that, in general, the higher up the perforation the milder the infection and the better the prognosis, and the case just reported seemed to bear out this view. In this case there had also been a croupous inflammation of the cæcum and ascending colon—in other words, that part of the intestine adjacent to the infected area of peritoneum.

Dr. Park said that this idea about the mildness of the inflammation in cases of high perforation was new to him and most interesting. In the duodenum there were usually but few bacteria, and those largely from the food, which had escaped the deleterious action of the gastric juice while in the stomach.

Dr. Harlow Brooks said that at the last meeting he had presented three cases of duodenal ulcer, and was therefore particularly pleased to observe the close similarity between this case and his own. The presence of a non-odorous pus, and of symptoms of appendicitis, made the similarity very close, and emphasized again the importance of the character of the abdominal exudate as indicating the presence of duodenal ulcer.

Dr. Conner said that he had been informed that interesting bacteriological investigations had recently been made by Dr. Cushing at the Johns Hopkins Hospital regarding the intestinal tract, and these had suggested the line of thought just presented.

Dr. Theodore Janeway asked if perforating ulcer of the stomach did not often produce gas abscess underneath the diaphragm, with the production of very foul pus. He had seen such a case last year, in which the first symptom of ulcer of the stomach had been perforation. The woman had gone into collapse and had developed a gas abscess. This had been operated upon in four days, and she had lived a week subsequently. The autopsy had shown a very general peritonitis, but more especially localized in the region of the diaphragm, liver, and stomach. The pus had had a very foul odor, and the gas had formed rapidly even after aspiration. In another case which he recalled there had been associated with severe pain in the upper part of the abdomen, and collapse, the development of friction sounds over the spleen and evidence of a slow abscess formation. After about one hundred days the abscess had burst into the left pleural cavity, and the pus had been found to contain only streptococci. About forty days later, when apparently doing well, the patient had died with symptoms of secondary abscess of the brain.

Dr. E. Libman mentioned a case of perforation of a gastric ulcer associated with thrombosis of the upper branch of the splenic vein. There were infarction and gangrene of the upper half of the spleen, with very foul pus and gas in the subphrenic space. Cultures showed streptocococci and the bacillus proteus vulgaris. With reference to the greater virulence of perforations in the lower part of the intestine, he referred to an investigation made by him some years ago on streptococcus infections of the bowel, as a result of which he had found that the streptococci increased in number from the duodenum down, and had been most numerous in the cæcum and lower part of the ileum, and that the changes had been most marked in the latter regions. This was possibly due to greater stagnation in these places.

Carcinoma of the Liver Secondary to Small Mammary Cancer.—Dr. George P. Biggs presented a specimen taken from a woman, sixty-five years of age. No history of the case could be obtained. The liver was found at autopsy to be greatly enlarged and to contain an enormous amount of carcinomatous tissue (chiefly in the form of nodular masses 1 to 3 cm. in diameter). A careful search through the abdomen and thorax failed to show any other carcinoma. Finally an examination was made of the breasts, both of which were quite small and of equal size. There was nothing in their outward appearance to suggest the presence of a tumor, but on palpation the right breast was found to be very firm, and incision revealed a scirrhus carcinoma involving the whole mammary gland which measured but 6 by 5 by 15 cm. Metastatic deposits were found in the right axillary glands. Microscopical examination showed a marked similarity in the type of cells found in the tumor tissue from the breast and the liver, and suggested the probability that the involvement of the liver was secondary to that of the breast. Additional evidence in support of this conclusion was to be found in the fact that it was the right breast which was involved, and that from this tumor metastasis had occurred in the axillary glands. It was of course possible that there might have been independent development of tumor tissue in each organ, but this seemed improbable. The case served to emphasize the importance of great thoroughness in making post-mortem examinations.

Dr. Van Gieson raised the query as to why the tumor in the liver should have grown to such an enormous extent while the carcinoma of the mammary gland had apparently ceased growing.

Dr. Biggs replied that he had no explanation to offer. There did not appear in the sections to be any association of the growth with the bile ducts.

Dr. Ewing commented upon the gross appearance of this liver. He asked if there had been any distinct indications of secondary growth, or if it had been uniformly distributed as in the section exhibited.

Dr. Biggs replied that it had been uniformly distributed.

A Case of Foreign Body in the Appendix Simulating Gall Stone.—Dr. J. H. Larkin presented a specimen removed from a man, fifty-four years of age, who had given a clinical history of repeated attacks of gall-stone colic for a number of years. About three days before admission to hospital there had been an unusually severe attack of pain, accompanied by fever and depression. He had been in the hospital only an hour or two when the symptoms had become very urgent, and the man had died before he could be operated upon. At the autopsy forty-one gall stones had been found in the gall bladder, and in the intestine three stones. The common duct had been greatly dilated, and there had been evidence that a number of large stones had passed through the duct at different times. The vermiform appendix was found twisted upon itself, and turned upward and backward. The middle portion was free, but the tip was adherent to the cæcum and could not be separated. The appendix being opened, it was found that its tip had perforated into the cæcum, and projecting through this opening was a stellate-shaped stone. On slitting up the appendix further he had found three stones—one in the shape of a clover-leaf and the other two with facets, one having six and the other four. Chemical examination of these stones from the appendix showed them to be simply enteroliths and not gall stones. They differed from ordinary enteroliths in their shape and in the presence of facets. The lumen of the appendix had been entirely obliterated, and microscopical examination had revealed a complete replacement fibrosis of the lumen, there being no remains of epithelial or glandular tissue. Mitchell had made a rather recent contribution to this subject, and had collected fourteen hundred cases of foreign bodies in the appendix. Out of this large number, cases of gall stones in the appendix had been reported by only three observers.

Dr. Conner thought it not impossible that these stones from the appendix were really gall stones, and the fact that one of them presented six facets seemed to point very strongly to this stone having been associated with a number of other stones. He suggested that such stones might lose some of their chemical characteristics after having been for some time in the bowel.

Dr. Larkin replied that in the chemical reactions of the enteroliths in the appendix cholesterin had not been found. The appendix itself showed that a chronic process had been going on for a long time. The chemical examination had shown very definitely that these stones in the appendix were not gall stones. The three stones present in the appendix might have produced a large number of facets. The formation of these facets seemed to him to be the result of muscular action.

Dr. Theodore Janeway asked if the chemical examination had been made from the exterior, or whether it had been made on the interior, or by section.

Dr. Larkin said that quite a large piece of one of the stones had been chipped off and subjected to chemical examination.

Colonies of the Plague Bacillus.—Dr. W. H. Park exhibited agar culture and stained preparations from agar and bouillon cultures of the plague bacillus obtained from the cases of bubonic plague found on the steamer *J. W. Taylor*. He said that although full half a cubic centimetre of pus had been extracted from the buboes of the ship's captain and cook, only three to five colonies had developed in each case. The rapid disappearance of the bacilli at the time of the pus formation in the buboes had been noted by the earlier observers. Their form, cultural and staining characteristics were identical with those of two cultures obtained from that disease which had been brought to him from India.

Mucinæmia and its Rôle in Experimental Thyroprivia.—Dr. Isaac Levin read a paper with this title (see page 184).

The Chemical Relationship between Mucoid, Colloid, and Amyloid Substances in Normal and Pathological Tissues.—Dr. P. A. Levene read this paper (see page 188).

Dr. James Ewing asked what had been the result of the examination of the blood in cases of thyroprivia as regards the presence of mucin.

Dr. I. Levin replied that it was exceedingly difficult to detect such small quantities of mucin.

Dr. Van Gieson said that these papers, and particularly the second one, were interesting as showing what it was possible for the physiological chemist to do in the way of aiding the pathologist. One more link would be added to the proof of the presence of mucin in the system. If the animals deprived of thyroid, after having been injected with mucin, had been supplied with artificial thyroid extract it should have, theoretically at least, prolonged their lives.

Dr. I. Levin replied that the trouble in experimenting in this way with the thyroid extract was, that this extract was of a most uncertain nature. The advantage of working with mucin was that one knew the nature of the substance with which one was working.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Stated Meeting, January 25, 1900.

Brooks H. Wells, M.D., Chairman.

Removal of Fibroids through an Anterior Vaginal Incision.—Dr. J. Riddle Goffe reported a case of a woman, forty-three years of age, married twenty-three years and the mother of two children. Examination had revealed a small fibroid in the posterior wall of the uterus, just above the internal os. He had operated for the removal of this tumor through an incision in the anterior fornix of the vagina. Having delivered the uterus into the vagina, the tumor had been very accessible, and had been easily shelled out through a longitudinal incision. He had then shortened the round ligaments through the same incision. The woman had made an uninterrupted recovery, and had left the hospital in three weeks.

Dr. Goffe also exhibited six fibroids removed from another woman, forty-three years of age. The tumors had been removed through the anterior incision by myomectomy. The woman had come to him complaining of backache and hemorrhage. He had previously curetted and packed the uterus, and this had proved a useful means of support during the subsequent insertion of the sutures into the uterus. In this case he had shortened the round ligaments and sutured the perineum. The patient had left the hospital on the twentieth day.

Dr. A. Brothers said that about eighteen months ago he had presented to the New York Obstetrical Society a number of fibroids, of about the same size as those just shown, and had been severely criticised for having removed such small tumors, the statement being made that such tumors never gave rise to symptoms of any importance. It was therefore reassuring to know that a surgeon of Dr. Goffe's reputation should see fit to do this operation. He would say incidentally that the patient from whom he had removed these fibroids had been restored to complete health, and instead of being an invalid she was now able to earn a living by laborious work.

Hysterectomy by the Clamp Method.—Dr. A. Brothers presented three uteri removed by the clamp method. The first case was that of a woman who had had many attacks of pelvic peritonitis during the previous twenty years, and who was anxious to have a most radical operation done. The uterus had been removed by the anterior median incision. The operation selected was vaginal hysterectomy by the clamp method, no effort being made at hæmostasis until the fundus of the uterus had been delivered through the vaginal incision. In the second case also he had begun by slitting up the anterior uterine wall, but had found it necessary subsequently to bisect the uterus. It had then been possible to reach the tumor and shell it out. The third specimen was a uterus which had been removed in one mass. The woman had suffered from frequent and severe uterine hemorrhages. Another gynæcologist had previously attempted to relieve this patient by curettage and amputation of the cervix, but without benefit. Dr. Brothers said that he had tried intra-uterine vaporization, having been hitherto very successful in stopping hemorrhages in such cases by that method. For the first time this had also failed him, and he had then removed the uterus, suspecting the presence of malignant disease. In this case the uterus had been simply drawn down and clamped in three different portions from below upward. On one side the adnexa had been completely removed. A different technique had been employed in this case because of the suspicion of malignancy.

Dr. P. A. Harris said that increasing experience showed that quite a large percentage of cases of myoma and fibroma ultimately proved to be malignant. This brought up the subject of the advisability of removing small tumors for slight symptoms occurring rather late in life.

Interesting Complication following Cervical Dilatation for the Cure of Sterility.—Dr. A. Ernest Gallant reported this case. The patient, a woman of thirty-one years, had been married ten months. He had first seen her last March, and as she had been very desirous of becoming pregnant, he had corrected a retroverted uterus and dilated the cervix. This was on March 18th, and she had menstruated on March 31st and on April 26th, but missed her menstrual period in May. Shortly after this she had an attack of pelvic peritonitis. On July 13th he had found a mass to the left of the uterus, and the organ was down on the pelvic floor and pushed to the right. The breasts were enlarged as in early pregnancy. He had made a diagnosis of extra-uterine pregnancy, and this diagnosis had been confirmed by Dr. Grandin. The following day he had performed abdominal section, and had found the omentum adherent to the tumor, and blood clots scattered through the intestinal coils. The fœtal sac had been found and removed. It was an unruptured tubal pregnancy as proved by microscopical examination. In the specimen no trace of tubal structure could be detected. It was thought to be a seven weeks' gestation. The hemorrhage had apparently occurred so late from a small opening found below the sac. The woman had insisted that one tube and ovary should be left if possible, and the right tube and ovary had accordingly been allowed to remain, although a cheesy mass had been found in that tube. Just beyond this mass the tube was bent at a right angle. When seen again on September 28th a pelvic examination had shown the uterus to be in good position. On September 4th she had menstruated scantily, and on October 2d she had flowed freely. In November and December the flow had been scanty, and she had returned to him for examination in December because of an uncomfortable feeling in the pelvis. A mass was found on the right side. Two days later, while at the theatre, she had fainted and had had to be taken home. A pelvic exudate had been found, but this had disappeared within a week under the use of hot douches. A second examination then showed a large mass on the right side extending up to the umbilicus. On January 15th he had operated upon her again, and had found several thin-walled cysts which had separated the broad ligament down to the cervix on the right side. A portion of the tube was allowed to remain. Microscopical examination of this specimen showed, to his surprise, a beginning alveolar sarcoma of the right ovary.

Dr. Goffe said that he was inclined to think that the restoration of the uterus to its normal position had been quite as important a factor as the dilatation of the cervix in causing pregnancy; however, the promptness with which pregnancy had ensued was certainly unusual. The malignant disease had developed so rapidly that it was rather difficult to believe that no indication of it had been present at the time of the operation for the extra-uterine pregnancy.

Dr. Brothers said that some years ago he had succeeded in relieving an obstinate metrorrhagia by means of curettage. The woman had returned after her marriage, and he had treated her then by negative galvanization because of a return of the metrorrhagia. Subsequently she had come to him with symptoms indicating that an extra-uterine pregnancy had ruptured while she had been on her way to his office. The diagnosis had been confirmed by Dr. A. J. C. Skene. Dr. Brothers had operated upon her forty-eight hours later, and had removed a ruptured ectopic gestation. He felt that the galvanization had acted as had the cervical dilatation in Dr. Gallant's case, and it was probable that in both instances some tubal disease had existed prior to the treatment.

Tuberculosis Complicating Pregnancy.—Dr. Hubbard W. Mitchell reported two cases of women who had had pulmonary tuberculosis complicating pregnancy. The first patient had consulted him in 1894 for advanced pulmonary tuberculosis. She was then about eight months pregnant, and her condition was so serious that it had seemed doubtful if she would live to the end of her pregnancy. She also had an extensive laceration of the cervix and perineum. On April 30th she had been speedily delivered at full term without any medical attendance of a well-formed child. Two other children had been born to her since then, and she was now in good health. Numerous examinations of the sputum had failed to show any tubercle bacilli. The second case was almost a counterpart of the first one, except that numerous tubercle bacilli had been found in the sputum. The good results of the treatment of the tuberculosis in these cases the speaker attributed to the use of an antiseptic tonic internally.

Dr. Goffe remarked that it had been frequently noticed that women in advanced stages of consumption were very apt to become pregnant—indeed, the same was true when the husband was tuberculous.

An Ovarian Cyst with Twisted Pedicle Mistaken for Appendicitis.—Dr. Brooks H. Wells reported a case showing certain difficulties in diagnosis. He had been called recently to see a woman supposed to be suffering from an attack of acute appendicitis. Up to a few days before she had been in perfect health. Constipation was marked, and a few hours before his arrival she had gone into collapse. The abdomen was enormously distended and extremely tender, so that palpation was out of the question. She was operated upon in the middle of the night, so great had been the urgency. An incision had been made over the region of the intestine. This had revealed a beginning general peritonitis, and also had disclosed the fact that the appendix was adherent to a mass about the size of an orange situated below the brim of the pelvis. The appendix itself was not inflamed. After making a median incision he had found a small ovarian cyst with two complete turns in its pedicle. The abdominal cavity had been flushed out and closed with a quantity of hot saline solution remaining in it. The woman had made a rapid recovery.

Dr. P. A. Harris recalled one similar case, except that the tumor had been sufficiently large to be detected by palpation before operation. She had had three attacks of severe pain, and, as a result of the twisting of the pedicle, a hæmatocele had been produced.

Pyloric Obstruction.—In nineteen cases with recovery and without relapse, Morison, of London, has operated by making an incision one and one-quarter inches from the pylorus, passing a guide through this opening and incising through all the coats. Suturing the incision is done in such a way that the line of union is transverse to the incision.

Medical Items.

New Jersey's Birth and Death Rate.—According to the State board of health report issued on November 29th, there appears to be a decrease of about five thousand births below last year's returns. The number of deaths for the year was 30,999, and the estimated population is 1,855,872, showing a death rate of 16.7. During the year there were 10,357 deaths of children under five years, and 8,042 deaths of persons over sixty years old. The victims of consumption numbered 3,584, and of acute lung trouble 4,322. The number of deaths from consumption was 419 greater than the average number for the previous twenty-one years.

Bravery of a Surgeon in South Africa.—Surgeon-Captain R. A. Buntine, who is mentioned in despatches for conspicuous bravery in the action at Bester's near Van Reenen's pass, is an Australian born in Melbourne. He was educated at the Scotch college in his native city and then at the University of Melbourne, where he took his degree as a physician. Dr. Buntine is in practice in Pietermaritzburg, the Natal seat of government. When the colonial volunteers were called out, Dr. Buntine and his partner, Dr. Currie, at once set off. The Carabineers were given the duty of patrolling the Free State border, and Dr. Buntine was out with them when they had a brush with the Boers at Bester's just under the Drakensburg, towering ten thousand feet above them. The Carabineers were compelled to retire, and a trooper who was wounded had to be left where he fell; Dr. Buntine, however, rode back for him and got his trooper servant, Duke, to accompany him. Dr. Buntine placed the severely wounded trooper on his own horse and held on to the stirrup leather of his servant's horse, and so ran back to camp.—*Lloyd's News.*

Fees in the United States.—The *West London Medical Journal* says: "Some attention was recently directed in an American medical journal to the professional fees paid to 'physicians' in the States, and the curious fact was pointed out that a fee of $500 was quite exceptionally netted. In the land where millionaires abound as well as men of large wealth, this certainly seems a surprising thing. A surgeon not long ago operated successfully for appendicitis in San Francisco, and his millionaire patient voluntarily handed him a draft for $30,000. This fee must eclipse any record we have in this country. If anything, however, there are signs everywhere that 'operation stock' is a falling market. That is to say, the fees for operations are not what they used to be. Many causes no doubt are contributing to this doleful state of affairs, but perhaps the most active of all is the increasing number of those in whose hands the public find that their surgical needs can be placed. Thus by competition combined with efficiency the operation stock market is being depressed."

Mr. Frederic Treves.—Few men who have gone to the front to care for the wounded at their country's call have more to lose and less to gain by so doing than Mr. Frederic Treves. Still a comparatively young man, his professional career of barely twenty-five years has been one continuous succession of scientific triumphs, and what is peculiarly gratifying to the profession in both his self-sacrificing offer and the high appreciation accorded to it by the government is that Mr. Treves' bright position is based solely upon purely scientific attainments and operative skill. He is emphatically a surgeon's surgeon and owes nothing of his reputation to medical politics or attendance upon distinguished personalities or households. The range of his work has been remarkably wide. Beginning as an anatomist or "dissector," his first marked success was a work which is to-day a standard text-book in every dissecting-room in which the English language is spoken. Then he turned his attention to the structure of some of our animal cousins, and his "Anatomy of the Intestinal Canal in the Mammalia" is already a classic, while the growth of his latest phase of reputation, the surgical, may be seen in his great "System of Surgery," published two years ago, and in the fact that within the past year he has been compelled to resign his chair at the London Hospital on account of the pressure of his private practice. And the personality of the man is worthy of his reputation—a commanding presence, a brilliant lecturer, with a remarkable gift of keen, incisive epigram, each sentence short, clear cut, and decisive, but with illuminating bursts of sunniest humor, he is the idol alike of his students and patients. His bearing in the operating-theatre is that of a general upon the field of battle.—*Outlook.*

Marvellous Draught of Fishes, Nine at a Birth.—It was reported by *The Lancet* correspondent at Rome that a marvellous story came from Casteldaccia near Palermo, and which was actually credited by the simple-minded Italian peasantry. The story ran that a woman at the above-mentioned place was, after a laborious confinement, delivered of nine little animals in the form of fishes, four of which weighed 15 grams apiece, and five 10 grams each. It is satisfactory that the latest news gave the mother as progressing as favorably as could be expected under the exceptional circumstances. *The Lancet*, commenting on this Munchausen-like tale, says: "Nihil sub sole novum." The Palermitian monstrosity, which has been going the rounds of the Italian press lay and professional, has evoked references to other lusus naturæ, of which Italy appears to have been from time immemorial the chosen seat. The painstaking and matter-of-fact historian of imperial Rome, from the death of Marcus Aurelius—Herodian to wit—has been laid under contribution, and his statement of the portents that marked the close of the reign of Commodus has had the honor of resuscitation: *ζῶα τε παντοῖα καὶ τὴν ἑαυτῶν φυσὶν μὴ τηροῦντα σχήμασι τε ἀλλοδαποῖς καὶ μέρεσι σώματος ἀναρμόστοις πολλάκις ἀπεκυήθη* (animals of all kinds deviating from their natural constitution were frequently brought to birth in strange forms and with parts of their body out of all harmony with each other). The time is ripe for a new edition of Geoffrey St. Hilaire's classic work on tetratology, were it only to utilize the material bearing on the subject, and chiefly to be found in the anatomico-pathological museums of the Italian medical schools.

A Preliminary Note on the Experimental Introduction of Cancer.—For some years the author has held the view that carcinoma is simply the result of the entrance of the normal epithelium of the body into the lymphatic spaces and its continued growth therein; his reasons being that the epithelium of cancer is practically identical with the normal epithelium of the body, that the spread of cancer always takes place along the lymphatics in the direction of the lymph flow, and that carcinoma is infectious. The epithelial cells themselves are in all probability the infective agent. In order to put this view to test the following experiment was made: The ovaries in a rabbit were incised, the cut surfaces scraped, and the juice containing free epithelial cells thus obtained was allowed to enter the peritoneal cavity. The animal remained well for nearly a year, then became thinner and weaker and dyspnœic, and was killed. On examination numerous white, hard nodules, varying in size from a pin's head to an olive, were found in the mesentery, liver, uterus, diaphragm, parietal pleura, lungs, and mediastinum. In structure these nodules had all the characters of ovarian cancer, consisting of alveolar spaces lined by one or occasionally more layers of columnar epithelial cells.—*Journal of Pathology and Bacteriology.*

Increase of Cancer in Great Britain.—The assertion that the increase in the deaths from cancer in Great Britain is more apparent than real, owing to a variety of causes, has been advanced frequently of late by those who distrust statistics. This may be and probably is the case to a certain extent, but to contend that cancer has exhibited no increase is wilfully to ignore incontrovertible facts. *The Lancet*, referring to the matter, has this to say: "Perfectly accurate figures show that the registered mortality from malignant disease in England and Wales has at least doubled within the last fifty years. Among males, indeed, there has been an uninterrupted increase from 19.5 per million of the male population to 571 per million in the later years of the last century." No verbal juggling or explanations can do away with the significance of these figures, and the quibblers must allow that, while admitting that an exaggerated view is taken of the greater prevalence of cancer by some. The truth is plain that there has been a very considerable increase of malignant disease both in this country and Great Britain.

Gunshot Wound of the Brain Through the Mouth.—Barker (*Lancet*, December 2, 1899, p. 1508) reports the case of a man, twenty-nine years old, who discharged two shots from a small-bore revolver into his mouth in a direction upward and backward. There was at first free bleeding from the nose, and this was plugged. On the following day the man was able to sit up in bed, bleeding moderately from the right nostril; he was perfectly conscious and quite intelligent, and complained only of a slight general pain in the head over the right side. The pupils were normal, and the only paralytic symptom was a slight droop of the right eyelid, which was also slightly ecchymosed. There was a round hole in the hard palate, just to the right of the middle line, two inches from the edges of the incisor teeth, and this was still bleeding. The plugging was removed, the wound dusted with iodoform, the patient kept at rest, and ice applied to the head. Vomiting occurred a few days later, and was repeated again after the lapse of two weeks. Ten days after this weakness appeared in the left arm and leg; the lines on the left side of the face were thought to be a little less marked than on the right, and the tongue deviated a little to the left. The pupils were still equal, though small, and they reacted to light. Intense optic neuritis with hemorrhages was found in the right eye, and also in the left though in less degree. The knee-jerks were increased on both sides, and ankle-clonus was present on the left. There was slight tenderness on percussion over the right parietal bone. The urine was normal, and the intellect perfectly clear. Vomiting without nausea recurred from time to time. The temperature was but little above normal. At no time did twitchings or convulsions occur, though carefully looked for. For a period there was steady improvement in all of the symptoms, so that it was deemed unwise to attempt removal of the bullets in the skull. Skiagrams showed that one of these lay near the body of the sphenoid bone outside the brain, and the other exactly in the middle of the brain. On careful measurement from the glabella to the external occipital protuberance the latter bullet was found directly under a point midway between the two, and at a depth of about one and three-quarters inches from the surface of the skull. Allowing for the difference in size between the patient's cranium and its shadow, it was thought that the bullet ought to have rested on the corpus callosum at about two-fifths the distance from its anterior extremity, and against the lower border of the falx cerebri, one-eighth of an inch to the right of the median line. On the sixth day after the injury the patient had a convulsion lasting from three to five minutes with loss of consciousness, but without localizing symptoms. The attack was preceded by a feeling of chilliness, then by a rigor, and the temperature was found to be 100.6° F. Two days later two additional attacks occurred, and the day after this a fourth. Operation was now decided upon, and after some difficulty the bullet was removed. On restoration of consciousness sensation and motion were absent at first upon the entire left side, except in the face. Improvement, however, in these symptoms took place, although clonic contraction at the elbow occurred from time to time, and also in the left calf. The knee-jerk was exaggerated upon the left, and ankle clonus was present. In the later history of the case secondary trephining was practised, with separation of some adhesions between the hemispheres. This was followed by a large number of epileptic attacks within a few days, but subsequently the patient improved.

Premature Maturity of the Japanese.—By examining statistics for the past five years, the *Jiji Shimpo* finds that the average age of students graduating from the Imperial University is twenty-six years and one month. The discovery causes that paper much disquiet. It says that young men in Europe graduate at twenty-two or twenty-three. On the other hand, the Japanese mature at an earlier age than Europeans do, and their lives of robust activity are shorter. In Western Europe a man is considered to be in his prime at fifty, and at sixty and even seventy he occupies the most important posts and discharges the most arduous duties. In Japan, on the contrary, a man is thought to have lost his capacity for usefulness at fifty, and is expected to step aside and make way for his juniors. So it would seem that there is a difference of ten years in the length of active life, and a difference of about five years in the time of concluding the scholastic career, the total loss on the Japanese side being fifteen years. Such figures naturally alarm our contemporary, and it appears to think that the only feasible plan is to reduce the standard of education. Beyond all doubt some means should be taken to enable youths to finish their university course at an earlier age. If twenty-six years is the average age of graduation, there must be many men of thirty studying in the university. But is it quite correct to say that active life is over in Japan at fifty? A large number of the leading merchants and statesmen of the present day are nearer sixty than fifty.

Cotton-Seed Oil as Food.—In an editorial under the above title *The Lancet* (July 29, 1899) says that because cotton-seed oil has been employed as an adulterant a certain amount of prejudice is entertained against its use as a dietetic. The ease with which it saponifies would indicate that this oil is a useful food and an excellent substitute for more familiar fats; in fact, properly refined cotton-seed oil is as wholesome as butter. The late Dr. Campbell Morfil devoted considerable attention to this subject, and concluded that the daily consumption of a small quantity of cotton-seed oil produced results unattainable from any other food, in cases of chronic dyspepsia, in which the diet was restricted and the stomach intolerant of other fat. It is less nauseating than cod-liver oil and free from its laxative tendencies, and may therefore be exhibited in tuberculous patients in whom excessive waste has to be combated without overtaxing the digestive functions. When properly refined the oil has a sweet, nutty flavor, and does not tend to become rancid. It is well adapted for culinary and edible purposes, but should not masquerade under a *nom de plume*.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended February 9, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Alabama, Mobile	January 27th to February 3d	1	
Arkansas	February 2d	*	
California, Los Angeles	January 18th	3	
District of Columbia, Washington	January 23d to 29th	3	
Florida, Jacksonville	January 27th to February 3d	3	
Illinois, Springfield	January 21st to 27th	1	
Indiana, Clay County	January 28th	Prevalent.	
Evansville	January 27th to February 3d	6	
Louisiana, Calcasieu	January 20th	8	
De Soto	January 20th	1	
Iberia	January 20th	3	
New Orleans	January 27th to February 3d	28	30
Shreveport	January 27th to February 3d	8	
Tangipahoa	January 20th	1	
Massachusetts, Barton	January 27th to February 3d	1	
Lawreoce	January 27th to February 3d	1	
Minnesota, Minneapolis	January 20th to 27th	8	
New York, New York	January 27th to February 3d	2	
Ohio, Cincinnati	January 27th to February 3d	3	
Cleveland	January 27th to February 3d	27	
Oregon, Portland	January 23d	1	
Pennsylvania, Philadelphia	December 24th to January 27th.	5	
South Carolina, Greenville	January 27th to February 3d	1	
Tennessee, Nashville	January 27th to February 3d	6	
Texas, San Antonio	January 1st to 31st	2	
Twelve counties and localities	January 17th to 23d	43	
Utah, Salt Lake City	January 27th to February 3d	1	
Virginia, Portsmouth	January 27th to February 3d	4	2
Roanoke	January 1st to 31st	12	
Washington, Spokane	January 31st	75	
West Virginia, Calhoun Co	January 31st	Reported.	
Gilmer Co	January 31st	Reported.	
Mingo Co	January 31st	Reported.	
Upshur Co	January 31st	Reported.	
Wisconsin, Lafayette Co	February 3d	1	
Lamonweir	January 24th to February 3d	5	1
Houston	January 24th	1	
* Generally prevalent.			
SMALLPOX—FOREIGN.			
Austria, Prague	January 6th to 13th	5	
Belgium, Antwerp	January 6th to 13th	5	1
Ghent	January 13th to 20th	..	1
Egypt, Cairo	January 7th to 14th	..	1
Engalnd, Liverpool	January 13th to 20th	..	1
London	January 13th to 20th	21	
Southampton	January 13th to 20th	1	
France, Lyons	January 6th to 13th	..	2
Nice	January 13th to 20th	2	2
Paris	January 13th to 20th	..	1
Germany, Hamburg	December 31st to January 13th.	4	1
Konigsberg	January 6th to 13th	4	1
Greece, Athens	January 13th to 20th	4	1
India, Bombay	December 26th to January 2d	..	66
Calcutta	December 16th to 23d	..	3
Mexico, Chihuahua	January 20th to 27th	..	3
New Brunswick, Campbellton	January 27th to February 3d	8	
Russia, Moscow	December 23d to 30th	..	1
Odessa	January 6th to 13th	8	4
Riga	November 1st to 30th	..	15
St. Petersburg	January 6th to 13th	17	3
Warsaw	December 31st to January 10th.	..	11
Scotland, Edinburgh	January 13th to 20th	1	
Spain, Corunna	January 6th to 13th	3	
Switzerland, Zurich	January 6th to 13th	1	
YELLOW FEVER.			
Cuba, Havana	January 20th to 27th	3	1
Mexico, Vera Cruz	January 20th to 27th	..	1
CHOLERA.			
India, Calcutta	December 16th to 23d	..	26
PLAGUE.			
Hawaii, Honolulu	January 21st	42	41
India, Bombay	December 26th to January 2d	..	244
Calcutta	December 16th to 23d	..	49
Kurrachee	December 23d to 31st	1	1
Japan, Kobe	December 26th to January 10th.	23	
Osaka	December 26th to January 10th.	34	

Japanese Barbers and Infectious Skin Diseases.—The Tokyo police have summoned all the barbers of the capital and conveyed to them strict instructions with regard to cleanliness and the use of disinfectants, as well as the duty of not shaving persons that are suffering from skin diseases or other maladies of a contagious nature. The chief of police has also instructed the constables serving in the city to observe the conduct of jinrikisha-men, and to interfere at once if they detect any attempt to importune citizens, or to behave rudely toward persons who refuse to employ jinrikisha.

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

CHRISTIAN SCIENCE: AN EXPOSITION. By William A. Purrington. 12mo, 193 pages. E. B. Treat & Co., New York.

REPORT OF THE BUREAU OF LABOR STATISTICS OF THE STATE OF NEW YORK. 8vo, 1,179 pages. Illustrated.

THE TREATMENT OF DISEASES OF THE NERVOUS SYSTEM. By Joseph Collins, M.D 8vo, 601 pages. Illustrated. William Wood & Company, New York.

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PRACTICAL TEXT-BOOK OF MIDWIFERY. By Robert Jardine, M.D. Edin., M.R.C.S. Eng., F.F.P. and S. Glasg. 12mo, 245 pages. Illustrated. The Macmillan Company, New York.

LETTER, WORD, AND MIND BLINDNESS. By James Hinshelwood, M.A., M.D., F.F.P. and S. Glasg. 12mo, 88 pages. H. K. Lewis, 136 Gower Street, W. C., London, England.

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THE SURGICAL DISEASES OF THE GENITO-URINARY TRACT. By G. Frank Lydston, M.D. 8vo, 1,011 pages. Illustrated. The F. A. Davis Company, Philadelphia, New York, Chicago.

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THE INTERNATIONAL MEDICAL ANNUAL SYNOPTICAL INDEX TO REMEDIES AND DISEASES. 8vo, 411 pages. E. B. Treat & Co., New York.

THE RETROSPECT OF MEDICINE, July to December, 1899. Edited by E. F. Trevelyan, M.D. Lond., B.Sc., M.R.C.P., and James Braithwaite, M.D. Lond. 8vo, 447 pages. Simpkin, Marshall, Hamilton, Kent & Co., Limited, London, England.

ANATOMIE CLINIQUE DES CENTRES NERVEUX. By Le Dr. Grasset. 12mo, 95 pages. Illustrated. Librairie J. B. Baillière et Fils, Paris.

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LEADERS IN TYPHOID FEVER. By E. B. Nash, M.D. Boericke & Tafel, Philadelphia, Pa.

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Original Articles.

ON THE TREATMENT OF THE SLIDING HERNIAS OF THE CÆCUM AND SIGMOID FLEXURE.[1]

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THE natural looseness of the peritoneum in the iliac regions of the abdomen allows not very infrequently the slipping or sliding of portions of the large bowel into a hernia, and thus makes a decided variation in the ordinary contents of a hernial sac. For instead of this sac being formed by the pushed-out parietal layer of the peritoneum, in which rests, ordinarily, free or adherent omentum, small or large intestine, in these slipped hernias, the "hernies par glissement" of the French authors, there is found an important variation in these usual conditions. It is, that the proper peritoneal sac is imperfect, usually on its postero-lateral aspect, where, instead of passing around the included bowel, the loose peritoneum rises up and passes over the herniated bowel to its other side. In other words, the protruded bowel is still outside the peritoneum. Figs. 1 and 2 show this more clearly than words can do. In these it will be seen that the bowel has been forced down, carrying with it a fold of loosened peritoneum into the scrotum, just as is done in the descent of the testicle. And, indeed, the congenital form of cæcal hernia is produced by the same agent that helps the descent of the testis, for the gubernaculum testis is included in the duplication of the peritoneum that contains the cæcum, and hence the bowel, from its action, is occasionally drawn down in the wake of the testis. A similar occurrence, although more rarely than with the cæcum, may happen on the left side where the gubernaculum ends under the sigmoid flexure.

Not every case, however, of cæcal or sigmoid hernia is of this kind; on the contrary, most of the cæcal variety and many of the sigmoid ruptures are found to have complete sacs owing to the fact that they are generally covered all around by peritoneum in their normal condition. This is particularly true concerning the cæcum and appendix, and it is a point of supreme surgical interest in connection with the surgical lesions of the latter, for which we are largely indebted to Treves for having made it widely known to us, although Scarpa, as long ago as in 1812, and later Bardeleben, in 1849, and other German observers early proclaimed the fact and its value in connection with perityphlitis. This mobility of the cæcum with its perfect peritoneal covering, which is only wanting in about eighteen per cent. of the observed cases, and a nearly similar condition in the sigmoid, where it is limited only by a mesocolon, narrow and of varying length, will explain why so many cases of cæcal and sigmoid hernias have been treated radically without surgical difficulty and with success. Such conditions are not considered here. Moreover, when the colon retains its long mesentery, which is its original development, the cæcum can present itself in a left-sided hernia or, vice versa, the sigmoid can show itself in a rupture on the right side of the body. *En passant*, this arrest of development from a long to a short mesocolon additionally permits the understanding of the left-side appendical difficulties which are occasionally encountered, and does away with the need of calling in the transposition of the viscera to help us in such questions. Macready says, concerning the variations of hernias of the cæcum, that in fifty-seven instances thirty-six were right inguinal; five were right femoral; nine were left inguinal, and one was left femoral.

Most of the cæcal and sigmoid hernias are reducible, which means that they generally have a complete sac and that the intestine rests free as it does in other hernias. Merigot de Treigney[1] collected an interesting number of cases of hernias of the large intestine and presented them as follows:

	Inguinal.	Crural.	Total.
Cæcum and appendix	8	5	13
Cæcum and end of ileum	11	..	11
Appendix alone	17	5	22
Transverse colon	4	..	4
Totals	40	10	50

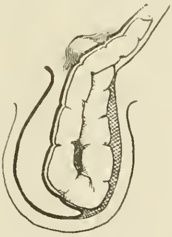

FIG. 1.—Showing the Large Intestine behind the Peritoneum.

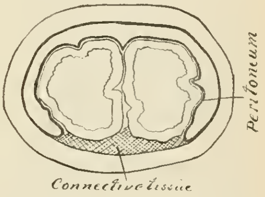

FIG. 2.—Showing the Retroperitoneal Large Intestine in a cross section of the hernia with its incomplete sac.

With such hernial contents this class of ruptures can, as a rule, be readily reduced.

A brief digression may be here made to express clearly the distinction which should be, but is not generally, made between a cæcal hernia and one of the ascending colon and on the left side, between a sigmoid hernia and hernia of the descending colon. In reality it is anatomically well known, and it has been already alluded to, that the cæcum should be considered with a few exceptions as entirely surrounded by peritoneum; it is, however, not so well known that the sigmoid flexure, with a long or short mesocolon, as it may be, is in its most mobile part below the edge of the pelvis, only mounting above this line when distended into the upper pelvis, and that the descending colon, 6 to 12 cm. long, terminates in the iliac fossa, and is adherent to the iliac wall by the absence of peritoneum over one-fourth to one-eighth of its circumference. The colon on each side, while usually attached as described, may be more movable by reason of a mesocolon of variable length. Hernias, therefore, such as are spoken of in the present article as those of the slipped cæcum and sigmoid, really are hernias involving the ascending or descending colon.

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[1] Read at a meeting of the Practitioners' Society, held January 5, 1900.

[1] Thèse de Paris, 1887.

This latter class of hernias—the subperitoneal, the sliding or slipped hernias of the ascending or descending colon, present difficulties of operative reduction which are not yet satisfactorily overcome, and in which my own endeavors, to be soon narrated, are but tentative, and yet need the corroboration of a larger personal experience and, more important, the confirmation of other surgeons.

Treigney, whom I have just quoted, presents sundry other cases of herniated large intestine which bear more closely on the point now in question. They are as follows:

	Inguinal.	Crural.	Total.
Hernias containing cæcum, end of ileum, and ascending colon	8	1	9
Hernias containing sigmoid flexure .	14	1	15
Hernias containing sigmoid flexure with small intestine.............	7	..	7
Hernias containing ascending or descending colon........	5	..	5
Totals	34	2	30

Of twenty cases in which the ascending or descending colon, alone or accompanied by the cæcum or sigmoid flexure, was involvd a whole sac was found only in seven cases; in five it could not be determined, and in eight the hernia was *par glissement*. This will give some idea of the frequency of this complication. When it is present we have conditions that are prone to bring about such an amount of irreducibility that it demands a special surgical interference, or, if strangulation exists, which is possible, although rare, necessitates the surgeon to relieve only the constriction present and often to forego the intended radical cure of the hernia. The bowels in these instances, in which they have slidden into the hernial sac, are well seen in the diagrams, and are held in position by the connective tissue, which is generally situated on the posterior or postero-lateral aspect, and which from its long subjection to abnormal conditions is often dense and thickened. Pressure under such circumstances accomplishes but little in replacing the protruded bowel in the abdominal cavity, and hence sundry expedients have been resorted to in order to bring about the proper replacement of the intestine.

Before, however, proceeding to the surgical treatment of such slipped or slidden hernias, a word or two concerning their recognition may not be out of order. They are more common on the left side and in males in middle or advanced life. It is difficult to determine their nature before the required surgical intervention. Usually they present themselves with the history, in its early period, of reducibility which is not always amenable to a truss or to taxis, and which soon passes into a permanent irreducible condition. They are usually scrotal when irreducible, and sometimes one can in a left-sided hernia suspect its being one of the sigmoid flexure or descending colon, from the inability to inject per rectum but a small quantity of fluid, or because by such an injection the bowel in the scrotum distends appreciably. So uncertain, however, is the diagnosis, and so often is the slipped large bowel associated with small intestine or omentum in the sac, that time is only misspent in endeavoring to solve the problem except with the scalpel. Only it is to be remembered that in a large irreducible hernia, whether on the left or right side, but particularly on the left side, on account of its greater frequency, it is wiser to make the incision into the sac well to the inner side of the scrotal swelling, and not to carry it too low down, so as to avoid the accident of coming down to and incising an unrecognized bowel deprived of its tell-tale peritoneal protection. On opening the parietal portion of the sac wall, aside from the probably associated omentum and small intestine which can be readily reduced and gotten out of the way, if strangulation be not present, which is first to be relieved, there may be encountered as a hindrance to a possible reduction some enlarged epiploic fringes. Their replacement can be attempted one by one, but even if reduction of these be impracticable or only temporary, as they often reappear when the finger pressure is relieved, their displacement will frequently clear up the field of view so that the postperitoneal condition of the bowel will be detected.

Now, as to the treatment. Very little information on this point is to be found either in text-books or special works on hernia. Ladroitte,[1] in 1882, in a cadaver in which he found a slipped sigmoid hernia, stated that he could bring about its reduction only by completely separating the bowel along its cellular attachment up to the external ring. This published fact attracted but little attention, and but few attempts on this line have been resorted to by surgeons meeting such cases. The majority of these hernias have been unsatisfactorily treated either by being closed up after an exploratory incision, or after a vain attempt has been made to push up the attached bowel toward the external ring and to hold it there by sutures carried from below the intestine to the sides of the ring or through the abdominal wall. Such a plan I was compelled, like others, to use in my first cases, and, owing to my inexperience, the operation resulted in no benefit. Later I employed the separation of the bowel from its subperitoneal bed. This, while generally easy, has at times presented difficulties encountered by other surgeons from the denseness of the tissue, and sometimes, too, the nutrient vessels of the intestine may be so damaged as to bring about its gangrene.[2] Mayo[3] says it is not always wise to attempt this. In the two cases in which the method was resorted to by me, the fear remained that this raw surface of a possibly now greatly thinned and damaged bowel might materially enhance the risk of the operation, and therefore while the procedure permitted the proper suturing together of the internal ring as a part of the due performance of the well-known procedure of Bassini (which I prefer to any), yet I remained not satisfied with the technique of the procedure.

The difficulty of reducing these hernias and, in certain cases, the risk of separating them from their changed resting-place will be appreciated by referring to the collection of cases lately made by Froelich, of Nancy.[4] He has gathered some twenty-one instances, ten strangulated and eleven in which a radical cure was attempted "*à froid*." There were six cæcal hernias, leaving four strangulated sigmoid hernias and nine non-strangulated. Of these Hydenreich had two cases, both followed by fecal fistula. Camplenon's case was followed by an artificial anus. Reverdin, Berger, Terrier, and Froelich all failed to cure their hernias. Terrier and Hartmann reduced the sac and the subperitoneal bowel and closed the ring in two instances. Finally, disturbed by the failure to secure a reduction in two cases, Juillard,[5] of Geneva, boldly resorted to the severe measure of cutting away the protruding bowel and joined the divided intestinal rings by a Murphy button, and with success. He aided the closure of the internal ring and inguinal canal by the additional removal of the testis and spermatic cord. These names of celebrity in the surgical world, exemplify the troubles that environ the satisfactory treatment of these hernias, and their results cannot be called brilliant. The successful outcome of Juillard's case will tempt only a rare repetition.

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[1] Bulletin Soc. Anatom., 1882, p. 169.

[2] Desbordes: "Des Hernies Adhérentes de S Iliaque," p. 37. Thèse de Paris, 1896.

[3] Mayo: "Des Hernies par Glissement du Gros Intestin." Thèse de Paris, 1897.

[4] "De la Cure Radicale des Hernies par Glissement du Gros Intestine." Gaz. Heb. de Méd. et Chir., No. 33, 1899.

[5] Congrès de Chirurgie, 1895, p. 433.

Anderson[1] gives three cases in which the bowel, although covered with peritoneum, could be pushed up sufficiently to allow of the suturing of the inguinal canal in two instances. In two of his cases the hernia promptly recurred. This looseness of the bowel I have likewise met with.

My records show that I have surgically treated six cases of sigmoid hernia and four cases of cæcal hernia, in one of which the cæcum was in a left-sided inguinal hernia, and in one instance it formed a part of a right-sided strangulated femoral hernia. In two of the sigmoid hernias I resorted to separation of the bowel by a dissection carried on mainly by the finger, and after liberating it and then pushing it up into the abdominal cavity I sewed up the ring and canal and thus completed the operation. I have not been able to trace many of these cases for any long period of time, but I am informed by Dr. Coley that in two or three patients on whom he operated similarly, and whom he had long under observation, they remained cured. In three others I succeeded in pushing back with some effort the herniated bowel and sutured the internal ring, but in a few months the hernia recurred.

In the four cæcal hernias two of them were of the cæcum proper and reducible, having a complete sac; one was found in a femoral hernia; another in a left inguinal rupture. The remaining cæcal and sigmoid hernias, one each, I ventured to attack in the following manner. Thinking that the reduction of the bowel after separation by dissection from the sac into the abdominal cavity was a surgically incorrect measure, as it left a raw and perhaps thinned bowel in the peritoneal cavity, I made an essay, comparatively recently, in these two cases, after freeing the bowel from its bed, to cover the raw surface with peritoneum taken from the sac, as in the manner shown in Fig. 3. This was accomplished by dissecting it up on each side of the bowel, at the top, on a level with or a little above the internal ring, and at the bottom to a short distance below the bowel. The bowel is then loosened, by peeling off with the finger or, if tightly fastened, by cutting or snipping with scissors as widely as possible from it until it is released up to or above the internal ring, which is to be opened widely by retractors or even enlarged by cutting if required to obtain a good view. Then the loosened peritoneum is turned backward and sutured behind the gut as far as practicable. The peritoneal flap should be an ample one, so as to permit to a satisfactory degree the unfolding of the bowel loop and thus avoid kinking, which, however, is rarely of importance in the large intestine. The ring is afterward carefully sewed together after the newly covered bowel is reduced, and if the patient has consented to the justifiable proposition to sacrifice the testis on this side, a radical cure may be reasonably looked for. I cannot but hope that the peritoneal covering that is given by this procedure will, moreover, aid in preventing recurrence, as the direction of any further slipping or sliding is (if the upper incisions have been carried high enough) turned more away thereby from the hernial outlet. In a rebellious case a better exposure could be had by a hernio-laparotomy, as was practised by Terrier and Hartmann in three cases with success. This would allow of a more complete bowel separation and serous investment, and would permit a resort to an intestinal fixation of the intestine above if this extra means of cure was required to prevent any further descent of the bowel. Of the two cases in which the procedure just described was applied, one was of the sigmoid variety (descending colon) and the other of the cæcum (ascending colon), associated in the latter with the small intestine and the appendix in an incomplete sac. There was in neither case any material difficulty in carrying out the idea. In both more than eight months have elapsed since the operation was performed without any recurrence of the hernia, although in the cæcal case this good result was hardly hoped for, as the scrotal swelling was of huge size and debarred the man from his vocation as a waiter. He was informed that the best that could be done for him was to render it possible for him to wear a truss. I may add in concluding that Froelich advises, in cases in which strangulation exists with a slidden bowel, simply to relieve the constriction, to return the caught small intestine and omentum, and to leave the large bowel alone. This should be borne in mind as safe and judicious.

The cases in detail are as follows:

Case I.—Left inguinal hernia; slipped large intestine; operation; reduction; suture of internal ring; cure. W. S——, male, aged sixty years, peddler; left inguinal scrotal hernia of twenty-five years' duration; reducible at first and controlled by a truss; later a hernia appeared in the right scrotum. Entered the New York Hospital January 30, 1885. The hernias were treated by Heaton's injections of tincture of oak bark, which served to keep them up for two months, when they recurred after a severe fall. A second injection was made at his request, but one month later the left hernia recurred. It was then the size of a goose's egg, resonant at its top and partly reducible. On May 22d the sac was opened up to the external ring; the sac was incomplete; its contents were the large intestine, the posterior layer of the sac passing over the intestine. The attachments of the bowel to the scrotal tissue were so lax as to permit the bowel with some force to be pushed back into the abdominal cavity. The sac was cut off as high up as possible toward the internal ring, which admitted the conjoined tips of three fingers. The edges of the ring were sewed together by three silver sutures and the outer wounds closed. He was discharged cured on June 9th. He was seen ten months later, and his rupture had not recurred.

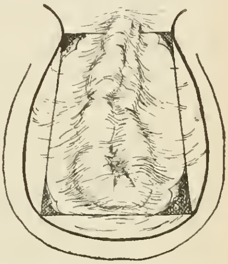

Fig. 3.—Outlioe of Peritoneal Lining of Sac utilized as a flap to cover posterior surface after it has been freed by dissection.

Case II.—Incarcerated sigmoid hernia; operation; incomplete sac; reduction; suture of internal ring. F. B——, male, aged fifty-eight years, priest; left inguinal hernia for twenty-eight years, reducible and controlled by truss until within the past four months. Since this time it has become more difficult to reduce, and he has had more pain and distress in this region. He has lost flesh from the discomfort. The hernia is the size of a cocoanut, and on entrance to the New York Hospital on February 12, 1889, it was in an irreducible condition and the size of a cocoanut and very tender. The incarceration was overcome mainly by gentle taxis after a morphine injection. The internal ring was large, admitting two or three finger tips. Under ether the next day an incision was made from the external ring to the bottom of the sac, exposing the hernia. There was an incomplete sac, the peritoneum passing over and being adherent to a knuckle of the sigmoid flexure, which was at the postero-lateral part of the mass. Six or seven ounces of fluid were found in the sac. With much difficulty the herniated bowel was pushed up into the abdominal cavity, and with a Macewen needle a strong silk ligature was passed through the conjoined tendon and the outer edge of the internal ring and Poupart's ligament, and duly secured. Other sutures were similarly applied to the large ring. The canal was closed by two other stitches, a drain introduced, and the wound closed. Healing was much interfered with by a sharp bronchitis, and the major part of the wound healed by granulation. The patient was lost sight of after leaving the hospital.

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[1] Brit. Med. Jour., October 29, 1895.

Case III.—Strangulated right femoral hernia containing cæcum and appendix; sac complete; reduction; Bassini's operation. E. H——, aged fifty-five years, seamstress, has had a small irreducible femoral hernia for ten years. Last evening, after a fit of coughing, it became larger and developed the usual signs of strangulation. A long tumor about six inches long and three inches wide was seen in the right groin. Under ether, on December 18, 1894, an incision was made parallel to Poupart's ligament, opening a sac containing a little adherent omentum, two loops of the small intestine, the cæcum, and the appendix, which were free, and which, after nicking the roof of Gimbernat's ligament, were easily reduced into the abdominal cavity. The omentum was tied off, the sac ligatured at its neck, and the canal and opening were closed with chromicized catgut after Bassini's method. On January 19, 1895, she was discharged cured. She was seen a year later, and the hernia had not recurred.

Case IV.—Hernia of sigmoid flexure; complete sac; Bassini's operation; gangrene of testis; sepsis; death. F. I——, male, aged forty-seven years, engineer; admitted to the New York Hospital on December 24, 1894. He had a left inguinal hernia for ten years and had worn a truss for about a year. The hernia was reducible but frequently painful. Bassini's method was used, and on opening the sac omentum and a loop of the sigmoid flexure were seen free in a complete hernial sac. The internal ring was dilated to the size of three finger tips. The omentum was tied off with catgut, and the ring and canal were closed with kangaroo tendon. The patient did badly, with scrotal swelling, which was opened, revealing a gangrenous testis due either to a possible twist, for the epididymis was forward, or, more probably, to a too tight closure of the internal ring. This was among my earliest Bassini operations, when acknowledged inexperience might have led to such a mishap. The testis and cord were removed and the wound was left open and dressed with iodoform. Sepsis prevailed, and the patient succumbed on January 6, 1895.

Case V.—Sigmoid hernia; incomplete sac; reduced by freeing bowel and completing rest of sac by peritoneal flaps; cure. C. W——, male, aged forty-four years, baker; admitted to the New York Hospital on January 23, 1895. He had noticed hernia of the left side for about eighteen months. Lately it has become irreducible and painful, and he could not return the hernia even when it was reducible. Operation was done on January 26th, by the Bassini method; the sac was incomplete; and the large intestine (descending colon) was present behind the peritoneum on the posterior aspect of the sac. The internal ring was enlarged upward for better inspection and manipulation. The herniated bowel was then dissected up from its bed of connective tissue and pushed into the abdominal cavity. The incomplete sac was cut off, and then the reflection of the peritoneum at the internal ring was incised laterally outward and inward so as to obtain a closure of the peritoneal ring behind the intestine pushed into the abdominal cavity. The ring itself and canal were closed *seriatim*. The result was a good one. When last seen, three months afterward, no recurrence was present.

Case VI.—Right inguinal interstitial hernia containing cæcum and appendix; complete sac; Bassini's operation. R. W——, male, aged fifteen years; ruptured himself on the right side, while running two years ago. The hernia was irreducible and did not descend into the scrotum. He wore a truss, but had a good deal of pain. On January 14, 1895, operation revealed an interstitial congenital inguinal hernia, containing the cæcum and appendix free in the main one of two sacs present. Ligature of the sac at its neck and closure of the ring and canal after Bassini's method were resorted to. He was discharged cured. He was seen one year later; no recurrence.

Case VII.—Congenital left inguinal hernia containing cæcum; sac complete; Bassini's operation; cure. G. H——, aged twenty-seven years, engineer, had a hernia of thirteen years' duration, from heavy lifting. Left inguinal hernia was irreducible up to four years ago, the size of two fists. Operation was performed on October 12, 1895, by Bassini's method. The hernia was found to be congenital and to have as its contents the omentum and the cæcum free from adhesions. The omentum was tied off and the cæcum returned. Primary union occurred. He was discharged from the hospital on November 4, 1895; he has not since been traced.

Case VIII.—Left inguinal hernia containing small and large intestines; sac incomplete; reduced by pressure; Bassini's operation; cured. W. I. N——, male, aged sixty-four years; rupture in left groin from a fall received eighteen years ago. Six months later a hernia also appeared on the right side. He was able to wear a truss on the left side for eight years. Since then, now ten years, he could not retain the hernia by any appliance, though both ruptures could always be readily reduced. Both scrotal rings were much enlarged. Under ether both hernias were operated on January 14, 1895, at the same sitting. On the right side the small intestine and omentum were found; four inches of the latter were tied off in sections and removed. Bassini's operation was completed. On the left side a portion of the large intestine was found on the posterior part of the sac covered loosely by peritoneum. As a consequence an incomplete sac was formed. Some small intestine was also present. The sigmoid flexure could with some effort be pushed up into the abdominal cavity so that the sac could be tied off at the internal ring, which was thereupon narrowed by sutures, and the other steps of Bassini's operation were carried into effect. There was no recurrence up to four months later, when the patient was last observed.

Case IX.—Large right inguinal irreducible hernia containing cæcum, appendix, ascending colon, small intestine, and omentum; sac incomplete; plastic covering of separated colon by peritoneal flap; reduction; Bassini's operation. C. H. D——, aged forty-one years, waiter, has had a rupture in the right groin for about eight years without known origin. At first it was reducible, and for its retention he used a truss up to three years ago, when the hernia could not be retained by such means, and he was forced to employ a bandage for support. On entrance into the New York Hospital a hernia as large as a child's head was seen in the right inguinal region, irreducible and largely containing intestine. He was urgent for operative help, as the deformity was apparent through his clothing and deprived him of work. It was candidly told him that such large hernias had greater risk to life, and that only a partial cure could at best be promised. With this understanding, under ether, and using rubber gloves, which is yet the latest fad and not altogether a satisfactory one, the sac was opened March

8, 1899, revealing as its contents small intestine and omentum, with the cæcum and appendix and a part of the ascending colon. The small intestine was reducible. The omentum was adherent in many places. These were tied off, and when duly freed, a large portion was tied off and its stump reduced. This showed very clearly that the sac was an incomplete one, and that while the cæcum and appendix were free and reducible, still the reduction of the ascending colon, which rested at the back and outer part of the protrusion, was impossible by reason of its immobility, it being firmly fixed behind the peritoneum by dense connective tissue. This was carefully divided with scissor snips or else separated by the fingers until the bowel could be easily replaced in the abdominal cavity. Before it was left there, however, the peritoneum from the sac was loosened up and turned backward so as to cover over the raised surface of the bowel, and there held by interrupted fine silk sutures. Then the sac thus completed was sutured at its neck, and the other steps of a Bassini operation were proceeded with. The patient made a prompt recovery, and when seen eleven months afterward no tendency to recurrence was found. He is presented this evening to you for inspection.

Case X.—Sigmoid irreducible hernia; sac incomplete; release of intestine with plastic covering from sac and its reduction; completion of rest of sac; Bassini's operation. M. C——, aged forty-seven years, merchant; referred to me by Dr. De Plasse, January 24, 1899. By lifting a heavy pail of water, thirteen years ago, the patient brought on a left inguinal hernia. This was kept under control by a truss for six years, but since then this has proved comparatively useless. The hernia was partly reducible, found to be scrotal, and in size about three by five inches. Operation was done January 26, 1899. On opening the sac it was seen to be incomplete, and the subperitoneal intestine, which was the lower end of the descending colon, was held *in situ* by somewhat loose connective tissue. The serous coat of the sac was cut on each side a moderate distance from the bowel, which was lifted out with the peritoneal flaps easily from its bed up to the internal ring. These flaps were then passed behind the bowel and sutured together, and the covered intestine was reduced into the general abdominal cavity. It was then seen that the just-covered loop of bowel fell within the abdomen below or beyond the region of the internal ring. The ring then completed by this little plastic effort was duly closed by sutures, and the remaining steps of the ordinary Bassini operation completed the case. It progressed uneventfully. He was lately seen, and has had no recurrence now nearly a year after the operation.

Of these ten cases, six were sigmoid hernias of which there was a complete sac containing an ordinary loop of the sigmoid with a long mesentery which allowed of its ready reduction. Five, however, had slidden out behind the peritoneum and required in three cases only firm pressure to force the bowel back into its place in the abdomen. In the two remaining cases the bowel was freed from its bed, then covered with the peritoneum of its incomplete sac, and finally reduced. Four other cases were of the cæcal variety. Three of these had a complete sac, and the hernial mass was readily reduced. In the remaining case the intestine (ascending colon) was freed by dissection and covered by peritoneum from the incomplete sac and successfully reduced.

Heidelberg University has opened its doors to the other sex. Women can now attend the medical lectures and examinations upon the same footing as the men.

THE CLINICAL USES OF THE SPHYGMOGRAPH.[1]

By R. VAN SANTVOORD, M.D.,

NEW YORK.

On considering how I might best fulfil my promise to the president of the Academy in the preparation of a paper on the clinical uses of the sphymograph, I decided to restrict myself to [illegible] analysis of my own results obtained b[illegible] a single instrument, that of Dudgen, dur[illegible]e last fifteen years. As the sphygmograph is an instrument which is not in general use among physicians, it will be advisable to recall briefly some of the elementary facts which must be borne in mind to order to interpret its tracings.

A sphygmogram is an approximately accurate record of the variations in arterial tension. Arterial tension is the lateral thrust of a column of fluid contained in a closed tube and compressed between the force of the ventricular contraction and the post-systolic arterial retraction on the one hand, and the resistance to the flow of the fluid on the other. This resistance consists mainly in the friction of the blood on the walls of the vessels, and is obviously directly proportioned to the velocity of the current. Gravity is a second important factor, which may, however, be neglected in the present inquiry, as all the tracings to be presented were taken on the radial artery with the patient sitting with the arm dependent and flexed at the elbow or horizontal as he lay in bed.

The factors which influence the rapidity of the blood current during the different periods of the cardiac cycle are the amount of blood thrown into the aorta at each systole of the ventricle, the rapidity of the heart action, the condition of the aortic valves, the elasticity of the vessels, the degree of contraction of the capillaries and arterioles, and, under exceptional circumstances, the pressure in the veins.

It is commonly stated that the amount of pressure on the spring of the sphygmograph required to develop a tracing of maximum amplitude, like the amount of pressure required to stop the pulsation of the vessel beyond the point of compression, is a measure of the absolute arterial tension, *i.e.*, the tension per unit of surface of the vessel.

This is true only when comparison is made between vessels of equal calibre. Marey found that the vessel supplying an aneurism could be easily compressed by a moderate amount of force, whereupon pulsation in the aneurism would cease. The same amount of pressure applied to the aneurismal sac produced no appreciable effect, a vastly greater amount of directly applied force being required to suppress its pulsation. The explanation of this difference is that the transmission of pressure through fluids under tension is equal in all directions, each unit of surface being acted on by the same distending power. The result is that the sac of the aneurism, which at any part of its diameter contains a larger number of units of surface than a corresponding section of the vessel, requires a correspondingly greater force to compress it. This same law obviously applies to radial arteries of different calibre. If we have two vessels, each having the same pressure to the unit of surface but one having twice the internal diameter of the other, it would take double the pressure to obliterate the former than it would the latter. Again, if in these two vessels we have in the larger only half the pressure to the unit of surface present in the smaller, it would require the same pressure to obliterate either. To a palpating finger the two latter vessels would seem to have the same tension, although the absolute tension in the smaller would be just double that in the larger. In the former instance of equal units of tension in vessels of unequal size, the large vessel, requiring more force to compress it, would to the finger appear to be of far higher tension.

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[1] Read before the New York Academy of Medicine, December 21, 1899.

Now in order to develop the tracing of the artery, the pad of the recording instrument is pressed down upon it until it is transferred from a cylinder to a body of elliptical section. The excursions of the lever are caused only to a very slight extent by actual dilatation of the vessel. They are caused mainly by the rising and falling of the artery as it approaches and recedes from its normal cylindrical shape under the variations of tension which occur at different parts of the cardiac cycle. If the pressure of the pad exceeds the sum total of the units of tension which are brought to bear upon it, the calibre of the artery will be obliterated and no tracing will be made. If the spring pressure is too light, the lever would be affected only when the tensile force has partly expended itself, and the tracing will be wanting in amplitude. The necessary pressure on the spring to produce the largest amplitude of tracing lies between these two extremes, and what this tension should be depends not alone on the tension per unit of square surface, *i.e.*, the absolute tension of the artery, but upon this combined with the number of units acting on the pad. In other words, a tracing of maximum amplitude developed under a pressure of five ounces on a small artery represents a higher absolute tension than a tracing of maximum tension developed under the same pressure in a large one. Allowance must be made therefore for difference in the size of the vessels in estimating the significance of the amount of pressure necessary to develop a tracing. The form of the tracing will, I believe, give a far more accurate record of the absolute tension of the vessel than the amount of pressure required to develop it; rapid and extensive variation in tension being indicative of slight resistance and low absolute tension; slight variation in tension being indicative of great resistance and high absolute tension. Results obtained by instruments like the sphygmomanometer of von Basch, which measure tension by indicating the amount of pressure necessary to exert on a vessel to prevent its pulsation being felt beyond the point of its application, are open to three objections: (1) It is difficult, at times impossible, to determine with any approach to accuracy just when pulsation has ceased; (2) the measurement of the necessary pressure is of value only if we know also how large a surface we are compressing; (3) the instrument measures only the highest point of pressure existing during the cardiac cycle and tells us nothing of its variations, which, as will presently be demonstrated, are highly significant.

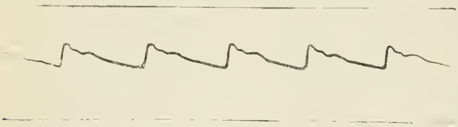


Fig. 1.

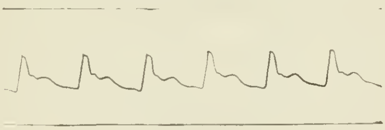


Fig. 2.

I will now present a series of tracings showing the form of the sphygmogram in the healthy adult under different physiological conditions. From these we will pass on to pathological variations.

I present here a tracing (No. 1) taken from a healthy young adult who had been sitting quietly for some time previously. The ascent of the tracing is nearly vertical; the primary wave is slightly blunt-pointed. The next most prominent wave in the tracing, the dicrotic impulse, corresponding to the period just succeeding the closure of the aortic valves, is marked and still more rounded. A third, known as the tidal wave, is indicated between these two, and is below the level of a line drawn between the dicrotic notch and the summit of the primary wave. One or more undulations will often be manifest in the portion of the line of descent following the dicrotic wave. There will be variations in the appearance of the tracing according to the instrument used; the lever of the Marey type moving in the arc of a circle; the recording needle of the instruments of Pond and Dudgen playing to and fro in a straight line. The relation between the magnifying power of the instrument and the rapidity of the motion of the paper must also be considered in contrasting the work of different instruments.

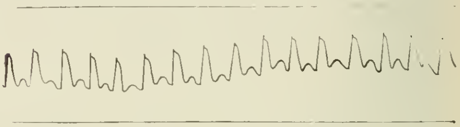


Fig. 3.

The illustrations which I show are copied on the same scale and with substantial accuracy from sphygmograms taken with the same instrument and with the paper moving with the maximum velocity of the clockwork, so that these considerations do not concern us in comparing them with each other.

The second tracing shows diminution of tension after a meal in the same individual from whom the first was taken. The primary wave has become much more pointed, the dicrotic undulation more marked, and the dicrotic notch, whose position in the tracing is the best indication of post-systolic tension, occupies a lower level.

The third tracing was taken from the radial artery of a perfectly healthy young man immediately after several minutes of active work on a stationary wheel in a gymnasium. The spring pressure was two and one-half ounces.

A tracing of the pulse at the same pressure just before the exercise showed a normal sphygmogram.

In accordance with the law explained at the beginning of the paper, the pressure of two and one-half ounces on the artery expanded during exercise represents a lower tension than the same pressure on the artery when relatively contracted during rest. The long pointed primary wave, the disappearance of the tidal wave, the low position of the dicrotic notch, the marked dicrotic impulse and great increase in rapidity of the pulse and amplitude of the tracing, are characteristic of low tension in a normal vascular system due to relaxation of the peripheral vessels, produced in this case by a physiological cause.

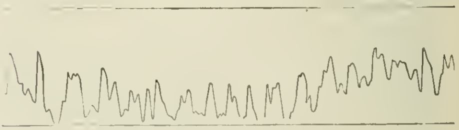


Fig. 4.

The tracing (Fig. 4) taken during the actual work shows the same characteristics, but is exceedingly irregular owing to the unavoidable muscular jerking and some irregular action of the ventricle.

Fig. 5 represents a type of high tension taken from the same subject as the preceding, during an attempt to raise himself from the floor with one hand. The first few waves show the same characteristics as the preceding, but the general line of the tracing runs up rapidly on the paper, showing increase of tension, and the amplitude of the individual waves diminishes greatly. The explanation is that with the effort the glottis was closed and the muscles of the trunk rigidly contracted. The pressure in both thorax and abdomen being thereby greatly raised, the entrance of the venous blood into the great vessels of the trunk was impeded, venous tension markedly increased, and this acting backward through the capillaries caused a corresponding increase of pressure in the arteries, the peripheral vessels still remaining widely open.

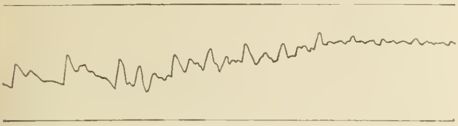


Fig. 5.

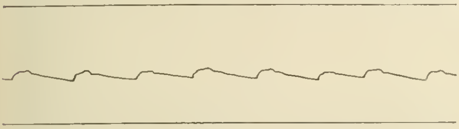


Fig 6.

The sixth tracing was taken from a case of tetanus and shows exceedingly high tension in elastic vessels. The line of ascent is gradual, the primary is lower in level than the tidal wave, both being, in common with the dicrotic, but faintly indicated. The dicrotic notch is as high in the tracing as the primary wave.

The seventh, as proved by autopsy, taken from a case of diffuse nephritis, predominantly parenchymatous, in a boy, shows these same characteristics in a less pronounced degree, the ascent being not so gradual, the primary waves in common with the tidal being more pronounced and on the same level, and the dicrotic notch lower in the tracing.

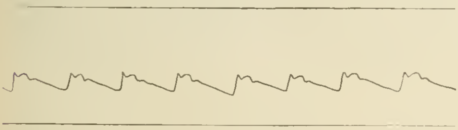


Fig. 7.

These cases may be described as cases of continuous high tension.

One rule given for the interpretation of a sphygmogram is to consider every tracing as above the normal in tension in which the tidal wave is above a line drawn from the dicrotic notch to the summit of the primary wave. These two tracings by this test, it will be observed, are of decidedly high tension.

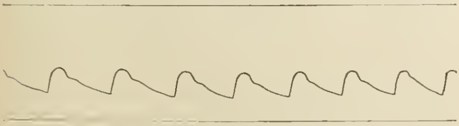


Fig. 8.

The next (eighth) sphygmogram was taken from a woman of eighty-three years in good general health but for the infirmities of age, whose radials were somewhat rigid and tortuous. Primary and tidal waves are fused together in a rounded summit; the dicrotic notch is at a slightly lower level than in the tracing No. 7, which shows moderate high tension in elastic arteries, and the dicrotic impulse is but slightly indicated. As Marey has stated, the systolic portion of such a tracing bears a strong resemblance to the tracing taken in the ventricle during its contraction, and represents the transfer of the ventricular impulse to the radial artery through the rigid vessels with but slight modification. Owing to the slight retractility of the great vessels the amount of blood forced into the periphery during cardiac diastole is less than normal, dicrotism is less, velocity falls, but the tension does not suffer a corresponding diminution because of the resistance offered by the inelasticity of the vessels beyond the point at which the sphygmogram is taken. The tracing may be described as one of high systolic and relatively low post-systolic tension, a combination which is typical of arteries which are less than normally elastic.

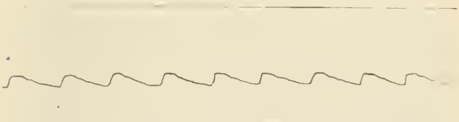


Fig. 9.

In cases which we meet in practice in which diseases of the vascular system and of the kidneys are found in various combinations, we have frequently the combined effects of inelasticity and increased peripheral resistance manifest in the tracing.

The following (No. 9) was taken from a stout lady, aged fifty-two years, who suffered from considerable dyspnæa. The tracing is of small amplitude. Its almost flat top without indication of primary and tidal waves indicates lack of elasticity, while the very high position of the dicrotic notch shows very high tension in the post-systolic portion. Moreover, it took a pressure of five ounces to develop the tracing. This pulse felt very small and weak. I would not have been able to recognize its nature without the sphygmograph. The pressure of five ounces on a very small artery, required to develop this tracing, was significant of absolute high tension.

The next tracing (No. 10) shows a flat-topped systolic and rather low tension post-systolic portion indicative of loss of elasticity. As the artery was large, the pressure (five ounces) necessary for its development was not significant of so much absolute high tension as in the last case. It was taken from a patient suffering from a recent cerebellar hemorrhage, whose urine presented at the time nothing abnormal. Retinal hemorrhage occurred at this time. Hyaline casts were found in the urine two years later, albumin after five years had elapsed, the quantity of urine gradually increasing and the specific gravity falling. He died, finally, from the giving out of his heart, more than nine years after his apoplexy.

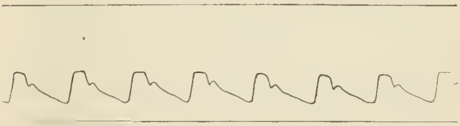


Fig. 10.

The next tracing (No. 11) was taken from a lady, aged sixty-four years, who suffered from dyspnœa and attacks of syncope, in one of which she died a month later. Her pulse was beating at the rate of thirty per minute. The systolic portion shows the rounded wave of inelasticity, and the dicrotic notch is very high on the tracing, showing enormous peripheral resistance.

Under the influence of nitroglycerin, the following modifications resulted:

(No. 12.) The rounded top of the systolic wave became almost flat, recalling the types last shown, the plateau being preceded by a small, sharp elevation. The dicrotic notch was lower in the tracing and the dicrotic wave more accentuated. This sharply pointed elevation at the summit of the tracing is to be explained as being due to an oscillation of the spring of the instrument. In inelastic vessels, especially when the tension at the end of the systole falls below a certain point, the advancing ventricular impulse is so sudden as to act as a water-hammer and cause a sharp oscillation of the spring of the instrument. This is a very frequent feature in tracings from inelastic vessels at medium and low average tensions. In elastic vessels this water-hammer oscillation occurs only in cases of extremely low peripheral resistance with a fairly strong ventricle.

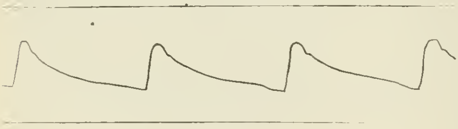
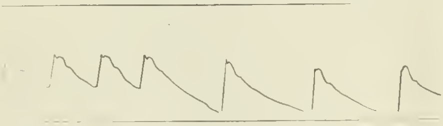


Fig. 11.

The next tracing (No. 13) to be considered is an undulation from this same sphygmogram, but in a place where three slow beats at the rate of about forty per minute followed others, one of which we have just examined, which were at the rate of seventy per minute. The slower beat allows the artery more fully to empty itself before the next systole. We get greater amplitude, less absolute tension, as shown by the downward curve of the general line of the sphygmogram, and the plateau back of the water-hammer oscillation is converted into a somewhat obtuse point, all showing the effect of a still greater lowering of tension in this same vessel.


Figs. 12 and 13.

In the next tracing (No. 14) one of the larger units from a very irregular sphygmogram obtained from a man with rigid and tortuous arteries, suffering from pneumonia, we see the result of a still greater reduction of peripheral resistance on a tracing taken from an inelastic artery. The cardiac systole is represented solely by a sharp point, the plateau having disappeared entirely. The tracing still shows the inelasticity of the artery in the relatively high position of the dicrotic notch, which in the tracing of a normal, very low tension pulse with a somewhat corresponding systolic wave, would be near the base line and in the relatively slight development of the dicrotism.

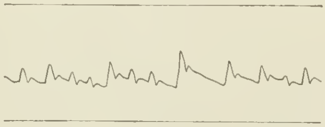


Fig. 14.

The next tracing (No. 15) from a case of pneumonia in a man, aged sixty-two years, shows a still lower tension of the same character, except that there are two jagged water-hammer oscillations at the summit instead of one, the blow being so sharp and the pulse collapsing so suddenly that a second slight oscillation occurred before the spring of the instrument followed the receding wave.

Tracing No. 16 shows a water-hammer apex betraying inelasticity of the artery, a slightly indicated systolic elevation, a dicrotic notch midway in the tracing and a slightly indicated dicrotic wave. The tracing is obviously one of rather low tension in an inelastic artery. Low tension indicates diminished velocity and consequent diminished resistance to the blood current, and may be produced, as in examples given above, by arterial dilatation with a normal ventricular output, in which case we have a large blood stream flowing slowly. Or it may be produced by diminished ventricular output with normal or even contracted or inelastic arteries, in which we have a small blood stream flowing slowly. Other things being equal, the amplitude of the tracing will be greater in low tension, due to peripheral relaxation of the vessels, than in the same condition due to ventricular failure, but no absolute conclusions can be drawn in comparing the amplitude of one tracing with that of another, because differences in the size of individual arteries and in the adjustment of the recording instrument are factors having a material influence on the amplitude. In this case, however, the radial was very large and somewhat hard. It would be safe to infer, therefore, from the moderate amplitude of the tracing, supposing it to be properly taken, that the low tension was due to ventricular failure. The patient in question was a man of large frame, formerly of great physical strength but suffering from cardiac dilatation, chronic nephritis, and acute bronchitis. He moved about with difficulty on account of dyspnœa and weakness. The chief point of interest for our present point of view was that to the finger this pulse gave the impression of exceptional force, so much so that the patient, himself a physician, remarked that there could not be anything much the matter with his heart because his pulse was so strong. The explanation was that on account of the very great size of the artery the finger had to overcome the resistance of a much larger surface under tension than in the case of a vessel of normal size. This combined with the comparatively sudden impulse of a low tension pulse and the resistance of a somewhat hardened artery, gave the misleading feeling of strength and high tension to the pulse. The man's condition proved that the sphygmogram was right and the impressions produced upon the finger were absolutely misleading.

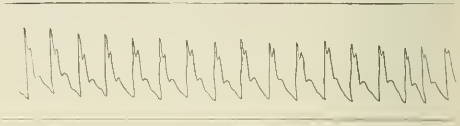


Fig. 15.

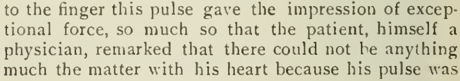


Fig. 16

One of the chief uses of the sphygmograph in actual practice consists in the ability it gives us to detect high arterial tension in the earlier stage. This high tension in the majority of cases shows itself in the flat-topped tracing similar to that shown in Fig. 10, and is indicative of arteriosclerosis chiefly, though this is obviously combined in some cases, as in Fig. 9, with contracted arterioles. In many cases the sphygmogram has given me information which I was not able to obtain with my finger. It is hardly necessary to recall the fact, long since demonstrated especially by Mahomet, that this high tension often precedes recognizable indications of lesions of the kidneys by a long interval of time. In a case reported above it was two years before granular and hyaline casts were found, and five before albumin appeared in the urine, that marked inelasticity of the vessels was demonstrated by the sphygmograph. The combined cardio-vascular and renal lesions require often not one or two, but five, ten, or more years for their full development.

Back of persistent high tension, back of the lesions of heart, vessel, and kidney, are the little understood changes in metabolism due to hygienic errors in eating and drinking, work and worry, exercise and recreation, modified more or less by intercurrent infections, acute and chronic. When the damage to the vascular system and the kidneys has become so great that they no longer are able to respond fully to even the most restricted physiological demands, we can do but little for our patients. In the earlier stages we can do much.

It has often astonished me to see for how long some patients, who are willing and able to take care of themselves, especially women in comfortable circumstances and leading sheltered lives, will remain in fair general health in spite of marked evidence of serious renal and vascular disease. It is hardly necessary to insist upon the great value of this early warning of coming danger. The absence of high tension does not, however, necessarily exclude the existence of serious renal lesions, especially those of parenchymatous nephritis in a subacute stage. One of my records shows a normal, rather low-tension tracing in a case of parenchymatous nephritis apparently of malarial origin. The patient from whom was taken the tracing showing high tension, in a normally elastic artery (No. 7) during a remission of the disease, later had a normal pulse. Autopsy showed a diffuse nephritis predominantly parenchymatous.

The effect of high arterial tension in producing cardiac overwork has long been recognized. In a paper[1] before this Academy, read last April, I presented the reasons for believing, as demonstrated experimentally by Romberg in 1895,[2] that excessive low tension such as is present in pneumonia and other acute infectious maladies is also a source of cardiac strain, my study being confined to acute lobar pneumonia. Although the resistance to be overcome at each ventricular systole is much below the normal, the increased rapidity of the heart-beat rendered necessary in order to maintain a capillary tension adequate to the needs of the body, and to secure a proper distribution of the blood in all the organs irrespective of gravity, more than offsets this advantage.

The records of other observers were confirmed in demonstrating the existence of this low-tension pulse by the use of the sphygmograph.

An interesting fact in this connection is the great tolerance by these patients of digitalis. In a number of cases on my service in the Harlem Hospital I demonstrated this, using the U. S. P. infusion, not the weaker one employed by Petresco, who has so strongly advocated the treatment of pneumonia by large doses of the drug. The connection between this tolerance and the low peripheral resistance was strongly indicated by the fact that the only patient who showed marked intolerance of the drug, as evidenced by irregularity of the pulse after its administration, was an old man with rigid arteries, *i.e.*, with one factor in peripheral resistance which dilatation of the arterioles could not overcome. My experience confirms Petresco's records of very slow heart action during convalescence after this treatment.

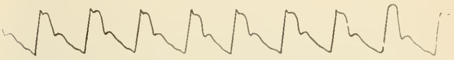


Fig. 17.

My records contain cases suggesting that excessively low arterial tension may be an important factor in chronic as well as in acute diseases. The tracings in cases of exophthalmic goitre are characterized by low tension. In one instance the administration of ergot and bromide of potassium, given with a view of bringing up the tension, was followed by the rapid improvement and recovery of the patient. One case proves nothing, of course, but it is suggestive.

A case of rapid heart with a low-tension tracing suggestive of both relaxed vessels and weak ventricle, in which there was no other indication of Graves' disease, was not much affected by ten-drop doses of tincture of strophanthus, but was markedly helped by twenty-five- and thirty-drop doses continued for a long period.

This experience recalls the corresponding tolerance of digitalis in pneumonia. Most authorities agree in stating that digitalis is of little use in Graves' disease, referring doubtless to the ordinarily used amounts of the drug. This case suggests the possibility that in Graves' disease, as in pneumonia, there may be a tolerance of the drug requiring a much larger dose to produce a given effect than is necessary in cases of average pulse tension.

A lady who had long been exposed to trying conditions in life, came to me complaining of prostration and flatulent dyspepsia. Her sphygmogram (No. 17) showed inelastic arteries and marked post-systolic low tension. After improving greatly under treatment she presented the following tracing (No. 18). The contrast makes it not at all improbable that abnormally low tension due to some passing auto-intoxication was embarrassing her heart and giving rise to the feeling of weakness complained of when she was first seen.

I had from time to time been much puzzled by complaints of faintness from patients, quickly following the administration of nitroglycerin. In these cases, what probably happened is that owing to an overdose, or to the more than usually rapid absorption of a dose generally tolerated, the arterial tension was carried so far below the middle point, at which the heart does its work with the least effort, that it became embarrassed in the way above indicated.

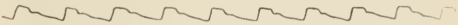


Fig. 18.

The conception of abnormal relaxation of the peripheral vessels as a factor in causing cardiac embarrassment has received but little attention.

These cases are offered to illustrate the importance of more definite study of this condition in the future, and of the value of the sphygmograph in demonstrating its existence.

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[1] "The State of the Vasomotors in Acute Lobar Pneumonia." New York Medical Journal, October 8, 1898.

[2] Berliner klin. Wochenschrift, Nos. 51 and 52, 1895.

The last series of sphygmograms which we will consider are those produced in cases of aortic-valve lesions. Leakage of the aortic valve gives rise to post-systolic low arterial tension, which will be greater or less according to its amount.

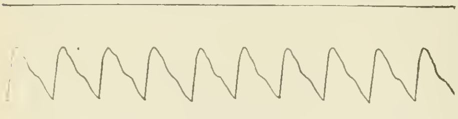
Fig. 19.

Tracing No. 19, taken from a boy aged eighteen years, with marked cardiac dilatation, shows a primary wave obtusely pointed, a dicrotic notch far down in the tracing, and slightly indicated dicrotic impulse. The last feature in a tracing, showing, as this does, an elastic artery, is indicative of considerable aortic leakage. In an elastic artery with competent aortic valves and as low a post-systolic tension as is indicated by the position of the aortic notch, the dicrotic wave would be much more pronounced than it is in this instance.

Tracing No. 20 shows a slightly high-tension sphygmogram of normal type. As the dicrotic impulse is fully developed, the murmur must have been due to a very inconsiderable leakage. Mitral regurgitation and great hypertrophy of the left ventricle were also present.

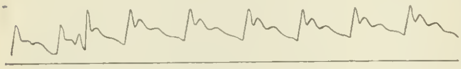
Fig. 20.

The next tracing (No. 21), taken with a spring pressure of three ounces from a subject with marked cardiac hypertrophy but no subjective symptoms, shows systolic high tension with rounded indications of primary and tidal waves and marked post-systolic low tension, with slight indication of the dicrotic impulse. This shows a well-compensated leakage of considerable extent in elastic arteries.

In the next (No. 22) the rounded summit of inelasticity appears, and the post-systolic low tension is obviously due to two factors, viz., rigidity of the great vessels and aortic-valve leakage. Three months later, this patient's pulse had increased from 80 to 126, and his compensation had markedly failed. His sphygmogram (No. 23) then presented two jagged water-hammer oscillations at the summit, which we have already learned to associate with falling tension in rigid arteries, and the dicrotic impulse became much more marked. This latter circumstance would seem to show that rigidity had a greater share than leakage in the suppression of this impulse in the earlier sphygmogram, as the effect of rigidity in suppressing dicrotism is in a measure offset by diminished tension, as may be seen by comparing tracings 17 and 18, in which inelasticity existed unaccompanied by leakage. The autopsy of this case, made some months later, showed a flabby dilated and hypertrophied heart, smooth, evenly contracted, and somewhat thickened aortic-valve leaflets, and a very atheromatous and dilated aorta.

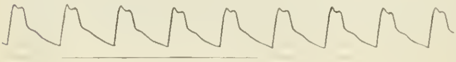
Fig. 21.

Tracing No. 24 shows a sharply pointed wave falling quickly to the base line without indication of either dicrotic notch or impulse. In a pulse of so extremely low tension we would hardly be justified in concluding that the water-hammer oscillation was due to inelasticity of the vessels, because even in elastic vessels such an oscillation may be produced when the tension drops excessively. The tracing falls away with great suddenness, showing no trace of tidal wave or dicrotic notch or impulse. A very short ventricular systole and great leakage of the aortic valves may be inferred. It was taken twelve hours before death from a man in whom an autopsy showed enormous left ventricular hypertrophy and dilatation associated with extensive fibroid changes in the heart muscle, dilatation of the aortic orifice with shrunken and thickened valve leaflets, and an aorta which was greatly dilated and atheromatous, the roots of the great vessels being also markedly affected.

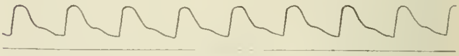
Fig. 22.

Broadbent presents in his book on the pulse a number of tracings of varying form representing aortic regurgitation, taken by different observers with different instruments, as proof of the unreliability of the sphygmograph. I have presented a still more widely varying set of tracings from patients with aortic regurgitation taken by the same observer with the same instrument. I hope that the above analysis has made it clear that these differences, instead of showing any fault on the part of the instrument, are in reality valuable and easily interpreted records of the varying conditions present in individual cases.

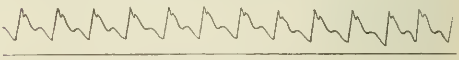
Fig. 23.

The next tracing (No. 25) was taken from a case of marked aortic obstruction, the characteristic feature of which is the very gradual line of ascent indicative of the slowness with which the blood was forced past the narrower aortic orifice into the vessels. The pulse in this case gave a misleading impression of extreme weakness owing to the gradual distention of the artery. The sphygmogram corrected this false impression and indicated the fact that the systolic murmur over the base to the right of the sternum was due to very considerable narrowing of the aortic orifice.

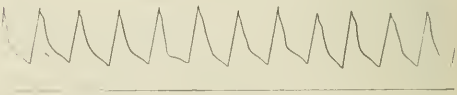
Fig. 24.

This tracing resembles in character No. 26, which was taken from the left radial of a case of aortic aneurism, No. 17 showing the right. In this case marked difference was detected only on an occasion when the aneurismal sac was temporarily distended by a paroxysm of coughing.

The utility of the sphygmograph in giving a record of the various irregularities of the pulse associated with myocardial disease, with or without mitral lesions and with certain toxæmias, may be mentioned, but exemplification would hardly be profitable in this place.

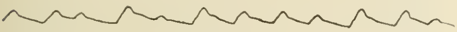
Fig. 25.

The individual pulse waves show nothing characteristic of these conditions, and in so far as they give evidence of deviations from the normal they are to be analyzed in accordance with principles already sufficiently illustrated.

A general objection to the utility of the sphygmograph has been the alleged uncertainty of its results: that different observers working with the same or different instruments fail to get analogous tracing in supposedly parallel cases, or even in the same case. Some of these objections, such as that of Broadbent above quoted, are certainly not valid, as the observed differences are based upon corresponding variations in the factors which influence the tension of the arteries in the successive periods of the cardiac cycle in the individual case, as I have illustrated in a number of instances. It is nevertheless true that faulty application of the instrument may give unsatisfactory or misleading results. In small arteries of high tension failure in the use of sufficient pressure on the spring results in getting a tracing of too small an amplitude for analysis.

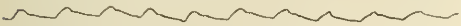
Fig. 26.

In many cases of medium-sized vessels and tension, however, variations in spring pressure often produce surprisingly uniform tracings differing only in amplitude. Every degree of tension in the artery requires a certain degree of pressure on the spring for its fullest development in the tracing. Too feeble a spring pressure fails to develop fully the strong portions of the tracing and gives undue prominence to the weak. Too strong a pressure tends to suppress more or less completely the weaker parts of the tracing and give undue prominence to the strong.

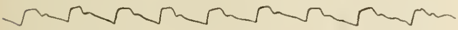
Fig. 27.

In tracing No. 28, taken from a case of pneumonia with a pressure of two and one-half ounces, the systolic portion is strongly marked, the dicrotic wave is almost suppressed.

Tracing No. 29, taken from the same case, with a pressure of one and one-half ounces, shows a less marked systolic wave and a very well-marked dicrotic impulse. In this case, if the rule had been followed to accept the tracing taken when the spring was at that degree of pressure which gave the largest excursion of the recording needle as the nearest representation of the truth, it would have been an obvious error. The only method of getting with any degree of certainty a tracing with that medium pressure on the spring which does not sacrifice the strong to the weak portions, or *vice versa*, is to take a series of tracings, each not necessarily occupying more than a third or fourth of a slip of the usual length, with a gradually increasing pressure on the spring. As with each increase of pressure on the spring there must be a corresponding increase of the tightness of the band which fastens the instrument to the wrist, the addition of two small tourniquets on this band, one on either side of the sphygmograph, is of very great importance in securing accurate results, as by their use the band may be tightened or loosened without lateral displacement of the instrument. The effect of too great pressure on the spring in another type of tracing is illustrated in Figs. 30 and 31. The first (No. 30) was taken at a pressure of three ounces. The second (No. 31), at a pressure of four ounces, shows the suppression of the first portion of the tracing and a diminution of amplitude in the tracing as a whole.

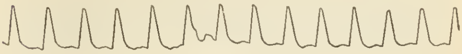
Fig. 28.

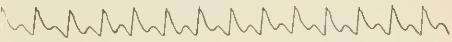
Fig. 29.

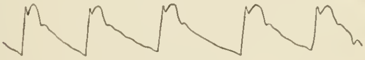
Fig. 30.

I have so often proved that this peculiar nicking out of the first portion of the tracing is an artefact that I am sure that any sphygmogram presenting such a peculiarity may be rejected as imperfect. It will be observed that the water-hammer oscillation is included in the suppressed part of the tracing. The spring had become too stiff, relatively to the force of the pulse, to yield to the blow.

On the other hand, in taking a series of tracings at gradually increasing pressure the water-hammer oscillation may be absent in the tracings taken with a small amount of pressure upon the spring, and appear as the pressure increases. The tracings in which it appears under these circumstances will usually be found to be of greater amplitude than those taken at a lower spring

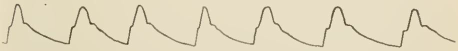
Fig. 31.

tension, and these pulses are usually of considerable tension in inelastic arteries. The explanation of its absence in these lower spring tension tracings is that the spring had not yet been pressed down upon the artery enough to get the full force of the blow.

In tracing No. 32, at a pressure of three ounces no water-hammer oscillation is evident. In tracing No. 33, at a pressure of four and one-half ounces, it is obvious.

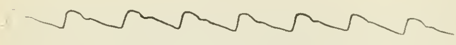

Fig. 32.

Failure to apply the middle of the pad of the instrument exactly over the artery results sometimes, especially in large vessels of low tension, in obvious distortion of the tracing. The variety which I have been able distinctly to recognize resembles that produced by too great tension of the spring. Apparently the instrument is tilted to one side as the artery rises, and the vessel impinges on the rigid projection at the side of the spring. As a consequence, the tracing is partially suppressed.

Finally, it must be confessed that we find occasionally arteries that are so small or so deeply placed that no satisfactory tracings can be obtained. Also, when the ventricular action becomes very feeble the variations in the tension of the artery may be too weak to overcome the inertia of the instrument sufficiently to give a tracing of any value. In spite, however, of these confessed limitations and sources of error a review of a considerable number of tracings taken by me during the last fifteen years shows so constant a recurrence of certain types whose readings harmonize with the clinical history of the cases and with the post-mortem findings, when it has been possible to obtain autopsies, that I have come to regard the sphygmograph as of very considerable practical value in diagnosis, and its sources of fallacy no greater than in many other methods of investigation which we would not think of discarding.

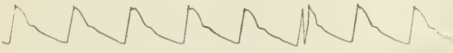

Fig. 33.

106 West One Hundred and Twenty-second Street.

THE PHYSICIAN AS A FACTOR IN EDUCATION.

By FRANK OVERTON, A.M., M.D.,
PATCHOGUE, N. Y.

Dr. Holmes, in his "Autocrat" papers, says that each individual is a trinity of three distinct personages: First, he is what he thinks himself to be; second, he is what others think him to be; and third, he is what he really is. What medical science actually accomplishes is in marked contrast with the notions which are often held even by educated people. This paper deals with the second person of the doctor's trinity, or with the opinion which the public have of medical matters. It indicates a few of the many points in which they might be educated by the medical profession with benefit both to the community and to the profession itself.

A little of a man's knowledge comes from reading and study; but by far the greater number of his ideas are received from conversation with his parents or associates. In other words, the most of each individual's knowledge is as purely traditional as it was in Homer's day. Fifty years ago the science of medicine was crude in its simplicity, and could easily be acquired through a short apprenticeship in a doctor's shop. As in other sciences, what were then professional secrets have now become common knowledge. But many theories which have long since been discredited by the profession still linger in the popular mind, and are perpetuated by tradition, as parents tell them to their children, and ignorant nurses to their patients. Within a generation medicine has advanced so rapidly that even an educated layman can scarcely follow a modern interpretation of a simple disease. The laity, however, are familiar only with the medicine of a generation ago, and they are ready to act on their erroneous ideas.

In the treatment of every patient the physician will be plied with questions which indicate the survival of ancient ideas of physiology and pathology. Has he taken cold? Will it lead to fits? Would a plaster draw out the pain? Can't you give something for his blood? Will it do to heal up the sore? Would it not be better to wait for the abscess to open itself? These familiar questions are relics of ancient medical thought, which survive only by tradition. The physician in his hurry or annoyance assents to every question, and thus unwittingly lends his sanction to erroneous and often untruthful impressions. While these antiquated ideas may not directly affect the patient's recovery, they put a conscientious physician in a dilemma. If, for instance, he says that a patient suffering with boils does not have bad blood, he loses his reputation as a diagnostician; and if he professes to give a blood medicine, he loses his own self-respect. As long as a recent graduate thinks only of the needs of his patient, his practice is chiefly in personal economy; but when the struggle for existence compels him to look chiefly after their preferences, he gains a profitable reputation for experience in purifying the blood, opening the pores, drawing out pain, and bringing abscesses to a head. This is business, but it does not seem quite professional that we need to deceive the community by our words, even though our diagnoses and prescriptions are scientifically correct.

Along with treatment, patients usually ask concerning the nature of their diseases, and the reasons for treatment. It is to our advantage to give them this information, and especially so since it is expected. There need be no fear that in a few moments any one can wrest from us secrets whose acquisition cost us months of close application. Even though some should gain a few practical ideas, sickness will not cease, for human nature is ever the same, and the doctor himself sometimes transgresses the laws of health.

The meaningless diagnosis that the "system is run down," and that a "tonic" will permanently restore it, is usually satisfactory to the patient, and profitable to the physician. This belief seems harmless, but it is really only another phase of the fable of the fountain of eternal youth. The public have outgrown these nursery tales, and can now bear the strong meat of science. Let us teach the great principle of self-poisoning from the retention of waste products; show their origin in errors of diet, ventilation, and exercise; tell of their expulsion ordinarily through the skin, kidneys, liver, and bowels, and in an emergency through the stomach also; give the action of drugs on these organs; and explain nature's remedial measures of refusing food or of rejecting that which is already feeding the poisons. Let us make plain the nature of each infectious disease, and the manner of its transmission; and impress the infectious origin of all "matter" and abscesses, and the necessity of surgical measures in their treatment. It is time that these and similar truths should enter into popular thought.

How shall we instruct our "nervous" patients? The more they know the more fearful they become, until it would seem as though any instruction at all would be unpractical. This class of patients are usually intelligent, and talk much about their ailments and the doctor's opinions. Many erroneous impressions are fixed by the innocent deceptions which the physician is almost compelled to practise in order to pacify them. For instance, the popular confidence in "something to quiet the nerves" is perpetuated in this way. These patients are impressed by the personality of a healer rather than by any intrinsic value in his therapeutic measures. Hence they are the willing followers of Christian scientists. faith curists, advertisers of nostrums, and of any one else who has the self-assurance to claim unusual powers. Of course a few are completely relieved, and their positive testimonials outweigh the negative opinions of the hundreds who are duped. If only for our own interest, we should explain the scientific principles by which these cures are effected, and that, under other names, they are being applied constantly with but a small percentage of failures.

Abstract physiology is taught in all public schools, but applied physiology and the physiology of sickness is learned only from the doctor. No matter what the schoolbooks may teach, the doctor's opinions are believed and acted upon. The proper administration of a prescription presupposes a certain amount of knowledge on the part of the attendant. Unless the medical education of the people is up to the times, we will be handicapped in our treatment. Both self-interest and the public good demand that we should promote the medical education of the people.

AN OPERATION FOR THE RELIEF OF AN INCARCERATED IRIS.

By GEORGE HUSTON BELL, M.D.,
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Realizing the number of failures and the bad results that very frequently accompany the operations which are done for the relief of the incarcerated iris, I desire to bring to the notice of the ophthalmic surgeon an operation which, so far, I have never seen fail. It is not recommended, nor can it be employed, in recent injuries which are seen in the first forty-eight hours. It can be used only in what one might call "an old case of incarceration" which has had for its duration four to six days, or longer, and in which the original wound in the cornea has completely healed, leaving the iris jammed between its internal lips. When the nutrition of the cornea has been re-established, it is then that this operation is indicated, and not before. In this class of cases I submit this operation for consideration and approval. As to whether or not a surgeon wishes to operate, after the lapse of several days or more, upon an eye of this kind, must be decided by himself, based solely upon his clinical experience, as there is no hard-and-fast rule laid down by the textbooks on ophthalmology, although Fuchs claims that an incarceration may afterward give rise to increase of tension, to inflammation, and even to sympathetic disease of the other eye. Such deplorable symptoms are not rare, and several times came under my immediate observation while a house surgeon at the New York Eye and Ear Infirmary.

As to the operation, it can generally be done much more satisfactorily, as a rule, under local anæsthesia, although ether is preferred for children under ten years of age. The great principle involved in this operation is the cutting loose of the iris from its attachment to the posterior surface of the cornea, with one sweep of the Von Graefe cataract knife. The technique of the operation is as follows: After the eye has been made as aseptic as possible, either with solution of boric acid or 1 : 5,000 mercuric chloride, the curved linear incision is made with the Graefe knife after the manner employed in doing anterior sclerotomies. Not always cutting upward, not always cutting downward, but sometimes to one side, sometimes to the other, as the case may be, the surgeon using his best judgment, depending entirely upon the situation and the extent of the incarceration, the Graefe knife is entered one-half to one millimetre outside the margin of the cornea, and the blade of the knife is passed into the anterior chamber between the incarceration and the centre of the pupil. The counter-puncture is made the same distance behind the limbus if possible; then the operator cuts from within outward, through the incarceration, on out through the sclera and conjunctiva. It is not necessary for the counter-puncture to be directly opposite the point of entrance of the knife as it is in anterior sclerotomies or cataract extractions. The great object is to make as small a section as possible, and after one gets the point of the knife by the incarceration, one makes the counter-puncture at once, thereby reducing the size of the section to the minimum, for obvious reasons, having always in mind the conjunctival flap. Now the operator turns this flap over the cornea, so that the wound may be exposed to view; then the iris forceps is introduced into the anterior chamber and the iris is caught, drawn out, and excised with the scissors. The columns of the coloboma are then replaced by means of irrigation with a sterilized decinormal salt solution through a bulb syringe, which little device is generally very effective and without any bad results to the lens. Of course, when necessary we resort to the spatula to help us out of the difficulty of freeing the pillars of the coloboma. Too much stress cannot be laid upon this point. The flap of the conjunctiva is then returned to position and the wound is sealed by stroking it with the spatula; one drop of a sixteen-grain solution of atropine is instilled, and both eyes are bandaged for twenty-four hours.

My reasons and plea for the conjunctival flap are as follows: (1) Fuchs claims that scleral wounds are less liable to become infected than those of the cornea, because of the slighter tendency that the sclera exhibits toward purulent inflammation, which is certainly worthy of consideration. (2) Another great advantage, which must not be overlooked, is that the wound heals a great deal faster, thereby causing a quicker restoration of the anterior chamber, which, after all, is the desideratum. (3) The astigmatism is not nearly so great.

This operation has been done successfully a number of times, Dr. Peter A. Callan having performed it frequently at the New York Eye and Ear Infirmary, and always with excellent results. Dr. N. D. McDowell, my successor as house surgeon, as well as myself, has had satisfactory experiences with such cases.

54 East Twenty-fifth Street

Buboes, when suppurating, may be opened painlessly by first injecting beneath the skin a three-per-cent. solution of beta-eucaine. After evacuation a five-per-cent. solution is poured into the wound, and after a few minutes curetting may be performed lightly without pain. One drachm of solution may be thus used with safety. To obviate the prick of the hypodermic needle in very sensitive subjects, first spray with ethyl chloride.—Dalton, *Therapist*, December 15, 1899.

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THE SIGNIFICANCE OF BOVINE TUBERCULOSIS.

IN order to determine this matter in an adequate manner Dr. George Adami, of Montreal, says that the following three main questions have to be asked and answered: (1) Is tuberculosis in cattle a source of danger to other cattle so as seriously to affect their well-being and to be a source of loss to their owners? (2) If infectious from animal to animal, is it infectious from animal to man, and thereby a grave source of danger to the human race? (3) If infectious from animal to man, what are the commonest modes of infection, and, as a sequel to this, how are we to diminish the danger?

The first question Dr. Adami answers with an unqualified affirmative, and gives a mass of statistics collected from different parts of the world in support of his contention. To the second and most important question, while accepting an affirmative as the correct answer, Dr. Adami points out that the amount of reliable evidence of direct transmission of tuberculosis from cattle to man is singularly slight. After drawing attention to the fact that experiments undertaken with the view of proving or disproving this theory have been attended with more or less negative results, Dr. Adami says we are forced, therefore, to fall back upon evidence of another type, and presents the case thus: "Do the bacilli gained from the human and bovine species possess a morphological and cultural identity? They do not. The bovine grow more freely in the ordinary glycerinated media; they are, I find, of greater relative breadth, while again pathogenetically they exhibit different degrees of virulence, and this when inoculated not only into cattle, but into guinea-pigs and the small animals of the laboratory. . . . So far, however, bacilli having all the morphological and cultural characteristics of the bovine 'race' have not been isolated from the human organism, nor do I know that, so far, by placing protected human bacilli in the abdominal cavity of the cow these have assumed the bovine characters. It is in this last experiment, I believe, that the solution of the question is to be found. For if we can show that under favorable conditions the human bacillus can become highly pathogenetic for cattle, the converse would also seem to hold, that there are conditions under which bovine tubercle bacilli can be pathogenetic for man." Dr. Adami concludes that failing experimental and bacteriological evidence of bovine and human tuberculosis, the casuistic evidence while not absolutely convincing is strongly in favor of the view that tuberculosis can be conveyed through the milk of animals extensively diseased.

With regard to the more frequent modes of infection Dr. Adami dismisses rapidly the infectiousness of meat, and goes on to say that with milk the problem presents several difficulties. With the finding of the British Royal commission, that only when the udder is diseased does the milk become infectious, he is not in agreement, being convinced that it is founded on imperfect knowledge, and states that he cannot but come to the somewhat unsatisfactory conclusion that whereas, in the first place, the milk of animals not suffering from udder tuberculosis may contain bacilli, nevertheless such milk is not of high infective power, and that therefore the frequency with which the bacteriologist may by inoculation into the very susceptible guinea-pig find the milk to be infectious is not absolute indication of its danger when employed as a food for man. Only when there is recognizable udder tuberculosis, and active tubercle bacilli are discharged into the milk in enormous numbers in consequence of ulcerative changes occurring in the tubercles, is there real danger. For practical purposes Dr. Adami agrees with Nocard that as regards the milk supply local tuberculosis of the udder is what has to be most especially guarded against, and this not because the evidence at our disposal affords absolute proof of the transmission of tuberculosis from cattle to man, but because the trend of evidence is all in that direction. On the whole, therefore, Dr. Adami is in accord with the chief authorities on bovine tuberculosis with regard to the means of transmitting the disease to man, that the danger from infection from meat is so slight as not to be worth considering; that the principal source of danger is from infected milk, and that only milk procured from cows with diseased udders is to be greatly feared. The question as to what measures should be taken to guarantee a milk supply free from infection has been so fully dealt with in former numbers of the MEDICAL RECORD that further discussion of these points would be superfluous.

It is, however, satisfactory to observe that at the meeting of the Medical Society of the County of New York the question of a pure milk supply was treated at length, and the president of the society was requested to appoint a special committee to consider the possibility of a commission to improve the milk supply of New York.

THE DANGERS OF WATER GAS.

THE substitution of water gas for lighting purposes in the place of coal gas, which has been carried out in many American cities, has been a fruitful cause of numerous fatal cases of asphyxiation. Coal gas is comparatively harmless, containing as it does but from three to twelve per cent. of carbon monoxide, more often the former quantity than the latter. On the other hand, water gas has in its composition seldom less than twenty-five per cent. of carbon monoxide, and not infrequently as much as thirty per cent. and over. Water gas has found favor with the municipalities of a number of American towns for the reasons that it gives a brighter illuminating-power than coal gas, and because it is better adapted for an emergency; that is to say, it can be manufactured more quickly. But although it has these substantial advantages on its side, it is notwithstanding a constant menace to the public health. The danger of carburetted water gas lies in the fact that it contains so large a quantity of carbon monoxide that its inhalation by human beings is always attended by serious consequences to life. Dr. Haldane, one of the British departmental committee appointed to inquire into the manufacture and use of water and other gases containing a large proportion of carbon monoxide, pointed out that in the case of Boston, where ninety per cent. of the gas is water gas, about one in every three hundred deaths is due to accidental poisoning, and the committee resolved that they would not allow in Great Britain more than twelve per cent. of carbonic monoxide in illuminating-gas.

However, no such permissive regulations are likely to be put into force in this country. The American is ever somewhat careless of risks, provided that his comfort and convenience are considered; so that the crux of the problem here is how to treat in the most successful manner those who are unfortunate enough to inhale a sufficient quantity of the gas to become dangerously asphyxiated. Working along these lines, experiments have recently been conducted under the direction of Dr. N. Wiley Thomas, at the physiological laboratory of the University of Pennsylvania, with the object of demonstrating the most effective methods of resuscitating animals poisoned or rather asphyxiated by inhalations of common illuminating-gas. The gas used in the experiments was the ordinary illuminating-gas of Philadelphia, which is composed of hydrogen 26.25; marsh gas, 28.91; carbon monoxide, 27.12; illuminants, 15.80; carbonic acid, trace; oxygen, trace; nitrogen, 1.92. Dr. Darrah's theory of the action of the gas—with which the writer on the subject in Allbutt's "System of Medicine" agrees—is that the asphyxia is due to the fact that the carbon monoxide in the gas forms a stable compound with the hæmoglobin, thus preventing the hæmoglobin from carrying oxygen to the tissues. Dr. Darrah goes on to say that the compound itself has only a slight irritating effect. When animals breathe pure oxygen and small amounts of carbon monoxide, the carbon monoxide is taken up by the hæmoglobin in preference to the oxygen, and forms a compound that cannot be displaced with oxygen. The condition produced in the animals after inhalations of the illuminating-gas resembled in most respects those of individuals asphyxiated by identical means, as dizziness, tottering, and inability to walk. Later in the condition there was low temperature, with rapid, feeble pulse. Respiration was increased in frequency and depth. The remedies first used to relieve this collapse were stimulants such as strychnine, brandy, glonoin, digitalis, followed by inhalations of pure oxygen, electricity, and artificial respiration, but with few favorable results if the condition had been profound. Nor did doses of hydrogen dioxide varying from 10 c.c. to 60 c.c. afford any but negative results. Hydrogen dioxide was next injected intravenously in both small and large doses. The former were without effect, and the latter caused oxidation of the blood with formation of gas in the blood-vessels, causing instant death. Injections of saline solutions did practically no good. Lastly, resort was had to transfusion of blood, the blood being drawn from the carotid artery of a healthy normal dog, and allowed to flow into the jugular vein of an animal under the influence of gas. Dr. Darrah reports that the effect of this method of procedure was magical recovery, occurring in most cases instantly; some few dogs showed symptoms for several hours, but eventually recovered. During the transfusion improvement was noticed in the heart action and in breathing with the first few ounces of blood injected.

From the foregoing experiments Dr. Darrah drew the following conclusions: 1. Small quantities of H_2O_2 have no effect. 2. Large quantities of H_2O_2 have an oxidizing action, with death from gas accumulating in the chambers of the heart. 3. Saline solutions are not of much use; some animals rallied but finally died. Life may be somewhat prolonged. 4. Transfusion abolishes almost immediately the poisonous effects of the gas, with no bad effects except in case of septic infection. It is interesting to note that the dogs from which blood was taken recovered in every instance.

Although the results of the experiments at Philadelphia appear to have been wholly successful, yet there are many medical authorities who prefer to put their trust in inhalations of pure oxygen. Dr. Hare holds that the direct transfusion of blood, even from the same species of animal, is futile, as the corpuscles are destroyed and a transient hæmoglobinuria follows. He stated that in some experiments made by himself and Dr. Martin they had found that inhalation of oxygen produced extraordinary results in dogs poisoned with coal gas. However, the fact should be borne in mind that the experiments undertaken by Dr. Darrah were upon animals which had inhaled much more carbon monoxide than would be contained in any description of coal gas.

Dr. Lorrain Smith reported in the London *Lancet*, in the early part of this year, several cases of gas poisoning which occurred in Belfast. He said that the cases brought out for the first time on record the extreme importance of the secondary effects of gas poisoning. One case on analysis showed the pink tint of carbon-monoxide hæmoglobin. On analysis by the carbon method the blood was found to be fifty-seven per cent. saturated. The blood of one child aged four years was very slightly tinted and not more than five per cent. saturated. Since the child was exposed to the same atmosphere as the adult, it is clear that her blood was at one time at least as highly saturated as fifty-seven per cent. The artificial respiration which was applied by the medical attendant sufficed to clear the carbon monoxide out of the blood. The child therefore died from what may be called secondary effects of gas poisoning on the heart and nervous system. In Allbutt's "System of Medicine" the following modes of treatment are laid down: "Immediate removal of the patient from the presence of the gas, and artificial respiration persisted in for hours in order to expel, if possible, the poison from the blood; Laborde's method of rhythmic traction of the tongue; hypodermic infections of strychnine, and the application of the faradic current to the phrenic nerve—but even with these measures venesection and transfusion of blood may also be necessary. Inhalation of oxygen in some cases is also recommended." Dr. Ransome advises Sylvester's method of artificial respiration.

Taking into consideration the peculiarly insidious narcotizing and fatal effects of carbon monoxide, and the presence of it in large quantities in the gas used in so many American towns, the importance to the public of discovering a really effective means of resuscitating individuals who have fallen under its influence is one that can hardly be overestimated. Experiments such as have been prosecuted at Philadelphia will go far to elucidate these moot points, and if it can be plainly shown that transfusion of blood is the best method to revitalize the almost extinct spark of life in cases of deep asphyxiation, a great boon will have been conferred on that portion of the human race who live in the big cities.

DIETARY STUDIES OF NEGROES.

Dr. Frissell and Miss Isabel Bevier have in connection with the United States Department of Agriculture contributed a series of dietary studies of negroes living in Eastern Virginia. The studies made in 1897 were conducted by Dr. Frissell, and the investigations on the same lines in 1898 by Miss Isabel Bevier. The mode of life and the quality and quantity of the food of the colored race in the United States is a subject that has received but little attention. Some statistics were collected a few years ago with regard to the food consumption of negroes residing near Tuskegee, Ala. These investigations showed that where negro families had profited by the opportunities for education provided at Tuskegee Institute, their methods of living had undergone a considerable change, approaching more closely to those of an ordinary American family. Other families who had not come under such influence might be regarded in the matter of diet as representative of the uneducated negro type.

The results of the studies in Virginia coincided in the main with those arrived at in Alabama. More protein was found in the dietaries of negro families in Virginia than the average amount consumed by white persons in fairly prosperous circumstances, nearly as large as that called for in the tentative American standard—namely, 125 gm. per man daily. This fact, however, is explained by the proximity of salt water to the district in which the investigations were conducted in Virginia, which made fish an important article of diet. The average fuel value of the food consumed per day by the negro families both in Alabama and Virginia is as large or larger than that found in dietary studies made among white families. The average fuel value found in nineteen studies in Virginia was 3,745 calories; that found in twenty studies in Alabama, 3,270; the average of ten white families in New England and New York, 3,515; while the tentative standard for a man at moderate work calls for 3,500 calories per day. Perhaps the most noteworthy feature revealed in connection with these studies was the small cost of the food. For eleven cents the families in Virginia obtained food materials furnishing more protein and more energy than were obtained for twenty-eight cents by the families of professional men in comfortable circumstances, and for nineteen cents by families of well-paid mechanics. It would appear from a consideration of the dietary studies made in Alabama and Virginia among negro families that the character of the food consumed by them is coarser and less appetizing than would be tolerated by an ordinary white family. "Hog and hominy" forms the staple of their diet. Scarcely any meat besides pork is eaten, but where obtainable fish is a favorite article of food, while at certain seasons frogs, turtles, and even snakes are eaten by some families. The cooking of the negroes is primitive to a degree, and their drinking-water is, as a rule, stagnant and brackish, often muddy. The fact, however, stands out prominently that notwithstanding the agricultural negro's careless, unhygienic methods of living, he is able to do hard manual labor and enjoys almost if not quite as good health as his white brother placed in like circumstances.

TYPHOID FEVER IN PHILADELPHIA.

While the authorities are deliberating upon the best means of providing a pure supply of water, the people of Philadelphia are again threatened with an epidemic of typhoid fever. The drinking-water in that city has for some time past been filthy and most unattractive for either bathing or drinking, but a short time ago a number of boys in a mischievous spirit interfered with an intercepting sewer, as a result of which sewage was made to overflow into the Schuylkill at a point not remote from a pumping-station. The statistics tell the rest of the story more eloquently than could any description. For the week ending January 20th there were reported to the Philadelphia bureau of health thirty-five cases of typhoid and eight deaths; for the week ending January 27th, forty-four cases and nine deaths; for that ending February 3d, thirty-nine cases and six deaths; for that ending February 10th, fifty-six cases and six deaths; and for that ending February 17th, seventy-six cases and fourteen deaths. For this last week there are also tabulated thirteen deaths from "inflammation of the stomach and bowels." The whole number of deaths for the city during the week was five hundred and three—thirty-four more than for the corresponding week of last year. As already indicated, the city of Philadelphia has under consideration the report of a commission of experts on water purification, which it has adopted, and for putting into execution the recommendations of which it has voted the making of a loan of many millions of dollars; but with conventions to look after, vacant senatorships to fill, patronage to solicit and dispense, franchises to give away, ballot-boxes to stuff, election returns to falsify, and other congenial occupations, office-holders and politicians may see no need of haste in providing a better water supply—and the people will get what they deserve from those they selected to act as their representatives.

News of the Week.

A New Anti-Tuberculosis Serum.—The *Sei-i-Kwai Medical Journal* announces a discovery which will doubtless have most important consequences if the author's hopes are realized, in the following terms: "Fleet-Surgeon T. Yabe, of the imperial Japanese navy, who is now studying bacteriology in the Pasteur's Institute, Paris, discovered some method to make human subjects immunity from the tubercular disease with some material which he calls tuberculo-immunitine. We heartily congratulate his success for such great and difficult subject which was considered almost impossible to achieve at among the imminent authorities in Europe and America."

A Suit for the Value of Epidermis.—A young woman recently sued a physician of North Adams, Mass., for damages for having taken more skin from her body for grafting purposes than she claims to have authorized him to take. She had consented to furnish the material for skin-grafting in a case in which that operation was necessary, but after the operation was concluded she claimed that the surgeon had denuded her too much. The judge, however, decided that there had been no specification as to the amount the plaintiff was willing to give, and consequently the defendant was at liberty to take all he needed. The case has been appealed to a higher court.

Heat in South America.—On February 5th, there were two hundred and sixty-seven cases of sunstroke in Buenos Ayres, and one hundred and eighty-seven on the following day, making a total of seven hundred and seventy-five cases in four consecutive days. The number of fatal cases was large. In Montevideo there were also many cases of insolation. The distress in Argentina was increased by a strike of the grave diggers for higher pay, and numbers of dead bodies were left to decompose in the cemeteries above ground. The intense heat destroyed the corn crop.

Contesting Chiropodists.—A suit has been brought by the president of the Academy of Chiropody against members of the Pedic Society for alleged discrimination against him by the society. It is alleged that the two members of the society, who are also the State examiners in chiropody, conduct a school, and favor their own pupils in the examination to the detriment of the academy, the pupils of which are thus not on an equal footing with the other students, and the president of which has no standing in the Pedic Society.

Lepers in New York.—A physician in this city having asserted that there are a hundred lepers, more or less, at large in New York, the president of the board of health is said to have called upon him for his proofs. There are unquestionably lepers in this city under medical treatment, but we doubt whether there are one hundred.

A New Fasting Man is undergoing a self-imposed forty-days' abstinence from food in Mount Vernon, N. Y. He has already passed about thirty-five days without food, as alleged, and is confident of completing his fast without injury.

Possible Closure of a Hospital.—The managers of the Flushing Hospital are said to contemplate closing its doors, because under the present rate of payment made to hospitals for public patients by the city the institution finds itself running heavily in debt. The city allows eighty cents a day for surgical cases and sixty cents for medical cases, and during January the income from this source was only about $200, while the expense of maintaining the hospital was nearly $1,000.

The Famine in India.—A despatch to the *Sun* from Bombay, dated February 7th, says that the famine in India is rapidly becoming worse, and threatens to eclipse the last disaster of this nature, and to outrun the government's resources. Already four million persons are receiving relief, and a steady increase in this number is to be expected. Deaths from starvation are becoming frequent, especially in Rajputana. The advent of famine refugees to Bombay city aggravates a situation that is already serious owing to the prevalence of the plague, smallpox, and other epidemic diseases.

A Board of Health for Havana.—Before leaving Cuba last week, General Ludlow organized the Havana board of health by the appointment of Drs. Emiliano Nuñez, Charles Finlay, Benito Valdez, Carlos Desvernin, Joaquin Jacobsen, and Manuel Delfin. The chief surgeon of the United States troops and the chief sanitary officer of the department will be ex-officio members so long as the military department exists. The mayor of the city will be ex-officio president of the health board. The board will have responsible executive functions, exercised under the provisions of suitable rules and regulations drafted in accordance with modern science and practice. The functions of the board will be exercised subject to the orders of the military governor. Major John G. Davies, the chief sanitary officer of the department, applied for transfer to the Philippines, and has already been ordered to report at New York.

The Louisiana Leper Home.—The board of control of the leper home of Louisiana will at an early date select a site and erect a permanent home for the lepers of the State. The present home is situated at a point rather inconvenient for caring for patients to the best advantage, and it is the intention to select a site for the new buildings nearer New Orleans where every convenience can be obtained, and where scientific observations can be carried on. The funds for the erection of the buildings were appropriated by the State legislature. There are at present thirty-three inmates of the home.

Trouble in the Harlem Hospital.—The commissioner of public charities has suspended two of the physicians of this hospital and reprimanded the female superintendent with threat of dismissal, on account of a quarrel which has been agitating the officials of the institution for some time past.

Smallpox at Bellevue.—An orderly in the erysipelas ward at Bellevue Hospital was recently found to be suffering from smallpox. He was transferred to North Brother Island, and all those with whom he had come in contact were revaccinated. It has not been discovered how he acquired the disease.

State Hospitals Independent of the City.—The New York City authorities have claimed that, under the charter of the city, they have the right to inspect the buildings, boilers, etc., of the Manhattan and the Long Island State hospitals, but this claim has been resisted by the officials of these hospitals. The dispute was referred to Attorney-General Davies at Albany, and he has decided that the city has no jurisdiction.

The Barren Island Nuisance.—The State board of health in its last annual report claims that the garbage-rendering establishment on Barren Island is less of a nuisance than those living in the neighborhood hold it to be. It asserts that "while under certain atmospheric conditions the odors from this plant can be detected at the places from which these complaints are sent, it is so modified by the appliances before mentioned that it is scarcely noticeable, and is not in any way injurious or detrimental to health or comfort."

Yellow Fever has reappeared in Havana at an earlier period than usual, the city being ordinarily comparatively free from the disease until well into the spring. On February 14th there were eight cases under treatment. The presence of the disease is attributed to the exceptionally warm weather and to the presence of so many unacclimated Spaniards and Americans.

Capital Punishment in New Jersey.—Two bills have recently been introduced into the New Jersey legislature dealing with capital punishment. The first provides that in murder trials if a jury return a verdict of murder in the first degree, accompanying the finding with the phrase "without capital punishment," the defendant's punishment shall be imprisonment for life. The second substitutes the electric chair for the gallows in the execution of the death sentence.

The Stickler Memorial Library.—The plans have been accepted for the library building at Orange, N. J., which the parents of the late Dr. J. W. Stickler are to erect in memory of their son. The medical library of the deceased physician is to be placed in a room in the new library building for the use of medical students, and his entire laboratory apparatus has been given by his widow to the Orange Memorial Hospital. Mr. and Mrs. Stickler have also given $40,000 to the Orange Young Men's Christian Association for the erection of a new building, to be known as Stickler Hall, and which will also be a memorial to Dr. Stickler, who was the first president of the association.

Dr. Jameson, who led the Transvaal raid a few years ago, for which he was imprisoned in England, is in Ladysmith, and is reported to be ill of a fever, the nature of which is not stated.

The Hospital Ship "Missouri" arrived in San Francisco from Manila on February 16th, with two hundred and sixty-nine wounded and invalided soldiers from the Philippines. Eighteen died during the voyage.

The Inoculation of Malaria by the Mosquito.—In the article with this title by Dr. Irving Phillips Lyon, which appeared in the MEDICAL RECORD for February 17th, the name of the tick which carries the germ of Texas fever should have been Boöphilus bovis, instead of Pyrosoma bigeminum, which is the name of the organism that the tick carries.

The Sale of Drugs in Department Stores.—A bill to prohibit the sale of drugs in department stores in this city has been advanced to the third reading in the State assembly. It was opposed on the ground that it was too radical, as under its provisions a department store could not even sell cough drops, and the constitutionality of the measure was also called in question. The bill was advanced to the third reading, however, by a vote of sixty-five to forty.

The Influenza still afflicts Europe, and the cable brings the names of many prominent personages among the hundreds of thousands who are suffering from it. In Paris President Loubet and Sarah Bernhardt, and in Berlin Ambassador White, the Empress Augusta Victoria and two of her sons, and the burgomaster have been among those attacked. General Krautwurst, a surgeon in the German army, has died of the disease. In this city the number of cases diagnosed as influenza and of respiratory affections which may be attributed in part to this disease has been steadily increasing during the past two weeks, and doubtless will increase still more during the weeks yet to come.

Hospital Corps for South Africa.—Between fifty and sixty men constituting the "Irish-American Hospital Corps" recently sailed from this port for Havre on the way to Pretoria, where they will offer their services to the Boers. They were not recognized by the Red Cross Society until each man had taken an oath that he was over twenty-one years old, that no women were dependent upon him for their support, that he was working for no compensation, and that he was going within the Boer lines not as an ally, but merely to give aid and comfort to the injured and sick. There are six surgeons, six assistants, nurses, litter carriers, and other attendants. The surgeons are Drs. J. R. McNamara, Herbert McAuley, James J. Slattery, R. L. Long, A. F. Corney, and J. B. Aderholt. They have six assistants. The litter carriers and other attachés are under the command of Capt. Patrick O'Connor. The men will wear a khaki uniform with the red cross on the sleeves and on the hat. Their outfit consists of medical supplies, surgical implements, surgical dressings, tents, and emergency kits for field work. A movement has been started by English-born Americans to organize a similar hospital corps to care for the British sick and wounded in South Africa. It is reported from Lorenzo Marques that the Portuguese authorities have seized two large cases of saddles forming part of the baggage of the Russo-Dutch Red Cross contingent that arrived at that port a short time ago, the claim being made that saddles are contraband of war.

The Gallaudet Home for Deaf-Mutes, near New Hamburg, N. Y., was totally destroyed by fire on last Sunday night. The twenty-six inmates, some of whom are blind and others very feeble, who were all in bed, were safely carried out of the building.

The Plague.—Up to February 17th there have been forty-two cases of plague, with thirty-two deaths, in Manila, about twenty of these being among Chinamen. A hundred inspectors, thirty of whom are Chinamen, are employed in enforcing the sanitary regulations and ferreting out the cases of the disease, which are often concealed by the friends of the sufferers.—In Honolulu four new cases of the plague were reported subsequent to the destruction of the Oriental quarter of the city, but advices dated February 9th say that no new cases had developed during the past four days, and the health officials had granted permission for churches, schools, and places of amusement to reopen. War has been declared on rodents, a bounty having been offered for rats dead or alive, and every householder having been supplied with poison for use on his premises.—A despatch from Rio de Janeiro states that the Brazilian government announces that Argentine and Portuguese ports are free from the plague.—The St. Petersburg Institute of Experimental Medicine has established a laboratory for the study of plague and for the manufacture of plague serum at Cronstadt. The laboratory is surrounded on all sides by water. There are stalls for twelve horses, and apartments for the medical officers and their assistants, with a lazaretto in case infection occurs among any of the staff.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending February 17, 1900. Medical Inspector H. H. Simons commissioned medical inspector from September 24, 1899. Medical Inspector H. Wells commissioned medical inspector from January 15, 1900. Medical Inspector M. H. Simons detached from the naval recruiting rendezvous, New Orleans, La., and ordered to the *Philadelphia* as fleet surgeon. Medical Inspector T. H. Streets detached from the *Philadelphia* as fleet surgeon on reporting of relief, and ordered to the New York navy yard. Passed Assistant Surgeon J. C. Rosenbleuth ordered to the naval recruiting station, New Orleans, La. Surgeon H. M. T. Harris commissioned surgeon from October 21, 1899. Assistant Surgeon Karl Ohensorg appointed from January 27, 1900. Passed Assistant Surgeon G. L. Barber ordered to the *Kearsarge* February 20, 1900. Assistant Surgeon D. G. Beebe detached from the *Petrel* and ordered to Port Isabella.

Alleged Cancer Cures.—California is prolific in newspaper cures for tuberculosis, alcoholism, cancer, and other ills. The latest is a telegraphic report of the cure of a cancer of the face of twenty-five years' standing by means of *x*-rays. A "cancer" of that age might be regarded as obstinate, but could hardly be denominated malignant. The reporter of the case cautiously remarks that it is uncertain what effect the Roentgen rays may have on carcinoma of the internal organs.

Mr. William Adams, a well-known English orthopedic surgeon, has recently died. He was consulting surgeon to the National Hospital for the Paralyzed and Epileptic. He was known especially for his work in operations for the relief of ankylosis of the hip.

The Late Dr. William A. Hammond.—The New York Neurological Society desires to record its regret at the death of Dr. William A. Hammond, one of the founders of this society and for many years one of its most active and distinguished members. Dr. Hammond was one of the pioneers of neurology in this country. His work was always suggestive and most lucidly presented, and it was often original and of permanent value. It has indissolubly linked his name with the history and growth of neurological science. It was before this society that many of his papers were presented. We record our appreciation of his work as well as of his brilliant mental gifts. These were most helpful to this society in its beginnings, and led to enduring results in the advancement of clinical neurology and psychiatry and the development of neurology in America.—CHARLES L. DANA, LANDON CARTER GRAY, GEORGE W. JACOBY.

Obituary Notes.—DR. WOOLSEY HOPKINS, of this city, died on February 15th from pneumonia, at the age of thirty-two years. He was born in Alexandria, Va., and was graduated from the College of Physicians and Surgeons, New York, in the class of 1890. He was assistant surgeon to the Manhattan Eye and Ear Hospital, and was a member of the American Laryngological, Rhinological, and Otological Society. A widow and two children survive him.

DR. GUSTAVE MOZART STOECKEL, of this city, died at his country home in Norfolk, Conn., on February 15th, at the age of fifty-one years. He was a graduate of the College of Physicians and Surgeons in the class of 1874.

DR. WILLIAM H. HASTINGS died at his home in Boston on February 16th, at the age of sixty years. He was a graduate of the Harvard Medical School in the class of 1868. In 1869 he became district physician of the Boston Dispensary, and was appointed superintendent in 1876, which place he occupied continuously from then up to the date of his death.

Dr. De Witt C. Green, of Florence, Ala., died in consequence of a fall from the roof of his house on February 14th. He was a graduate of the Jefferson Medical College in 1882.

Dr. John D. Hillis died in West Haven, Conn., on February 15th, at the age of forty-five years. He was born in Poughkeepsie, N. Y., and was graduated in medicine from a school in Cincinnati. He practised for a time there and later in Chicago, but afterward engaged in mercantile pursuits. A widow survives him.

Dr. Horace R. Allen, of Chicago, died in consequence of a surgical operation at the Presbyterian Hospital in that city on February 13th. He was a graduate of the medical department of the Western Reserve University in the class of 1857.

Dr. Edward Lorenzo Holmes, of Chicago, died on February 12th, of pneumonia, at the age of seventy-two years. He was born in Dedham, Mass., and was graduated from the Harvard Medical School in the class of 1854. He settled in Chicago soon after graduation, and there devoted himself chiefly to the study of disease of the eye and ear. He was for many years professor of ophthalmology and otology in the Rush Medical College, and was one of the founders of the Illinois Charitable Eye and Ear Infirmary. He was a member of the American Ophthalmological Society and of the American Otological Society, and was a frequent contributor to the literature of diseases of the eye and ear.

Dr. Samuel R. Forman died at his home in Jersey City, on February 19th, of Bright's disease, at the age of sixty-four years. He was a graduate of the College of Physicians and Surgeons, New York, in the class of 1857.

Dr. R. A. Kennedy died at Shamokin, Pa., on February 9th, in an apoplectic attack, at the age of forty-four years. He was a graduate of Bucknell and of the medical department of the University of Pennsylvania.

Dr. Gerald J. M. McMurray died at Philadelphia on February 10th, of meningitis, at the age of thirty years. He was graduated from Jefferson Medical College in 1894.

Dr. Charles B. Kennedy died of heart failure at Hollidaysburg, Pa. He was a graduate of Bellevue Hospital Medical College.

Dr. William W. Lamb died at Philadelphia on February 15th, at the age of fifty-nine years. He was a graduate of the Long Island Medical College. He was an assistant surgeon in the Eighth New Jersey volunteer regiment during the Civil War, from 1872 to 1885 an inspector of drugs, from 1872 to 1890, surgeon to the Third Regiment Pennsylvania National Guard, from 1890 to 1892 assistant surgeon to Battery A, and from 1871 a police surgeon. He was further surgeon to the Methodist Home for the Aged and to the Methodist Orphanage.

Meddlesome Probing is condemned in military surgery by Dr. Senn in his "War Correspondence," the old-fashioned probe having been entirely superseded by dissection and the use of the *x*-rays.

Progress of Medical Science.

Medical News, February 17, 1900.

Report of Bacteriological Investigations upon Yellow Fever.—Aristides Agramonte gives the results of experiments in which he injected serum taken from convalescents from uncomplicated yellow fever. The serum is perfectly innocuous; it is more readily absorbed than the equine serum. It has never produced any cutaneous manifestation, and within twenty-four hours every sign of the injection has disappeared except at the point of puncture, where a minute red spot may be visible. No case is injected which is seen after the fourth day of the invasion. The disease has been distinctly modified in every instance. In these experimental injections two facts have been emphasized: (1) the absence of hemorrhagic tendency; (2) the rapidity with which patients who received the serum went through the period of convalescence; the fever having once left them, their reparative functions were quickly started, and they were ready to return to business in an unusually short period of time.

An Improved Operation for Acute Appendicitis or for Quiescent Cases with Complications.—Robert F. Weir in this method increases the intermuscular space of McBurney. He tears off with the finger-tips, or with the end of blunt scissors, the already denuded fascia of the external oblique muscle from the sheath of the rectus quite up to the median line, where it is held retracted by an assistant. The anterior sheath of the rectus is now divided transversely in a line continuous with the opening made in the peritoneum by the original muscle-separation operation. The outer edge of the external rectus is then lifted up and carried by a retractor to the median line. The epigastric vessels should be divided and ligatured. The posterior sheath of the rectus and the peritoneum should be cut in a manner similar to the outer sheath. When blunt retractors are now passed into the peritoneal cavity and the abdominal wall is put on the stretch, there is a very superior exposure of the whole pelvis and of the right iliac fossa.

Two Cases of Rupture of the Right Lobe of the Liver; Laparotomy, Recovery.—H. Beeckman Delatour says that the question of when to operate in these cases is the all-important one and must be decided for each case individually. In the first of these two cases, had operation been at once resorted to, probably a fatal issue would have resulted, while in the second case unavoidable delay nearly cost the patient's life.

A Consideration of Acute Inflammatory Rheumatism.—W. H. Neilson believes that inflammatory rheumatism is an infectious disease; that its natural history points to this, its complications point to it, and the treatment found so effective proclaims it. He approves of the use of salicylic acid and its compounds.

The Bubonic Plague.—Edwin Klebs declares that the bacillus pestis bubonicæ is undoubtedly the cause of bubonic plague. The first step in combating the spread of the plague must be by general hygienic measures. The demonstrated cases should be at once isolated in a plague hospital.

A Case of Post-Epileptic Amnesia.—David Trumbull Marshall reports this case, in which the amnesic period was ten days. There was great difficulty in obtaining a history of epilepsy, since the family did not wish the matrimonial prospects of the patient blighted.

Journal of the American Medical Ass'n, Feb. 17, 1900.

The Hockey-Stick Incision.—Willy Meyer describes this incision, useful in certain complicated cases of appendicitis. He says that its chief advantage is that it enables the operator to respect the fibres of the external oblique muscle, and that, if properly lengthened at its lower angle, it gives sufficient access to the small pelvis and its contents for whatever work may be necessary, at least as far as the adnexa of the right side are concerned. The author calls it the "hockey-stick" incision on account of its shape. In most cases the incision commences at a spot about one-half inch above and midway between McBurney's point and the anterior superior spine, and ends about one-half to three-quarters of an inch from Poupart's ligament. Meyer has used this incision in ten cases of appendicitis, gangrenous, perforative, or complicated with tubal or ovarian affections, and recommends it as a typical mode of entering the abdominal cavity in such cases, as by it extensive work can be done within the small pelvis without necessitating an additional median incision.

Have We in Nature a Basis for a Science and Art in Medicine ?—H. J. Herrick says it is the purpose of this paper to show that the conditions with which the physician deals have such uniformity of phenomena and facts that the subject may be properly termed a science, and that such conclusions may be reached and practical results attained, as to be unquestioned by any intelligent inquirer, and that when those principles are applied to practical use for the curing of disease, it may appropriately be styled an art.

Why the Negro Does Not Suffer from Trachoma.—Warwick W. Cowgill says that this disease is common only among the poorer classes of whites in the country districts. Between this class and the negro there is a wide gulf fixed. Assuming therefore, as the author does, that the disease is contagious, the conclusion is reached that the negro owes his immunity to his lack of contact with the source of contagion.

Bilharzia Hæmatobia.—Edwin Walker says that the authors who have described this parasite all supposed that Africa was its only habitat. But one other case has been reported in this country, the patient being a resident of Sparta, Ill. In the case reported by Walker great care was taken to avoid error; the parasite was found in the specimen of urine passed in sterile vessels, as well as that drawn by catheter.

Mucocele in the New-Born.—Clark W. Hawley reports six cases of this disease in his practice, from observation of which he has reached the following conclusions: 1. The disease is a rare one. 2. The indications are to establish drainage into the eye if it is not possible to cause flow into the nose. 3. The tumor should be opened by a very small incision. 4. An anæsthetic should be given and probing done.

The Maddox Rod or Phorometer ?—Alvin A. Hubbell gives results of his own experience with these two forms of test, and says that in view of the fact that by the rod test there is introduced no extraneous impulse to muscular contraction, and as its findings are in the great majority of cases equal to or in excess of the phorometer, he believes the rod to be the more precise and trustworthy guide in daily practice.

Corneal Corpuscular Activity.—In his discussion of this subject Joseph E. Willetts says that the phenomenon consists of bright moving bodies filling the field of vision. He adds that all the evidence is in favor of these bright bodies being the amœboid leucocytes circulating through the lymph canals of the cornea.

Railway Hygiene and Emergency Equipment.—W. W. Grant says that the present methods of ventilating cars and of cleaning their furniture are entirely inadequate. He suggests many radical improvements, including the equipment of every train with a hand litter for the removal of the sick.

Operative Treatment of Chronic Glaucoma.—Alexander W. Stirling discusses the usual operations for this disease, viz.: iridectomy, sclerotomy, and sclero-iritomy. As to the relative advantages of myotics or operation he thinks it impossible to speak dogmatically.

Eviscero-Neurotomy.—J. G. Huizing describes a new method for evisceration of the eyeball, and claims for it all the advantages of the Mules operation, as well as those of enucleation, without their disadvantages.

Convergent Strabismus.—William B. Meany reports this case of total apparent strabismus—convergent—of 62°, in order to demonstrate the method used for this individual case by Professor Landolt in his clinic.

Eosinophilia in Dermatitis Herpetiformis (Duhring).—Mark A. Brown and George P. Dale report a case of this disease in which a clinical examination of the blood changes showed a large percentage of eosinophilia (at one time 44.3 per cent.).

The Bubonic Plague.—Edmond Souchon gives some points of special interest to sanitarians regarding this disease, which he has gathered from the writings of Kitasato, Nakagawa, Yersin, Wyman, and Manson.

Treatment of Septic Conditions in Children.—By Edwin Rosenthal. See MEDICAL RECORD, vol. lvi., page 27.

New York Medical Journal, February 17, 1900.

The Importance, both Medico-Legal and Clinical, of the Early Recognition of Certain Organic Affections of the Nervous System, Including Paresis.—J. Leonard Corning discusses the early symptoms of locomotor ataxia, multiple sclerosis, paralysis agitans, and general paresis. All these maladies play a considerable part in the litigation of to-day to determine the presence or absence of insanity. He calls attention to the care necessary in studying the symptoms of prisoners in order to arrive at a proper diagnosis, and shows how juries are often influenced by the lay idea that organic disease of the nervous system necessarily entails insanity.

A Plea for the More Extended Use of Antitoxin for Immunizing Purposes in Diphtheria.—From statistical tables compiled from New York City Health Reports, J. S. Billings claims that the increased number of cases of diphtheria in the city for 1899 was due in part (in the author's view) to a neglect of immunization by antitoxin. He believes that 300 units should be used in children and 500 units in adults.

Four Cases of Diabetes Mellitus of Apparent Bacterial Origin, and their Successful Treatment.—J. P. Sheridan states his belief in the bacterial origin of this disease, though he gives no proofs to sustain his position. He finds the ideal remedy for the malady in a combination of the bromides of gold and arsenic.

Overstudy.—L. M. Yale is sceptical as to the fact of overstudy being the cause of physical ailments, but believes that physical ailments underlie difficulty in school work. The physician should never accept "overstudy" as a cause for deranged health until he has carefully sought for and failed to find a physical reason.

Digitalis and Aconite; their Physiological and Therapeutic Value.—F. O. Hawley makes a study of the peculiarities of these drugs and condemns the loose methods of assay so frequently practised. To the resulting unreliable preparations we owe much of the uncertain effects so often seen in administration.

The Therapeutic Value of Alcoholic Stimulants.—F. A. Castle maintains that it is the volatile ethers which give to wines and spirits their chief therapeutic value.

The General Treatment of Phthisis Pulmonalis.—G. A. Evans discusses the general therapeutics of the disease, and gives tables referring to diet and mode of living.

Skin Manifestations of Influenza Observed in the Present Epidemic.—J. E. Herman has seen eruptions resembling respectively measles, scarlatina, and herpes.

Studies on Internal Antisepsis.—By E. Klebs. A continued article.

Philadelphia Medical Journal, February 17, 1900.

The Pleural Friction Sound.—Albert Abrams describes several manœuvres of value in eliciting this sound. (1) Respiration is suspended, and then the arm on the affected side is raised while in extension, the suspected area being auscultated in the mean while. (2) The patient lies on the affected side for a minute or two and then rises suddenly, suspending respiration. The affected area is now auscultated while the patient takes a deep breath. (3) Pressure in an intercostal space with the buttoned rod of the phonendoscope screwed to a piece of tin, which is fitted over the hard-rubber bell of the stethoscope. The phonendoscope itself cannot well be used, for when pressure is exerted with the buttoned rod in the intercostal space the patient's breathing gives rise to adventitious sounds which are confusing.

Gangrenous Stomatitis Treated with Antistreptococcus Serum.—W. C. Cahall reports a case of noma in a child seven years old suffering from typhoid fever. The disease was treated first by cauterization, then by the curette, and finally by an extensive cutting operation, but each time the gangrene reappeared. Then an injection of 10 c.c. of antistreptococcic serum was made, and within twelve hours a line of demarcation formed, and within twenty-four hours the gangrenous part had disappeared, leaving a healthy-looking wound.

The Earliest Recorded Autopsies in America.—Francis R. Packard says the earliest mention of an autopsy in America is to be found in "An Account of Two Voyages to New England," published in London by John Josselyn in 1674. Four other post-mortem examinations were made in New England during the remainder of the seventeenth century.

An Unusual Case of Molluscum Fibrosum.—Daniel H. Williams report the removal of a tumor of this character weighing twelve and one-half pounds and measuring fifteen by eighteen and one-half inches.

The State Care of Consumptives.—Charles E. Nammack enters a plea for the fresh-air treatment of tuberculosis and for the establishment of State sanatoria for the poor.

Position Symptoms in Joint Disease.—By Harry M. Sherman. See MEDICAL RECORD, vol. lvi., p. 494.

Boston Medical and Surgical Journal, February 15, 1900.

The Clinical Value of Oliver's Hæmocytometer.—David D. Scannell describes this instrument in detail and extols it as being time-saving and accurate as compared with the Thoma-Zeiss procedure.

A Case of a Man who Swallowed his Suspenders.—Maurice H. Richardson by external œsophagotomy extracted the ingested wearing apparel, and the patient, a previous inmate of an insane asylum, made a good recovery.

A System of Clinical Instruction.—A. H. Wentworth describes the method which he employs for the simultaneous instruction in small sections of a large number of students.

Diffuse Peritonitis from Acute Appendicitis.—J. Coplin Stinson reports a case in a young girl in which operation was followed by recovery.

Medical Press and Circular, Jan. 31 and Feb. 7, 1900.

The Correlation of Sexual Function with Insanity and Crime.—H. Macnaughton-Jones concludes his paper, taking up climacteric insanity, which occurs chiefly in women but also in men. The correlation of insanity and disordered sexual functions arising out of affections of the generative organs is a factor to be taken seriously into consideration. A careful examination should be made when there is suspected a condition of the generative organs which might produce or aggravate the mental affection. Due weight should be given irregularities in investigating criminal acts in women, especially during the menopause, etc. The special dangers of the climacteric period (climacteric mania) must be remembered. Pelvic examination should be made when moroseness, depression, hysteria, hallucinations, unfounded suspicions, and apprehension are leading symptoms. There is greater predisposition to mental disturbances after operations on the generative than other organs. Those previously insane are predisposed to relapse under such operations. Suicidal impulse and crime at the climacteric should be anticipated by operation if gross lesions are detected.

A Rare Form of Ulceration of the Female Urethra.—Richard Dancer Purefoy says the external female genitals furnish some of the best illustrations of chronic syphilitic disease being confounded with malignancy. In a case observed there was upon the inner surface of the left nympha a circular excavation with sharp cut overhanging edges, the base being white cicatricial tissue. The entrance to the vagina was closed by a morbid growth with red nodular surface hanging from an enormously dilated urethra. Dr. West had seen six similar instances—mostly in women giving a history of syphilis or venereal disease. The writer has seen it as an independent affection and also associated with condylomata. The lower wall of the urethra is often like cartilage and the aperture is permanently patulous. Sometimes the urethra will admit one or even two fingers through its whole extent. Strong nitric acid may produce enough contraction to control the urine. This rare affection is similar to, if not identical with, Huguier's lupus hypertrophicus.

A Case of Posterior (Congenital) Luxation of the Shoulder Joint.—G. Burbridge White says posterior luxation is the most unusual form which congenital dislocation of the shoulder assumes. He relates an instance in which, when examined, there was total inability to move the arm or forearm, to pronate or supinate or to flex or extend the hand. The forearm was turned in so that the dorsum of the hand rested on the loin. Treatment consisted in careful massage until motion in the arm independent of that of the scapula took place. When slight active motion was possible, dumbbells and an American elastic exerciser rendered improvement more rapid. After twelve months there was considerable use of the arm possible. The *x*-ray confirmed the diagnosis of luxation of the acromial end of the clavicle and atrophy of the head of the humerus.

Five Cases of Angina Pectoris.—Dr. Salomon reports five similar cases. There were no asthmatical symptoms. In a few weeks the pain began to radiate to the left arm. The pain was often started by slight movements, as in undressing. The duration of the attack was from ten minutes to several hours. Three patients died, and two recovered. Two had had syphilis, one influenza. The writer does not believe that iodides are of benefit in genuine ordinary angina. Patients with coronary angina die; those with neurasthenic angina get better. Iodides along with hygienodietetic treatment must always occupy the first place.

The Dilatations and Diverticula of the Œsophagus.—John Knott divides these rare abnormalities into congenital and acquired, each being arranged, according to Rokitansky, under three heads: (1) The cylindrical or fusiform, in which a great part of the length of the tube is enlarged; (2) the sacciform, in which one or more pouches are found, which involve all the coats of the œsophagus; (3) the hernial, in which the mucous membrane alone expands, and this coat, protruding through the muscular layers, forms diverticula or herniæ. Illustrations are given, and the subject is to be continued.

Some Remarks on the Operative Treatment of Uterine Fibroids.—W. Gow supports the view that, of all radical operations for fibroids, abdominal hysterectomy with subperitoneal treatment of the stump is the best and safest procedure, and that this operation may confidently in the future be looked upon as giving a mortality of not more than one or two per cent. He relates four cases in which single or double pyosalpinx existed, and gives a table of forty-seven patients treated in this way with a mortality of just over two per cent. There were thirty-nine consecutive cases of recovery.

Acute Chorea Treated with Large Doses of Arsenic.—Murrell carried out the treatment recommended by William Murray, but somewhat modified. Instead of giving fifteen drops of liquor arsenicalis three times a day for a week, he gave smaller doses over a longer period, but vomiting was a distressing symptom, and the drug was discontinued. He finds that the duration of the attack is immensely shortened by giving arsenic.

Some Remarks on the Oils of Cajeput and Cubebs and their Use in Inhalation.—Robert J. Lee finds that these oils may be vaporized without difficulty, and as their properties are well understood it is unnecessary to point out the class of cases in which they may be inhaled with benefit.

Ambrose Paré and his Times.—J. Grant Andrews gives an entertaining account of Paré's life.

British Medical Journal, February 10, 1900.

An Undescribed Form of Plague Pneumonia.—W. C. Hossack reports five cases of an indefinite and obscure form of plague, differing in character and general symptoms from the classical form of plague pneumonia in that its onset is not fulminant but insidious, and the symptoms are slight. The most striking characteristic of the disease is the pulse, which presents grave characters quite out of harmony with the brief duration of the illness and the limited amount of lung mischief. Every case the writer has heard of, including the five coming under his immediate notice, have ended quite unexpectedly in death on the fifth to the tenth day. In answer to the probable objection that these cases were not plague at all, but simple broncho-pneumonia, the writer evidences their clear connection with the plague, their occurrence in series with indisputable plague cases, and their apparently inexplicable fatality.

Preventive Inoculation against Bubonic Plague.—A. Lustig and G. Galeotti assert that preventive inoculation is the only means by which this disease may be rationally combated when it has manifested itself in epidemic form. They give the results of experiments on animals by means of a nucleo-proteid which they have succeeded in extracting from the plague bacilli. The authors claim that this product is free from the drawbacks of Haffkine's vaccine, and that its advantages may be summed up as follows: (1) Its efficacy has been proved from the experiments made on various animals; (2) the substance is innocuous in the case of man; (3) if the cultural liquids possess an immunizing power they owe it to the nucleo-proteid which the writers have isolated; (4) the advantages of using an active substance isolated and pure instead of cultures which contain it mixed with heterogeneous elements are evident.

A Case of Malignant Malarial Fever with Cerebral Symptoms Terminating Fatally, in England.—D. C. Rees reports this case, and says that he has never seen such an enormous number of parasites in the peripheral circulation in any case of malignant malaria. It is noteworthy that the patient was only five days in a malarial country. The writer points out the importance of blood examinations in such a case as this. The patient was unconscious; no reliable history could be obtained; he had practically no pyrexia, no rigors, no sweating; without the blood examination the diagnosis of malaria would hardly have been justifiable.

The Serum Diagnosis of Mediterranean Fever.—T. Zammit says in every case of fever the method of serum reaction should be used in diagnosis. He submits the following facts gathered during the past year: (1) The micrococcus of Bruce can be grown successfully from a culture seven months old; (2) cultures of the micrococcus two years old give a clear serum reaction; (3) the micrococcus does not grow on sea water solidified with agar, not even when the water was taken from a sewage outfall; (4) the micrococcus grows on an agared solution of normal human fæces.

A Case of "Beef Worm" (Dermatobia Noxialis) in the Orbit.—This case is reported by Frederick T. Keyt. He says the "beef worm" is commonly found in British Honduras and Central America, in dogs and cattle, and often in human beings. The natives treat it by applying tobacco leaf over the swelling and occluding the orifice; the worm is narcotized or killed, and its expulsion is easily effected by squeezing. Occasionally it gives rise to serious inflammation of the subcutaneous tissues, demanding liberal incision and free drainage.

Cinnamon in the Treatment of Tropical Diarrhœa.—A. Norris Wilkinson reports good results from the use of cinnamon in teaspoonful doses, mixed with milk to mould it into the shape of a bolus, and chewed night and morning. In all cases ranging from ordinary diarrhœa to severe cases of dysentery the author relies upon this mixture given in conjunction with a mixture of quinine sulphate, potassium bromide, and antifebrin.

Poisoning by Castor-Oil Seeds.—In this case, reported by W. P. Meldrum, the patient, a dock laborer in good health, ate a couple of castor-oil seeds. No medical assistance was sought for three days. There were then incessant purging and vomiting with cold extremities and weak pulse. Under treatment the purging stopped, but the vomiting persisted, and the patient expired from exhaustion.

Some Researches into the Nature and Action of Snake Venom.—In his account of these researches Robert Henry Elliot describes his method of collecting and storing venom, bile, etc.; he gives the standardization of solution and mode of administration, describes the preparation of the animal, with the calculation of dose based on idiosyncrasy, and notes the variations in lethal dose for different animals.

A Case of Vesical Calculus in Sierra Leone.—In this case reported by W. Renner recovery followed lithotomy. The author says the case is of interest from the fact of the rare occurrence in this colony of a case of stone in the bladder, so rare in fact that there was not in the colony a single instrument for the operation of lithotomy, and one had to be sent from London.

The Epidemiology and Prophylaxis of Malaria in the Light of Recent Researches.—In this article A. Celli traces the life cycle of the malarial organism in man and the mosquito, discusses the habits of Anopheles, and deduces therefrom certain prophylactic measures which experience has also shown to be of service.

A Note on Species of Anopheles Found among Mosquitos Sent from Shanghai and Java.—George Thin pictures two specimens of mosquitos sent to him for examination from Batavia and Shanghai. They were both probably A. pictus, as appeared from a comparison with specimens of A. pictus and A. claviger caught in Spain.

The Saline Treatment of Dysentery.—W. J. Buchanan gives notes of five hundred and fifty-five consecutive cases of dysentery treated by a saturated solution of sulphate of magnesium, with only six deaths.

The Lancet, February 10, 1900.

Further Observations on Pernicious Anæmia; A Chronic Infective Disease.—In this final article of the series, W. Hunter calls attention to the relation between this affection and infection from the mouth and stomach. The nature of the infection is a mixed one, as it occurs in all classes irrespective of surroundings and as there is an abundant presence of organisms of coccal and short streptococcal nature forming zoöglœa-like masses amid the catarrhal and inflammatory exudation contained in the vomit. Treatment must include hygiene of the mouth and teeth, local treatment of the stomach and intestine, arsenic, and serum injections. The nature of the serum to be used is still to be determined.

Prognosis in Appendicitis.—From a series of two hundred cases H. A. Caley discusses prognosis as to recovery and as to recurrence. Under the former, he studies the pathological basis of prognosis from the nature and extent of peritoneal infection and the nature and course of the appendix lesion; the clinical basis requires the consideration of local symptoms, general symptoms, local signs and progress of the case.

Consanguineous Marriage and Deaf-Mutism.—A. H. Huth gives elaborate statistical tables, from which he concludes that when there is a family taint of deaf-mutism, more deaf-mutes are liable to be born in families in which there is a double inheritance through the relationship of the parents than when this is not the case.

A New and More Permanent Method of Mounting Amyloid Sections Stained with Iodine.—A. B. Green recommends the employment of Weigert's iodine, liquid paraffin, and xylol, with iodine crystals. Each is to be used on the section in the order named. A cover-slip smeared with vaseline is then placed over the section.

The Present Position of Aural Surgery.—W. B. Dalby thinks that the advance in aural surgery has greatly dispelled quackery, and calls attention to the vast amount of study which is now being given to the subject of chronic suppurative discharge.

Eighty Successive Cases of Stacke's Operation.—Full tables are given with an analysis of symptoms. Only three deaths resulted, and all these cases did not come under observation until a very advanced stage of pyæmic poisoning had been established.

A Case of Complete Inversio and Prolapsus Uteri.—F. L. Pochin records this case occurring in a primipara aged twenty years. Reposition was successful, and the puerperium was without special incident.

Fetichism in Surgery.—E. Stanmore Bishop thinks that the modern surgeon is especially liable to fetichism in two directions: undue importance attached to certain details in technique, and a desire to operate with a rapidity which is injurious to the patient.

Successful Case of Enterectomy for Gangrenous Hernia.—A. H. Burgess removed four inches of gut from a boy aged fifteen years. Healing occurred without suppuration, and the patient was up in three weeks.

Mental Dissolution.—A clinical lecture by G. H. Savage, in which he calls attention to the physical and mental peculiarities seen in persons passing into a condition of mental weakness.

Deutsche med. Wochenschrift, Jan. 25 and Feb. 1, 1900.

The Saliva and its Influence on Gastric Digestion.—Martin Cohn says the alkalinity of the saliva varies in different individuals and in the same individuals at different periods of the day. The average corresponds to a 0.0154-per-cent. solution of caustic soda. He never found an acid reaction, such as was noted by Sticker in the interval between breakfast and dinner. It has been suggested that retained products of metabolism may be got rid of by increasing the salivary secretion, but the author was unable to discover any evidences of such vicarious elimination in cases of renal disease. The digestive activity of the saliva does not cease with deglutition, but is continued for a time in the stomach. As has been shown by Van der Velden, there are two stages of stomach digestion. In the first the acidity is not sufficient to inhibit the saccharifacient action of the saliva (amylolytic stage), but in the second this action is arrested by the increased secretion of hydrochloric acid (proteolytic stage). It has been asserted by Sticker that the saliva has an influence also in the digestion of albumin, but Cohn does not think the experiments offered in proof of this assertion are conclusive. His investigations led him to the conclusion that the presence of saliva in the stomach is beneficial, but he was unable to determine that its presence was of extreme importance in digestion or that its absence impaired the process very materially.

A Case of Pneumathæmia.—Paul Bernhardt reports the case of an idiot, fifty-four years of age, who died after a brief illness marked chiefly by diarrhœa, anuria, and extreme restlessness. At autopsy the blood was found to be fluid and of a peculiar crimson tint. The heart, especially the left auricle and coronary veins, was swollen, and when opened under water its contained blood was found to be mixed with air. Incision of the inferior vena cava gave exit to a bloody foam. The liver was enlarged, its surface was covered with little vesicles, and on section a thin, bright-red foam exuded; the hepatic veins, when cut, gave exit to more air than blood. Examination of cover-glass preparations of the liver fluid showed the presence, in almost pure culture, of thick rods with rounded extremities, 1 μ thick and from 3 to 5 μ in length; there seemed to be an indistinct capsule; they did not form chains; they were stained by gentian violet, carbol fuchsin, and after Gram's method. The writer thinks it was probably the bacillus aerogenes capsulatus, which has been so carefully studied and described at the Johns Hopkins laboratory.

Clinical and Experimental Studies of Dural Infusion.—Paul Jacob gives an account of his experience with the injection of various fluids into the subarachnoid space after the removal of an equal quantity of cerebrospinal fluid through a lumbar puncture. The fluid must be injected very slowly (fifteen to twenty minutes being required for the passage of 25 c.c.); otherwise the most alarming pressure symptoms might be produced. Animal experiments with methylene-blue solutions showed that the fluid injected into the lower part of the subarachnoid space very quickly reached the brain, that it was eliminated very slowly, and that within a very short time it permeated the cerebrospinal substance. The writer reports a case of tetanus cured after dural infusions of antitoxin, and three cases of cerebrospinal syphilis treated most successfully by dural infusions of sodium-iodide solution. He believes there are great therapeutic possibilities in the treatment of many diseases of the central nervous system by this method of bringing the curative agent into direct contact with the diseased foci.

Employment of a Heart-Supporting Apparatus in Cardiac Affections, Especially in Cardiac Dyspnœa.—Abée, observing that patients with heart disease often instinctively make pressure with the hand over the cardiac region, was led to devise a mechanical support in which a pad should take the place of the patient's hand. He reports two cases of various cardiac affections in which the subjective symptoms, especially pain and dyspnœa, were markedly relieved, and the patients were able to take moderate exercise when previously they had been unable to walk without the greatest distress. The writer has studied the physical effects of the pad and finds that it elevates the heart as much at times as 2 to 3 cm. and causes an axial turning of the organ, as shown by the altered apex beat; the pulse is slowed by as much as ten beats in the minute; and finally the limits of lung expansion anteriorly on the right side are increased 1.5 to 2 cm. All these changes are constant, and occur within two or three minutes after the adjustment of the pad.

Treatment of Circumscribed Abscess of the Abdominal Cavity.—Sonnenburg cautions against rashly opening into the peritoneal cavity in suppurative appendicitis. A free and rapid opening of the abscess cavity is permissible only when the general symptoms are threatening and septic symptoms are present. In all other cases when it is a question of operating upon a circumscribed purulent collection, one should not immediately open the peritoneum, but should first seek for the abscess and evacuate it, and often the appendix will be found in the cavity. Great care should be taken not to break up the protecting adhesions.

A Specific Immunizing Serum against Spermatozoa.—Moxter injected guinea-pigs with the spermatozoa of rams, and found that the injected organisms gradually acquired a more potent spermatozoicide property. This power resided in the body of the guinea-pig, for the blood serum removed from the vessels did not possess it. The anti-body resulting from these spermatozoa injections is also hæmatolytic in relation to the red corpuscles of sheep.

Ileocolic Invagination.—Lewerenz reports a case of intussusception of the ileum into the colon through the ileocæcal valve occurring in a boy twelve years of age. The abdomen was opened, and the invagination was reduced with some difficulty. The patient made a good recovery.

Berliner klinische Wochenschrift, January 29, 1900.

Simultaneous Gunshot Wounds of the Thoracic and Abdominal Cavities.—F. Koenig concludes a lengthy article by a brief summary of the various pathological processes which follow injuries of this nature in the regions indicated. He calls attention to the fact that in addition to the injuries sustained along the course of the wound there may be severe lesions at a distance caused by the explosive force of the missile. Bacterial infection may arise not alone from the outside, but from the migration of germs from their natural habitat in the intestinal and biliary tracts. Products of inflammation may be removed by puncture. This failing, opening of the cavities is indicated.

The Surgery of Cancer of the Stomach.—H. Lindner discusses the question of possibly more radical intervention in the future. The removal of infected glands suggests itself and is to be attempted. On the other hand, recurrence in the glands is comparatively rare. In cases in which a radical operation is impossible, gastro-enterostomy is to be commended. In the latter class of cases it has been suggested that jejunostomy is the preferable procedure, but the author is not disposed to grant this point.

Therapeutic Employment of Moist Heat.—H. Davidson describes and figures an apparatus devised by him for this purpose. It consists essentially of a coil arrangement shaped to the human frame and supplied with a cover-lid. The coil is supplied with hot water from a reservoir to which is applied a spirit lamp.

Chronic Villous Polyarthritis and Arthritis Deformans.—By M. Schueller. A continued article.

Wiener klinische Rundschau, January 28, 1900.

Two Cases of Tuberculosis of the Serous Membranes in Man, with the Macroscopical as well as the Microscopical Appearance of Bovine Tuberculosis.—Josef Pelnár draws these conclusions from his observations on this subject. There exists in man a tuberculous affection of the pericardium and peritoneum which is characterized by small connective-tissue tumors with pedicles. Sometimes these are the only signs, then again there are besides these tumors other small tuberculous growths. These little swellings are both macroscopically and microscopically like the nodules in bovine tuberculosis. In these nodules tubercle bacilli are sparingly found, and show the morphological peculiarity that they almost always appear in little masses which are like those seen in actinomycosis. Cholangitis and pericholangitis tuberculosa hepatis can be seen as solitary thick-walled cysts of the size of a walnut, without other demonstrable tuberculous changes in the liver.

A Simple Method for the Application of Carbon Dioxide.—Rudolf Hatschek states that a good method of applying carbon dioxide is to take gr. lx. of sodium bicarbonate mixed with a little warm water, and with this mixture rub the patient. Carbon dioxide is evolved.

Wiener klinische Wochenschrift, February 1, 1900.

Air Emboli in Placenta Prævia.—Hugo Hübl says that diagnosis of this affection should be made: (1) By the exclusion of other possible diagnoses such as ruptures of the cervix and uterus, death from anæmia or from chloroform, and thrombus emboli. (2) If there is present over the heart a clucking murmur, and if in that region there is a tympanitic or dulled tympanitic percussion sound, then the clinical diagnosis of air emboli is certain. Hübl gives two conditions which make possible the entrance of air into the veins: (*a*) Pressure in the abdominal-uterine vessels is suddenly diminished, and so air is sucked into the open vessels. (*b*) Pressure in the interior of the uterus is increased, and in this way air within the uterus is pressed into the gaping vessels.

The Limitation of Laparotomy in Favor of Vaginal Cœliotomy.—F. Schauta believes that the improved technique of vaginal cœliotomy is one of the most valuable advances in modern operative gynæcology. Its mortality is about half that of the abdominal method. The course of healing is painless and uncomplicated, while there is an absence of suppuration and hernia, resulting from the operation, so common in the other method. As to the objections raised about "operating in the dark," he lays special stress on the fact that the technique should be so skilfully managed that the operation is under careful observation from beginning to end.

Ovariotomy per Anum.—Hubert Peters cites the history of a Russian woman, thirty-seven years old, who had from early youth suffered from constipation. For years she had noticed a rectal prolapse on defecation. On examination, a cystic tumor was also discovered, corresponding in position to the left ovary. In order to shorten the operation as much as possible on account of the precarious condition of the patient, ovariotomy was performed at the same time with the rectal operation by means of the anal method, instead of the usual abdominal or vaginal cœliotomy or the perineal or sacral method. The ovarian tumor proved to be a serous cystadenoma.

Bacilli of the Stools of Nurslings Colored by Gram.—Ernst Moro has isolated a bacillus from the stools of infants which he calls bacillus acidophilus because it flourishes in acid media. Tissier has also isolated a bacillus from the same source by means of anaerobic culture methods. Both are stained by Gram's method.

Münchener medicinische Wochenschrift, Jan. 30, 1900.

Contribution to the Question of the Causes of Death in Burns by Fire and by Scalding.—E. Scholz gives the results of two series of experiments made for the purpose of ascertaining the influence of the skin in the formation of toxins in the living body. First, he compares equally extensive burns, by fire, of the skin and peritoneum. Next, he compares burns of the skin—in the first place, skin with the circulating blood, then in a bloodless condition. He concludes that in scalding the skin changes do not play a chemical rôle, but that the chemical changes result from the influence of heat on the blood. In peritoneal burns a great number of blood corpuscles are changed. The burn of the skin, because of the protecting covering it affords, is not so destructive as the same injury of the peritoneum. Scalding of bloodless skin, which would, if the blood were present, cause death, is followed by no such effect in the anæmic part. This shows that the formation of toxic substances is not concerned with the skin. Neither do the blood changes occur through the absorption of toxic materials, but death by fire or scalding is due to the combined influence of the physical and chemical waste products of the blood resulting from the effect of heat.

Psychiatry in Relation to the Question of School Physicians.—W. Weygandt declares that the use of the school physician for the psychical observation of the students is still in the experimental stage. Psychology and pyschiatry are chiefly useful in the building up of this theory. The physician with psychological and psychiatrical education has the best foundation for the position of school physician in the higher schools of learning. In the public schools the students should be sifted and the weak-minded separated from the others and put in classes by themselves.

A Case of Acute Perichondritis and Periostitis of the Nasal Septum of Dental Origin.—Gustav Killian reports the case of a man thirty years old. Pain was severe, and foul-smelling pus escaped from the left nostril. The left second incisor ached. The mucous membrane of the nasal septum was opened and dressed. Six months later the patient again appeared, the tooth was extracted, and a cyst was disclosed. This was excised, and recovery followed.

A Case of Perityphlitis in a Hernial Sac: Resection of the Cæcum and Vermiform Appendix.—C. Göschel, after giving a history of this case, speaks of the literature on this subject. Diagnosis between incarceration and perityphlitis in a hernial sac cannot be made before operation. Happily this has little influence on the treatment of the affection. Operation is always indicated.

Severe Opium Poisoning of an Atrophic Child of Ten Weeks; Ten Hours' Faradization of the Phrenic; Recovery.—August Model reports the case of a young child to whom its nurse gave an overdose of the tincture of opium. He applied faradization to both phrenic nerves with the happiest results. After this treatment the infant, who had been very feeble, improved greatly in general health.

Experiments Concerning the Influence of New Antiseptics on Infected Corneal Wounds.—Wilhelm Hauenschild has experimented with protargol, silver nitrate, and oxycyanide of mercury of different strengths on infected corneal wounds, and finds the vitality of the micro-organisms in no way affected by the antiseptics. So far, mercury oxycyanide applied under high pressure has had the best results.

Absorption and Fat-Splitting in the Stomach.—By F. Riegel. A continued article.

La Riforma Medica, January 20 and 27, 1900.

The Action of the Halogens on the Cells of the Central Nervous System.—O. Modica and U. Alessi conclude from a series of experiments on guinea-pigs that the halogen salts, more especially bromides and iodides, profoundly affect the central nervous system. Changes in the chromatin constitute the first symptom, shortly followed by degeneration and necrosis of the cells. These grave lesions existed in animals which had apparently normally working nervous systems. The action of these salts does not differ from that of many other substances.

Acute Fibrinous Bronchitis.—Camillo Vittorio Pick reports a case noteworthy because of the rapidity of its onset and disappearance.

The Tetany of Influenza.—R. Gomez describes a case of tetany due to influenza in a child aged seven years.

Bulletin de l'Académie de Médecine, Jan. 23 and 30, 1900.

Respiratory Reflex and Lingual Tractions.—J. V. Laborde, describing his method of treating apparent death, says that the respiratory reflex is the first phenomenon of life in a newly born infant, and the first to be exhibited in the resuscitation of asphyxiated infants; so should it be the first in cases of suspended animation, or apparent death. The sensory nerves governing this function are the pneumogastric through the superior laryngeal, and the glosso-pharyngeal (as lately determined by the author). Rhythmical tractions of the tongue, by stimulating these nerves, excite them to renewed activity. The method is so simple, of such easy application by any bystander, that in cases of apparent suffocation, etc., it should invariably be tried. Laborde holds that after apparent death there is a latent period of life which lasts about three hours, and that it is during this time that rhythmical tractions of the tongue will often re-establish the respiratory function and restore the patient to life. Failure to obtain this result proves that death is real, not merely apparent. He urges the use of this procedure in every case of death for three, six, or twelve hours, either by means of the hand alone, or by the use of apparatus devised by him for the purpose.

Congenital Lacrymal Tumor.—M. Guéniot describes a case in a new-born infant. When pus formed, the lacrymal sac was emptied and cleansed, and two drops of a collyrium of 10 cgm. silver nitrate to 15 gm. distilled water was used morning and evening. A cure followed.

Abscess of the Liver.—Lucas-Championnière describes a case in which the radiograph was of use in determining the presence of a tumor. Exploratory puncture confirmed the diagnosis, and a curative operation followed.

The Chigre.—M. R. Blanchard discusses Clair and Joly's report of the recent appearance of the chigre or burrowing flea in Madagascar.

Dystocia.—M. Porak discusses a case reported by Narich concerning the diagnosis and prognosis of dystocia from fœtal hydrocephalus in breech presentation.

French Journals.

Invasion of the Lymphatic System in Cancer of the Stomach.—B. Cunéo makes a practical study of this subject, long one of theoretical interest. Anatomo-pathological data point out operative indications of great importance: (1) The frequent, almost constant, existence of submucous changes at 2 cm. beyond the apparent limits of the neoplasm, showing the necessity of cutting well beyond this limit. (2) The advance of the neoplasm along the lymphatic channels of the lesser curvature necessitates a wide resection of this region. (3) The habitual integrity of the duodenum permits of not including in the resection more than 1.5 or 2 cm. of this portion of the intestine. (4) The ganglia of the coronary chain and of the gastro-epiploic chain on the right side should be completely extirpated, so far as possible, at the same time as the tumor. (5) Pylorectomy is the best of the palliative operations in adenopathies at a distance, on condition of being easy and rapidly executed.—*Gazette des Hôpitaux*, February 1, 1900.

Some Ocular Disturbances in Typhoid Fever.—Edmond Koenig discusses optic neuritis and other eye affections in the course of typhoid which, like other severe infectious processes, may determine ocular changes. Optic neuritis is one of the accidents which may lead to atrophy and blindness. In doubtful cases we are no longer justified in admitting a meningitis in an exclusive sense, when such a lesion of the optic nerves is found. This ocular accident, occurring at times in the early period of convalescence, should make a reserve prognosis necessary from the double standpoint of general and local condition. Optic neuritis of microbic origin is possible without the intervention of other physiological or pathological mechanism.—*Le Progrès Médical*, February 3, 1900.

Osteo-Hypertrophic Varicose Nævus.—Klippel and Trenaunay relate an observation of congenital deformity in a man aged twenty-eight years, implicating the thigh, leg, foot, and portion of the trunk, consisting in a varicose nævus with elongation and enlargement of bones, causing slight limping. The condition had not changed essentially from a very early period. The literature is given, and the origin of such conditions is thought due to intra-uterine infection the effects of which persist after birth during the whole period of development.—*Journal des Praticiens*, February 3, 1900.

Primary Epithelial Tumors of the Bronchi.—Charles G. Nicolas finds that up to 1886 only eighty-six instances of primary epithelioma of the lung had been reported, and Pick in 1891 had found but fifteen cases of primary cancer of the trachea. The writer now collects thirty-five instances of neoplasms supposed by their observers to be primary cancer of the bronchus. He studies the whole question. The evolution is quite rapid and treatment is only palliative.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, February 4, 1900.

Hydatid Cyst of the Pleura.—Gibert and Jeanbrau put on record the case of a man aged thirty-two years, operated upon by Professor Forgue by resection of the eighth, ninth, and tenth ribs, evacuation of the pleural cavity, and cure, in hydatid disease originating in the liver. These cases are usually mistaken for simple pleurisy or tuberculosis. Ample thoracotomy at once is the best treatment to avoid lasting bronchial fistulæ and gangrene of the lung.—*Gazette des Hôpitaux*, January 25, 1900.

Experimental Typhoid Fever.—Paul Remlinger reviews the history, modes of inoculation, conditions which favor infection of animals, symptomatology, and pathology, and concludes that there exists in animals a true experimental typhoid, which is closely connected with typhoid of man, and that it presents in particular analogies with typhoid in infancy.—*Gazette des Hôpitaux*, January 27, 1900.

Jour. of Nerv. and Mental Disease, Jan. and Feb., 1900.

Progressive Ankylotic Rigidity of the Spine.—B. Sachs and J. Fränkel report several cases belonging to what they call the Strümpell-Marie type, which has an apparent resemblance to ordinary rheumatic affections, but differs from them in that the vertebral joints are affected; hereditary predisposition has not been established; the disease is progressive, has been noticed chiefly in men, and shows no tendency to improvement. The morbid changes causing this affection appear to differ in degree and localization, not in kind, from those found in extreme forms of articular rheumatism and arthritis deformans; but from a clinical standpoint "spondylose rhyzomélique" merits further study.

Trauma of the Cervical Region of the Spinal Cord, Simulating Syringomyelia.—James Hendrie Lloyd reports a case in which the anatomical findings were extensive destruction of the gray matter of the cord, and of the direct cerebellar and Gowers' tracts, with comparative exemption of the posterior columns. Correlating this with the clinical phenomena in the case, he thinks the inference warranted that the tracts for heat, cold, and pain pass up by way of the gray matter, eventually passing from the gray matter into Gowers' tract, while tactile or common sensation is conveyed by the fibres in the posterior columns.

Meralgia Paræsthetica.—John Herr Musser describes ten cases of this disease, which he defines as a disturbance of sensation on the external surface of the thigh, characterized by various forms of paræsthesia, associated with dissociation and more or less diminution of sensation. In statistics collected in regard to 99 cases, the affection occurred 75 times in males. The duration cannot well be determined. As to etiology, injury was mentioned 19 times, syphilis 10, alcoholism 8, typhoid 8, other infectious processes 8, pregnancy 6, gout and rheumatism 12, other nervous conditions 11.

A Case of Tumor at the Base of the Brain in the Pontine Region.—By James Hendrie Lloyd. See MEDICAL RECORD, vol. lvi., p. 138.

The Unity of the Acute Psychoses.—By Philip Coombs Knapp. See MEDICAL RECORD, vol. lvi., p. 137.

Two Cases of Muscular Dystrophy with Necropsy.—By William G. Spiller. See MEDICAL RECORD, vol. lvi., p. 140.

Anniversary Address.—By Wharton Sinkler. See MEDICAL RECORD, vol. lvi., p. 141.

The Nervous Equivalent of Fever.—By Henry S. Upson. See MEDICAL RECORD, vol. lvi., p. 137.

Landry's Paralysis.—By Philip Coombs Knapp. See MEDICAL RECORD, vol. lvi., p. 142.

A Case of Hæmatomyelia.—By James Hendrie Lloyd. See MEDICAL RECORD, vol. lvi., p. 141.

Annals of Surgery, February, 1900.

Pathology of the Lymphatics of the Peritoneum.—From observations based on over five hundred abdominal post-mortems, Byron Robinson concludes that there are in the adult certain localities of peritonitis which are practically constant: peritonitis over the right psoas muscle is found in seventy-five per cent. of the cases involving appendix, cæcum, and distal end of the ileum; over the left psoas involving the meso-sigmoid in eighty per cent. Lymphangitis over the levator ani in women involves about the same number. Examination of pieces from the areas of local lymphangitis shows nearly complete occlusion of the lymph-vessels. White connective tissue proliferates and constricts them. Means to transport infectious material is thereby wanting, and hence repeated lymphangitis becomes less and less dangerous.

Further Observations on Depression of the Neck of the Femur in Early Life, Including Fracture of the Neck of the Femur, Separation of the Epiphysis, and Simple Coxa Vara.—R. Whitman places on record another case of separation of the epiphysis in adolescence, and points out the essential differences between this class of cases and those of true fracture of the neck of the femur. Depression of the neck, either simple or traumatic, predisposes to progressive deformity, and may indicate operative treatment at an early stage as a preventive measure. Since forty-eight cases of this depression have come within the author's observation within a comparatively short time, he is inclined to believe that this deformity is more common than is generally believed.

Traumatic Rupture of the Bile Duct.—R. W Garrett records the case of a young farmer suffering from this injury as the result of a fall. Abdominal section revealed the rent at the back of the upper part of the common duct as it passes downward and to the left between the two layers of the lesser omentum. The patient recovered. Reference is made to other recorded cases.

Actinomycosis in Man, with Special Reference to the Cases which Have Been Observed in America.—J. Ruhräh reports seven cases, in addition to those previously published by him in the *Annals* These additions make the total of American cases seventy-two. The author believes that there are still additional unreported cases, and urges that the records be made complete with reference to this affection.

Inter-Scapulo Thoracic Amputation.—From the study of a large number of cases R. S. Fowler concludes that sarcoma of the humerus offers slight chance of ultimate cure by any but the most radical procedure, and that the operation of choice for sarcoma of any part of the humerus is primary inter-scapulo thoracic amputation.

The Technique of the Positive and Negative Diagnosis of Ureteral and Renal Calculi by the Aid of the Roentgen Rays.—C. L. Leonard makes a plea for the employment of this means of differential diagnosis, which he believes is perfectly reliable and in the light of our present knowledge an absolute clinical necessity.

Intestinal Obstruction due to Intussusception.—J. F. Erdman analyzes the histories of nine cases seen by him within a few years. Results of treatment were as follows: three operative recoveries, one enema recovery, four operative deaths, one non-operative death.

American Journal of the Medical Sciences, Feb., 1900.

Some Cases of Dilatation of the Stomach.—John H. Musser and J. Dutton Steele conclude from their observation of these cases that: (1) The symptoms upon which most reliance can be placed in determining the presence of gastric motor insufficiency are: (*a*) The presence of fluid and food in the stomach fasting over-night; (*b*) the ready entrance of fluid through the tube and difficulty in the return flow, (*c*) the absence of visible gastric peristalsis, (*d*) evidences of fermentation and intoxication by the products thereof; (*e*) thirst; and (*f*) scanty and concentrated urine. (2) In determining the position and size of the stomach, by far the most certain method has been inflation with air through the stomach-tube. (3) The condition does not seem uncommon in students. The etiological factor is myasthenia caused by chronic gastritis from the abuse of alcohol and tobacco, from deficient innervation, probably of congenital origin, and occurring in the course of acute disease.

Narcolepsy: A Contribution to the Pathology of Sleep.—D. J. McCarthy has found nothing in his studies of sleep and its disturbances to support the idea that the condition known as narcolepsy is a distinct neurosis or disease. In the only autopsy report out of eighteen cases collected by S. Weir Mitchell there was simply "no lesion." In Mitchell's case he found "starch corpuscles in those portions of the gray matter submitted to examination." McCarthy feels certain that a microscopical examination of the brain in such cases of prolonged sleep as that lately reported by Skerrit and Stewart, when the patient recovered from a sleep of fifty days with inco-ordination and other symptoms of brain lesion, would reveal cellular changes. He cites several interesting cases.

The Increasing Prevalence of Cancer as Shown in the Mortality Statistics of American Cities.—G. Betton Massey declares that the conviction is warranted that there is a widespread increase in the causes of this affection or the liability to acquire it, throughout the country. The greatest increase appears to have occurred in San Francisco. He gives nine charts representing the mortality rates of cancer in New Orleans, Philadelphia, Boston, New York City, San Francisco, St. Louis, Baltimore, England, and Wales, and one showing the combined cancer mortality of seven American cities. Aside from operations in private and in ordinary hospitals, the attention paid to this trouble may be said to be comprehended entirely in the establishment of one State laboratory of research and one special cancer hospital, the latter not confining its attention to cancerous diseases.

A Critical Summary of Literature on the Influence of Heredity on Deafness.—W. Scheppegrell states that there is a lack of unanimity of the views on this subject. In cases in which deaf-mutism cannot be traced to heredity or to consanguineous marriages, it may be the expression of an abnormal condition in the parent. It is a phase of physical degeneration which may appear in families suffering from scrofula, tuberculosis, mental or nervous diseases, syphilis, or alcoholism. Social environment is also of importance in this connection, as has been advocated by Ménière. Many nervous affections have been noticed in the families of deaf-mutes. Boys appear to be more frequently affected than girls.

A Case of "Family Periodic Paralysis."—James J. Putnam, in reporting this case, inclines to the view that in this curious disease we have to do with a subtle disorder of the physiological co-ordinations of health rather than with a general poison.

The Surgical Treatment of Acute Puerperal Sepsis, with Special Reference to Hysterectomy.—By Hiram N. Vineberg. See MEDICAL RECORD, vol. lv., p. 796.

The Practitioner, February, 1900.

On the Relation of Pneumonia to Pulmonary Tuberculosis.—R. W. Philip says such terms as tuberculous pneumonia and pneumonic phthisis should be dropped to avoid confusion. He is inclined to think that the concomitance of pneumonia and pulmonary tuberculosis in the same subject is commoner than is sometimes stated. His experience is that the supervention of pneumonia during the course of pulmonary tuberculosis is by no means uncommon, the already damaged lung falling more easily a prey to further attack. In this mixed affection there is a tendency of the pneumococcus to loiter, and he has found it present many months after the acute attack. As to the possibility of pneumonia determining the establishment of pulmonary tuberculosis, many authors are quoted. Some years ago the writer analyzed one thousand cases of pulmonary tuberculosis, and concluded that in only one-half per cent. was a close sequence of tuberculosis or croupous pneumonia to be made out. It is not a common precedent factor and is rarely found in immediately determinant relationship. In some supposed cases of croupous pneumonia the condition is really one of acute exacerbation of the tuberculosis.

The Surgical Aspects of Pneumonia.—A. Pearce Gould considers the surgical treatment of certain sequelæ, empyema, pulmonary abscess, gangrene of the lung, and briefly mentions the conditions under which pneumonia occurs in surgical practice. The surgical diagnosis of empyema is made with the aid of an exploring syringe. Every case of pneumococcus empyema should be submitted to operation as soon as the condition is diagnosticated. The surgical treatment of pulmonary abscess and gangrene consists in making a direct opening into the diseased area of the lung and evacuating the pus or removing the sphacelated tissue. The sign especially relied upon is the presence of moist râles. Pneumonia as a sequel to surgical operations may be due to too great exposure of the chest, but it must be remembered that the operation may take place just as an attack is developing. Broncho-pneumonia is a more frequent sequel to operation, due at times to aspiration of blood. Traumatic pneumonia is of limited area without tendency to spread unless infective organisms are carried into the injured lung.

On Some Methods of Treatment of Pneumonia.—Sir Hermann Weber confines his remarks to lobar, acute, or croupous pneumonia, comparing the treatment by blood abstraction, tartar emetic, opium, and salicylate of sodium, and the mortality of cases treated in Bonn and in London. In Bonn it was somewhat higher than in London (fourteen to seventeen per cent. as against twelve to fourteen per cent.). Epidemic pneumonia is more fatal than sporadic. He thinks an abortive treatment may be found by means of antitoxic serum. It is a possibility that different forms of pneumonic fever may be caused by different microbes. The prejudice against small doses of antimony and against bleeding in moderation in suitable cases is entirely unfounded, and both may be eminently beneficial.

On the Treatment of Pneumonia.—Sir Samuel Wilks says those who examine all patients thoroughly are the least likely to mistakes in diagnosis, confounding pneumonia with inflammation of the brain, delirium tremens, etc. If pneumonia reaches the stage of complete albuminization it is inevitably fatal. He doubts whether digitalis has a capability of lowering the pulse except given in doses which are probably injurious. None of the products of the laboratory can be compared with opium for long-continued use. He is satisfied when he sees a patient with pneumonia taking a dose of saline and five grains of Dover's powder every four hours. Cold to the chest and blisters are harmful. Pathology and therapeutics must go hand-in-hand.

American Journal of Insanity, January, 1900.

Case of Multiple Cerebro-Spinal Sclerosis of a Special Anatomical Form, with a History of Pronounced Family Defect.—I. H. Neff and T. Klingmann give a complete history of the case with postmortem findings. The interesting features are: (1) The distribution of the sclerosis, it being largely limited to the motor tract; (2) an absence of marked changes in the vascular system; (3) a pronounced secondary descending degeneration in the pyramidal tract and complete atrophy of the ganglion cells; (4) the reaction of degeneration and muscular atrophy.

Differential Diagnosis of Paretic and Pseudo-Paretic States.—A. W. Hurd makes special mention of cerebral syphilis and insanity of alcoholic origin. These are the cases which are most likely to develop paresis. Diagnosis is most difficult in the melancholic and demented types.

Common Features in Neurasthenia and Insanity; their Common Basis and Common Treatment.—G. W. Foster collates the results of other observers along this line, and makes a plea for the more general employment of hydrotherapy in cases of this nature.

Cortical Functions and Psychology.—H. Nicholas believes that much is to be expected from the psychologists in regard to determining the functions of the cortex of the brain, two-thirds of which is still a functional *terra incognita*.

A Differential Count of White Blood Corpuscles in a Few Cases of General Paralysis.—F. H. Jenks gives figures from nine cases, and thinks that they show an increased percentage of large lymphocytes at the times of a paretic seizure.

What the Chronic Insane can Accomplish under Proper Directions.—J. W. T. Rowe describes the work done at Central Islip, Long Island, and shows how beneficial out-door work is to this class of patients.

The Colony System of Caring for the Insane.—H. Ostrander warmly commends this system and describes an institution of this kind recently established by the trustees of the Michigan asylum.

General Pathology of Mental Diseases.—By H. J. Berkley; from advance sheets of "A Treatise on Mental Diseases," based upon the lecture course at the John Hopkins University, 1899.

Transitory Alienation following Intense Pain.—H. J. Berkley narrates a case in which the onset of symptoms was dependent upon the menstrual epoch.

Bulletin of the Johns Hopkins Hospital, January, 1900.

Contributions to the Surgery of the Bile Passages, Especially of the Common Bile Duct.—W. S. Halsted writes that he is much impressed with the splendid results of operations for gall stones in the common duct. He reviews eight of his recent cases, pointing out interesting facts in connection with them. In one case were conditions suggesting hepatico-cholecystostcholecystenterostomy as a possible operation. Remarkable toxic (?) renal colic resembling closely intestinal colic, associated with anuria; colic and anuria entirely relieved by salt infusion. In another case renal pains resembling intestinal colic (third observation of the kind within eighteen months). Halsted believes, if no contraindication exists, that adhesions should be separated if possible, as not infrequently to adhesions alone are due the symptoms which persist after the calculi have been removed or have escaped.

Medical Commission to the Philippines.—Lewellys F. Barker writes that at present the observations concerning the causation of dysentery—one of the most important results of the expedition to the Philippines being the isolation by Dr. Flexner, from the dejecta of patients, of a bacillus which is almost certainly the cause of the acute dysentery studied—the differentiation of the fevers of the region, the relative prevalence of typhoid fever and malaria, the studies of the varieties of the malarial parasite there found, and the investigations of beri-beri, may be specified as among the more important scientific results of the expedition.

Early Exploratory Operations in Tuberculosis of the Hip.—Joseph C. Bloodgood states that the chief object in the early operation for tuberculosis of the hip is to take the disease in its early stage, to relieve the tension of the distended capsule, to check and cure the tuberculous synovitis by disinfection and drainage, to explore the bone with the hope of finding the tuberculous osteomyelitis, in which case it can be partially or completely excised; trusting also to disinfection, drainage, and the healing-process to check and later cure the disease of the bone without injury to its continuity.

A Reconstruction of a Glomerulus of the Human Kidney.—William B. Johnston has made a wax model of a glomerulus of the kidney of a child three months old. When the child was dead but a few hours, the kidney was injected *in situ* through the abdominal aorta until the Berlin blue appeared in the renal vein.

Gunshot Injuries by Weapons of Reduced Calibre.—L. A. Lagarde declares that upon the whole, in the later Cuban war, the gunshot injuries by the Mauser, the reduced-calibre rifle of the Spaniards, were in keeping with those humane effects so confidently predicted by experimenters generally.

An Apparatus to Aid the Introduction of a Catheter or Bougie.—George Walker describes, with cut, an instrument whose object is to distend the urethral canal, and in this way to enlarge the narrowed portion, so that an instrument will pass through.

Archives of Pediatrics, February, 1900.

A Study of Lesions of the Liver in Young Children.—Rowland Godfrey Freeman gives a summary of his observations on hepatic lesions in young children. Fatty livers are frequent. The condition of nutrition apparently has no connection with this lesion. Fatty livers occur rarely in marasmus, malnutrition, rachitis, and syphilis, unless such condition be complicated by an acute disease; and with tuberculosis not more often than with other conditions. They occur most often with the acute infectious diseases and gastro-intestinal disorders. The two cases of cirrhosis of the liver examined by the writer ran a comparately acute course. The livers on section showed a marked hyperplasia of the so-called new-formed bile ducts. Focal necrosis of the liver may be a lesion of measles.

The Mortality and Treatment of Acute Intussusception.—Fred. Kammerer believes that after one failure of an attempt at reduction laparotomy is indicated. The causes of the high rate of mortality in irreducible cases are generally the septic condition of the intussusceptum, and the necessity of extended surgical interference. The mortality in reducible cases is less than half that in irreducible cases.

The Necessary Factors in the Successful Treatment of Intussusception.—C. L. Gibson thinks that the main feature of expected success in relieving intussusception depends, first, on the intussusceptum being found in a reducible condition and free from septic changes, and, second, that such a favorable condition can ordinarily be met only by a very early interference. That is, the prognosis depends absolutely on the promptness of relief.

Report of Two Cases of Sarcoma of the Lower Jaw.—W. H. Hudson states as particular points of interest: In Case I., the successful removal of the tumor and the uneventful recovery of the patient after the first operation. The necessity is also shown for the very early and thorough extirpation of sarcomatous growths if permanent relief is to be hoped for. In Case II. is the proof that a sarcoma may develop from a tooth follicle in a person eighteen years of age.

Bulletin of Cleveland General Hospital, October, 1899.

A Report of Several Cases of Typhoid Fever with Interesting Complications.—I. Friedman, in summing up the interesting points in five cases of typhoid fever, says that in Case I. the pus from the suppurated parotid did not contain typhoid bacilli, but a pure culture of the pneumococcus. Case II., complicated by intermittent malarial fever, further proves the possibility of double infection. In Case III., at the time of perforation, the temperature did not show the usual sudden drop. Case IV. tends to show that low enemas do not produce the desired result in securing free evacuation of the bowels and so prevent the serious complication of auto-infection; further, it shows that the use of decinormal saline solution has little effect on the conditions resulting from this complication. Case V. shows the not uncommon difficulty in making a differential diagnosis between miliary tuberculosis and typhoid fever. Tub baths produced a decided and prompt amelioration of many of the serious symptoms in these cases.

Osteomyelitis of Fibula with Spontaneous Casting Off of the Entire Bone, Empyema, Pyæmic Abscesses; and Recovery, with a Useful Limb.—J. C. Steuer gives the history of this case with the final results of his treatment. The leg was incised and the pus evacuated. The pleura was incised and drained and the various abscesses were opened. All the wounds were dressed with bichloride gauze and irrigated with 1 : 2,000 bichloride solution. Digitalis, nux vomica, and brandy were prescribed. The child recovered with very little trace of her severe illness.

Kryofin in Neuralgia.—Charles J. Aldrich's experience with this drug shows it to be safe in comparison with acetanilid, although it is as active. It is also safer than phenacetin. The purely neuralgic cases seem to be its field, and when used judiciously it rarely disappoints. It is often given in doses of gr. xv–xx., with excellent results.

A Case of Puerperal Mania with Albuminuria.—C. F. Dutton, reporting this case, believes that both the nephritis and mania were due to autotoxæmia. Whether the poison had its origin in the alimentary canal, in the liver, or in the more general metabolism of the body does not appear.

A Case of Appendicitis.—George W. Crile reports the substance of this case as follows: Rupture of gangrenous appendix; general peritonitis; incision and drainage; fecal fistula; resection with end-to-end anastomosis; ventral hernia, herniotomy, recovery.

Treatment of Stone in the Bladder.—C. B. Parker states that the successful treatment of stone in the bladder is always surgical. The two approved methods are: 1, litholapaxy; 2, lithotomy.

Guaiacol in Orchitis and Epididymitis.—William Huss notes the remarkable effects of guaiacol in these painful affections. It was first used on suggestion of Dr. Aldrich.

Report of a Case of Persistent Priapism.—W. J. Scott thinks that in this case the condition must be a reflex to the constrictor penis.

The Medical Chronicle, February, 1900.

Peripheral Neuritis following Chorea Treated with Arsenic.—J. C. Railton reports four cases which show that there is a risk of disastrous results following the treatment of chorea with arsenic, if that remedy is given in doses which amount in the aggregate to as much as six grains of arsenious acid. The results may give no warning of their approach during the administration of the drug, but make their appearance afterward with an interval varying from a week to a fortnight subsequent to its discontinuance.

Statistics on Lactation.—G. F. Blacker found that out of one thousand women of the lower classes in London, only twenty-four never suckled their children on account of an entire absence of milk, and of these only eleven were multiparæ.

The Edinburgh Medical Journal, February, 1900.

Vaginal Cœliotomy.—J A. C. Kynoch claims the following advantages for the vaginal over the abdominal route: Shorter convalescence, no abdominal cicatrix, consequently no risk of hernia or formation of intestinal or omental adhesions; less shock, drainage, if necessary, carried out through the posterior fornix. Cases suitable for the vaginal route (other means of treatment failing) he believes to be: Mobile retroflexion, causing symptoms at about the menopause; chronic ovaritis with adhesions; prolapse of the ovary with fixation; ovarian cysts if small; pelvic hematocele; unilateral, mobile, tubal swellings. Cases unsuitable are large tumors, old standing tubal disease with dense adhesions.

Sprue.—Lauder Brunton uses dilute solution of bicarbonate of soda to lessen the soreness of the mouth, and treats the sore anus with an ointment of bismuth and lanolin. The diet should be an entirely milk one.

The Treatment of Hypertrophied Prostate by Vasectomy.—T. Vincent Jackson says that this operation has never been followed by any kind or degree of harm, and that it has seldom failed to relieve the patient.

Pyosalpinx Removed by Laparotomy in the Early Puerperium.—R. Milne Murray successfully performed this operation on a patient two days after delivery. There was a good recovery.

Injuries and Diseases of the Conjunctiva.—A. Maitland Ramsay describes the various accidents and diseases which may affect the eye, and gives the treatment therefor.

Papilloma of the Tongue.—J. Grant Andrews reports a case in which many features suggested carcinomatous change. After removal there was a recurrence in the submaxillary lymphatic glands.

Sudden Death following Labor.—G. W. Simla Paterson reports a case in which unsuspected cardiac lesions and suddenly superadded pneumonia caused death twenty-four hours after labor.

Effects of the Roentgen Rays.—J. Hall Edwards reports three cases of lupus in which the use of the *x*-rays gave fairly satisfactory results.

The British Journal of Dermatology, February, 1900.

A Clinical Study of Some Winter and Summer Recurring Eruptions.—H. Radcliffe Crocker first considers acrodermatitis pustulosa hiemalis, a papulopustular winter eruption of the hands, probably a variety of folliclis. The winter diseases *par excellence* are chilblains, Raynaud's disease, pruritus hiemalis, and dermatitis hiemalis (Corlett). Three cases are given which agree fairly well with others described under a variety of names, including the one employed, folliclis. He says, in a foot-note, that since his paper was written he has read of a case described by C. W. Allen under the name necrotizing chilblain lesions, which seems closely analogous to his own, coming on only with the advent of cold weather. He described a recurrent pustular eruption of the hands similar to Corlett's dermatitis; a recurrent winter erythema causing red blotches upon the cheeks and about the mouth; an acneiform eruption limited to the nose; and a diffuse finely papular eruption. The recurrent tumor eruptions are vesico-pustular; vesicular, erythematous, and urticarial, numerous cases being cited, all except the acrodermatitis being of angioneurotic origin.

The Primary Lesion of Psoriasis.—William J. Munro points out as the result of studies in Sabouraud's laboratory that the initial lesion in psoriasis is a dry abscess in the superficial part of the horny layer of the skin; the vice of keratinization being secondary.

Dublin Journal of Medical Science, February, 1900.

Tropical Diarrhœa.—A. A. Gore discusses this question in the light of his military experience in India. During enforced residence in that country everything tending to lowered vitality should be avoided; habits should be regular, exercise moderate, diet unstimulating, and stimulants used only in moderate quantities. Flannel clothing must be constantly worn. On the supervention of diarrhœa, we may give a castor-oil purge guarded by a little opium. After that a most careful dietary is prescribed Later remedies include nitro-muriatic acid, lead, chloroform, bismuth, and carminatives.

A Contribution to Renal Surgery.—T. Myles discusses the question of bleeding in floating kidney, and gives the details of the method which he prefers for the fixation of this organ.

Dublin Fever.—H. Fitzgibbon studies a group of febrile symptoms which he attributes to unsanitary conditions in the city of Dublin. He considers the disease as an enteric influenza.

The Position of Murphy's Button in Modern Surgery. By J. S. McArdle. A continued article.

Il Policlinico, January 1, 1900.

The Action upon the Renal Function of Hypnotics Associated with Diuretics.—T. Pirocchi concludes from experimentation that chloral increases the diuretic action of caffeine and arbutin, occasionally that of diuretin and potassium nitrate, but that it has no effect upon sodium nitrate. The sulphate of duboisine increases the diuretic action of caffeine, sodium nitrate, diuretin, and arbutin, and sometimes of potassium nitrate. The most useful combinations are chloral and caffeine; chloral and arbutin; sulphate of duboisine and diuretin; sulphate of duboisine and the nitrate of sodium; sulphate of duboisine and arbutin.

Influence Exercised by Diphtheritic and Typhoid Toxins on Nutritive Exchange.—Domenico Pace concludes that a large but non-lethal dose of toxin causes a consumption of albumin, but exercises such an influence upon the delicate mechanism of nitrogenous exchanges that a second larger dose of the poison is felt only as a lesser dose which tends to economize the body albumin. This is what occurs when, in the study of the organic exchanges in an organism, repeated doses of toxin create a condition of opposition to infection, or what Charrin calls "the nutritive type of immunity."

Metabolism in Ankylostoma Anæmia.—Giuseppe Vannini gives the detailed results of observations in six cases.

Albuminuria in Diabetes and Renal Diabetes.—By Ferruccio Shupfer. A continued article.

Lo Sperimentale, Vol. liii., No. 4, 1899.

Hemorrhagic and Necrobiotic Infarcts in the Cirrhotic Liver.—A. Bonome holds that these are not due to the formation of connective tissue, although related to the obliterating endarteritis of the small branches of the hepatic artery and to the disappearance of the branches of the portal vein. The impeded circulation in the liver due to cardiac lesions or even to functional insufficiency of the heart facilitates the production of these infarcts. It also favors the action of the tubercle bacillus and its toxins and the development of connective tissue.

Typhoid Infection Without Intestinal Localization.—L. Picchi reports a number of cases in which there were no intestinal lesions, but in which the pathological and bacteriological researches gave unmistakable evidence of typhoid fever. As to the method of entrance of Eberth's bacillus into the system, that is as yet unknown.

The Spinal Accessory Nerve is a Mixed Nerve.—Gaetano Pieraccini states that recent macroscopical and microscopical researches have proved beyond a doubt that the eleventh nerve is a mixed nerve.

Results Obtained by Specific Serum Therapy in Malignant Pustule.—Achille Sclavo gives the statistics relating to one hundred cases. All but two resulted in recovery.

Norsk Magazin for Lægevidenskaben, January, 1900

The Temperature in Psychopathic States and its Importance in a Diagnostic Sense.—Harald Holm says that the body temperature is normally slightly higher in the evening than in the morning, and in the rectum than in the axilla. Any notable departure from this rule in either direction—that is to say, if the morning temperature equals or surpasses the evening, or the axillary the rectal, or if the evening and rectal temperature are two or three degrees Fahrenheit higher than the morning and axillary respectively—indicates a pathological condition. The author presents the results of a special study of temperature abnormalities in the hysterical and insane.

Hysterectomy in a Case of Fibroid Tumor.—O. Semb reports the case of a woman, forty-four years old, who had excessive losses with severe pain at the menstrual periods. Examination showed the presence of a submucous fibroid the size of a goose egg; the uterus was hypertrophied and completely inverted; there was no prolapse of the vagina. The uterus was extirpated and the patient made an excellent recovery.

Specialism and Massage.—Chr. Bergh argues in favor of the performance of massage only by specially trained experts, and reports a number of cases of various affections in which this mode of treatment rendered signal service.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 15, 1900.

William H. Thomson, M.D., President.

Report by Drs. Roswell Park and Gaylord upon their Researches on the Etiology of Cancer at the State Laboratory, Buffalo, N. Y.—Dr. Roswell Park, who read the first paper, dealt with the clinical portion, or border line of the subject. He said that Arnold had called attention to the comparative frequency of what he called "fragmentation" of cancerous tumors, but others had claimed that this was a post-mortem change. Leucocytic aggregation and infiltration must be regarded as a reaction against some form of irritation. Leucocytic infiltration or phagocytosis was practically always the reaction against extraneous forces. The mechanism of lymphatic enlargement had not been made so clear yet as it should be. To his mind, every metastasis had the force and significance of an inoculation experiment. Secondary nodules in the involuntary muscles at a distance were very rare. Diffusion of cancer along the nerve trunks was very interesting, and was more frequent than was commonly supposed. Involvement of surfaces constantly in contact had been known to furnish numerous instances of the spread of cancer. That immediate contact was not necessary, was shown by cancer of the lip and tongue. Cancerous elements, when introduced into the serous fluids, seemed to find very favorable conditions for their development. A number of observers had succeeded in transmitting tumors from one animal to another of the same species. Syphilitic lesions, or their resulting scars, might be points of departure for cancerous formations. Fistulous tracts, especially those leading inward from the skin, with a gradual downward extension of the epithelium of the skin, had often been the starting-point of cancer. Scars were particularly prone to undergo cancerous change, and this tendency was the more marked in proportion as the nutrition of the scar tissue was lowered. For this reason, cancer was liable to attack scars following extensive burns. About the vulva, as well as about the tongue, slight but prolonged irritation or traumatism was a common source of cancer. One observer had reported no less than six cases, in which cancer of the uterus had been apparently the result of traumatism, inflicted by the use of a pessary. Of forty-eight cases of cancer of the liver reported by one observer, forty-one gave a history of gall stones. The speaker said that he had recently seen a marked case of multiple sarcoma, originating in what had been apparently an innocent nævus. In the mucous membrane of the alimentary canal similar changes were noted. Uterine adenoma certainly predisposed to cancer of the uterus. Dr. Park did not believe in the heredity of cancer, although he expressed his belief in a hereditary transmission of a soil favorable to the growth of cancer. He carefully distinguished between the cancerous dyscrasia, the forerunner of cancer, and the cancerous cachexia, the result of cancer. Apparently, cancerous cachexia was a complex product of numerous factors, though characterized in general by toxic phenomena. In this connection one should not lose sight of the effect of frequent and exhausting hemorrhages, and the common association with renal disease.

Dr. Gaylord made some remarks on the pathology of cancer, illustrating them with lantern slides. He said that the most prominent school in this line of recent research was the Italian school. He characterized Bras as an ignoramus, and his work as being in the hands of a charlatan. He had exhibited to the speaker some of his peculiar organisms, and these had been at once recognized as nothing more than common contaminations. Russell, of Edinburgh, eight or nine years ago had described what was now known as "Russell's fuchsin bodies." They occurred with sufficient constancy in cases of cancer to make Russell describe them as having an etiological relation to cancer. It had been soon found, however, that many other bodies having no pathological significance whatever also stained readily with fuchsin. Dr. Gaylord said that, from our present knowledge, it was not at all improbable that these so-called fuchsin bodies might, after all, have some definite relation to cancer. Shortly after Russell had come Walker and Plimmer. The latter investigator had stained twelve hundred carcinomata, and had found in these a certain organism, which could be injected into animals, and could be recovered from the tissues of these animals. Plimmer had not, however, succeeded in reproducing the phenomena of cancer by such inoculations. He had demonstrated that this organism was a species of yeast, and that it gave rise to certain well-marked pathological changes. The speaker then discussed pathogenic yeasts, and their bearing upon this subject. He stated that it had been only comparatively recently that a pathogenic yeast had been known to exist. Botanists had not yet definitely determined whether the yeast represented a definite form, or only a transition stage of a higher organism. It was probable that it existed in two forms, one being a pathogenic fungus. The most exhaustive research showed that it was so far impossible to classify yeasts morphologically. He had employed Plimmer's technique recently in twenty-five cases of carcinoma, and in every instance had found Plimmer's bodies therein. These organisms had been occasionally cultivated, and hence it was not probable that these bodies were degeneration products. Concerning the work at the State cancer laboratory in Buffalo, the speaker said that those working there had exhausted all the classical methods of investigating the nature of cancer. They had once succeeded in producing carcinoma by inoculation with the organism referred to. Their recent experiments had embraced prolonged and thorough drying of infected lymph nodes, proved by the microscope to contain Russell's bodies, and the injection of the powdered product into animals. In each instance the animal had died within three or four weeks, and the lymph nodes had been found generally enlarged, and had been shown by the microscope to contain large numbers of Russell's bodies. He thought it probable that if these bodies bore an etiological relation to the tumors, it was a very broad one, and probably would be found related to all forms of rapidly growing tumors.

THE PRACTITIONERS' SOCIETY.

One Hundred and Fifty-Second Regular Meeting, Held on Friday, January 5, 1900.

A. Alexander Smith, M.D., President, in the Chair.

A Case of Recurrent Retinal Hemorrhages.—This was presented by Dr. E. G. Janeway. The patient was a man, thirty-eight years old, who had suffered from four attacks of hemorrhage into the retina. In the first attack, which occurred about four years ago, there was a hemorrhage into the retina of both eyes; in the two subsequent attacks only the left eye was involved, and in the last attack the right eye. Dr. Janeway said the case was interesting on account of the location of the hemorrhages, and because no adequate reason could be assigned for them. They occurred when the patient was fatigued or while he was suffering from a cold or coryza. The man's heart was a little enlarged, and there was a faint systolic murmur on one examination. His urine was generally loaded with urates. There had been no hemorrhages elsewhere, and nothing of the nature of purpura. The sight of both eyes was much impaired, particularly the right. He had had rheumatism in earlier life, and diphtheria some nine years ago.

Dr. Charles Stedman Bull, after examining the patient's eyes with the ophthalmoscope, said he regarded the case as one of chorio-retinitis disseminata, the inflammatory process being primarily in the choroid, with resulting hemorrhages. In one eye an extensive hemorrhage involving the macula had been followed by a large atrophic patch, leaving nothing but the sclera. The right eye was the more seriously involved. The lesions were more numerous at the periphery than in the centre of the field in the left eye. The blood-vessel walls did not show any ophthalmoscopic evidence of disease, and the speaker said he thought the cause of the trouble was in the blood rather than in the vessel wall. In the left eye the nerve was still perfectly healthy, well nourished, and normal in appearance, but around the optic discs in both eyes there were marked degenerative changes in both retina and choroid. Dr. Bull said he thought the original cause of the trouble was some blood disorder, possibly rheumatic, producing an ophthalmoscopic picture totally different from that observed in cases in which the vascular walls were diseased.

A Case of Primary Intrathoracic Growth of the Left Lung.—This case was reported by Dr. Janeway. The patient was a man, forty-seven years old, who had been in good health until last September, when he began to complain of shortness of breath. His previous history, as well as that of his family, was negative; he had never had syphilis nor met with an accident. When Dr. Janeway first saw him, about three weeks ago, the dyspnœa was very pronounced. There was swelling of the neck and lower part of the face, and the patient complained of a throbbing in his head. Examination showed an intrathoracic growth which had replaced the upper lobe of the left lung. The veins of the neck were swollen and congested, and a superficial vein about as large as a lead pencil, beginning about the sixth rib, ran down the left side of the chest to the level of the umbilicus, with its current of blood downward. The speaker said he attributed this to interference with the current of blood in the vena azygos, internal mammary, and some of the intercostal veins, causing a reflux of the blood. Dr. Janeway said he regarded the intrathoracic growth in this case as a sarcoma or carcinoma, probably originating in the mediastinum, on account of its rapid growth and the marked pressure symptoms it had given rise to. The man was now scarcely able to walk across the floor. Intrathoracic growths, Dr. Janeway said, were more common than was usually believed. During the past year, four such cases had come under his observation. In one, which he saw about three weeks ago, death occurred suddenly as the man was turning over in bed. That patient had been under treatment for months for severe intercostal neuralgia. He then developed some pleurisy and subsequently symptoms which indicated the presence of an intrathoracic growth, which proved fatal. In another case which he saw last spring, the patient, a lady, was supposed to be suffering from pulmonary tuberculosis. Over the left lung there was marked flatness, with loss of vocal fremitus, and paralysis of the left recurrent nerve. There were no fever and no special distress; there was very little displacement of the heart. Subsequently, the disease affected the other lung, and pleurisy with effusion developed. The patient died of suffocation within five days.

Dr. Janeway also reported the case of a woman whose cousin had died of sarcoma of the pleura. Two years before her death she had an attack of pericarditis in the course of slight rheumatism. From this she made a complete recovery, and the examination of the lungs showed no evidence of disease. About a year before her death she began to complain, and an examination showed a progressive solidification of the left upper lobe with dulness and bronchial breathing. Gradually fluid took the place of the lower lobe, while the side of the chest did not enlarge nor did the heart become displaced; neither was there any fever present. Some of the fluid in the lower part of the left chest removed for diagnosis was of low specific gravity, without blood or diagnostic cell contents. From these factors the diagnosis of carcinoma of the left lung with retraction was made. Toward the end of life a nodule made its appearance in the left breast, which had previously been free. At the autopsy the left lung had the appearance of a chronic pneumonia. The lung was of a grayish color, retracted, and a clear fluid filled the rest of the pleural space. Two secondary cancerous nodules were found in the right lung, two in the liver, and one in the left breast. The reasons for the diagnosis of cancer before death were given above. Even at autopsy this case might have been mistaken for chronic pneumonia.

Dr. Robert F. Weir said the subject of intrathoracic growths was interesting from a surgical standpoint, particularly those occupying the mediastinum. Growths in this region were of more common occurrence than was generally supposed. Of the malignant neoplasms, carcinoma was the most frequently observed, and in such cases surgical interference was of very little avail, but when the anterior or posterior mediastinum was the seat of a benign tumor, due perhaps to enlargement of the glands in that region, the possibility of surgical relief from such pressure effects should be borne in mind. A certain amount of success had already been achieved by operating in these regions. Posterior incisions, through which the œsophagus and growths in the posterior mediastinum may be reached, were known to all the members. Anteriorly, Milton, of Cairo, had shown that much could be done by splitting the sternum nearly its whole length and retracting the two sections of the bone for a distance of from one to two inches, thus obtaining free access to the anterior mediastinum. Others, with the same object in view, proposed division or ablation of the sternum high up. Dr. Weir had in one instance been able to reach behind the sternum to a distance of nearly one and a half inches below its notch.

Dr. George L. Peabody related a case of primary carcinoma of the lung which came under his observation on the autopsy table some years ago. The patient was a man whose only symptoms of pulmonary trouble made out during life were those of a bronchitis. His most prominent symptoms, for which he had been treated for many weeks, were of spinal origin. There was evidence of pressure on the cord in the dorsal region, with intense pain, ultimately paralysis, and death from exhaustion. The autopsy showed a diffuse development of carcinoma in both lungs, with a secondary large growth involving the dorsal vertebræ and the muscles of the back. The disease had undoubtedly originated in the lungs, yet the symptoms referable to those organs were very trifling.

Treatment of Hernia of the Sigmoid Flexure.—This paper was read by Dr. Robert F. Weir (see page 309).

Dr. Joseph D. Bryant said that his experience with hernia in the region described by Dr. Weir was not very extensive; he had seen two cases of cæcal hernia and one of sigmoid. In his first case of cæcal hernia he was prompted to suspect that he had to deal with this condition—or at least with some form of hernia which was not properly provided with a sac—because there was no history of any definite periods of reduction, such as commonly occurred in a hernia which was provided with a proper sac. Then again, the outline of this hernia, which was not strangulated, was different from that frequently observed. An incision was made in the usual way, but lower down, and after exposing the intestine and liberating the connective-tissue adhesions lying between it and the adjoining structures, the hernia was quite easily pushed back. No gangrene or other unfavorable symptoms resulted. The man was discharged from the hospital and lost sight of, so it was impossible to say whether a recurrence took place or not. In the second case of cæcal hernia, which was strangulated, the operation proved more difficult. Reduction was accomplished only after free separation of the tissues, with division of the restraining bands on either side, including the peritoneum. The patient made a good recovery. In the case of sigmoid hernia, Dr. Bryant said he did not suspect this condition of affairs until the time of operation. Reduction was comparatively easy because of the fact that the intestines were better provided with peritoneum than was usually the case. In operating on this class of cases, the speaker said, care should be taken not to employ too great force, and interference with the vascular supply should also be avoided. In the next case which might chance to come under his observation, Dr. Bryant said he would resort to the method described by Dr. Weir.

Dr. Charles McBurney said he had seen four cases of hernia of the sigmoid flexure possessing the peculiarities which Dr. Weir spoke of. He had never recognized the condition prior to the time of operation, the external signs having been those of ordinary left inguinal hernia. Aside from the confusion arising from failing to find the usual hernial sac, Dr. McBurney said he experienced no special difficulty in dealing with the cases. In each instance the mass was returned to the abdominal cavity by means of blunt dissection and gentle manipulation, and then the wound in the abdominal wall was closed in the usual way. The cases did well, and recurrence had not taken place when they were last heard from. Dr. McBurney said he did not think the danger of impairing the vascular supply of the intestine deserved much consideration, unless the dissection was carried too close to the intestine. As soon as the true condition of affairs was recognized care should be taken to make the dissection as far away from the intestine as possible, so as not to interfere with the plexus of vessels running into the gut. Of course, if the dissection was made very close to the wall of the gut, every stroke of the knife divided so many supplying vessels. Dr. Weir mentioned several cases of intestinal fistula resulting from defective vascular supply of the gut, but in connection with such a statement the kind of wound healing which followed the operations should also be known. If clean, aseptic healing was obtained, the speaker said he would feel absolutely safe about the nutrition of the gut, but if suppuration occurred he would feel afraid that the vascular supply of the gut might suffer. The method of peritoneal covering described by Dr. Weir, the speaker said, he had never seen employed; from the description, it appeared to be an attractive method of dealing with such cases.

Dr. Weir, in closing, said that the cases which he had collected from the French literature did not always give the details of the operation. He was therefore unable to say how much dissection was done, but he was inclined to believe that a good deal of force had been employed in replacing the bowel. He said that two classes of this form of hernia were met with; in one class the gut was comparatively loosely attached and could be pushed back without much trouble and retained there, but there were other cases in which, because of inflammation, or long residence *in situ*, or slight traumatism, the connective tissue became dense and a certain amount of dissection was required. Of course, it was better to cut widely, but the most important factor to remember was to employ no force in manipulating the gut. As regards the healing of the wounds in the cases he had quoted, Dr. Weir said the operations had been done by well-known surgeons, and he was inclined to believe that they worked with proper antiseptic precautions.

Dr. Bryant said he had recently operated on a woman for recurrent appendicitis, and found that the appendix arose from a posterior fibrinous band of the ascending colon, at the junction of its upper and middle third. The speaker said he had never seen or read of anything of the kind before. The patient made an uneventful recovery.

Dr. Charles Stedman Bull said that at the previous meeting of the society Dr. Kinnicutt had reported a case of acromegaly, and the patient had subsequently had an ophthalmoscopic examination. This had proved absolutely negative, as far as any pathological conditions of the optic nerve were considered, much to Dr. Bull's surprise. The speaker said that well-marked cases of acromegaly generally showed advanced signs of atrophy of the optic nerve.

Chorea and Tænia.—Dr. Andrew H. Smith reported the case of a boy, twelve years old, who suffered from chorea, and had a distinct cardiac lesion. He was treated for a long time without much benefit. Recently, the nurse discovered some flakes of tape-worm in the stools, and upon the expulsion of the worm the chorea readily yielded to treatment. It disappeared within a week after the tape-worm was expelled.

Dr. A. Alexander Smith said it was not uncommon to see choreic manifestations in children suffering from tape-worm.

Dr. Beverley Robinson said he was recently called to see a woman who was suffering from what was apparently a severe attack of bronchial asthma, with marked cardiac depression, cold extremities, and a condition bordering on collapse. Her symptoms, it appeared, had been induced by some tablets which her husband had given her for the relief of a "cold." The tablets were made by a patent-medicine concern, and Dr. Robinson said he was unable to learn their composition.

Typhoid Bacilli and the Gall Bladder.—Dr. Weir said he was recently called to operate on a woman who, about a month before, had recovered from an attack of typhoid fever. Recently she had been seized with a severe pain in the region of the upper abdomen, and on the right side a tumor was made out, which was recognized as a distended gall bladder. This was opened, and about six or eight ounces of a tolerably clear glairy fluid and some pus were evacuated. This was sent to the pathologist for examination, who reported that it contained large numbers of typhoid bacilli. The gall passages, it was supposed, had become temporarily blocked by a catarrhal swelling. Though a number of such cases had already been reported, yet they were comparatively rare and obscure. Dr. Weir asked whether any of the members present had observed similar cases.

Dr. Andrew H. Smith said he recently saw a young woman convalescing from typhoid fever; her temperature was normal, when she was seized with what was apparently an attack of hepatic colic; there was tenderness over the region of the gall bladder, and an ill-defined tumor could be made out.

Dr. Walter B. James mentioned the case of a boy, aged twelve years, who very early in the course of typhoid fever developed jaundice, with severe pain over the gall bladder, and some enlargement of that sac. His symptoms were regarded as the result of a catarrhal condition of the gall ducts. The patient went on through a mild attack of typhoid fever, from which he made an uneventful recovery.

Dr. Weir said that certain German observers regarded the mucous secretions of the gall bladder as a very good medium for the cultivation of the typhoid bacilli.

Dr. Janeway said this subject was now being studied at the Johns Hopkins laboratory.

Dr. Peabody said the fact had been recognized that the gall bladder could be infected by the typhoid bacilli. In the case referred to by Dr. Weir, there had been a previous attack of biliary colic some years ago.

Dr. Janewav said the fact that in Dr. Weir's case a light glairy fluid was evacuated, indicated a stoppage of the cystic duct. The speaker said he had recently seen a woman who was quite indignant because an operation for gall stones had not saved her from a recurrence of the same trouble. She had had four attacks of gall-stone colic during the past six weeks, three months after the operation, and in three of them she passed gall stones. Another patient, a man, was operated on by Dr. Bull, who removed a stone from the common duct by opening the duodenum. A year later, at a second operation, another stone was removed. The patient now wished to know whether he could get rid of his gall stones by other than surgical means.

Dr. McBurney said it had never been claimed that these operations prevented the formation of gall stones. If, after the operation, nothing was done to prevent the formation of the stones, recurrent attacks were apt to occur.

Dr. J. W. Brannan said that it had been suggested that the bacilli in the gall bladder might be the direct agent in causing relapses in typhoid fever. So long as the bacilli remained in the bladder, they apparently did no harm, except perhaps locally. It was probable, also, that they might be discharged into the bowel without reinfecting the patient, provided this did not occur until after he had become immune against a second attack of the disease. If, however, this occurred before immunity had been acquired, the patient was liable to suffer a relapse. This view enabled us to account for the relapses which so often followed upon indiscretions in diet before convalescence had been thoroughly established. The more liberal diet stimulated the liver, and caused an increased flow of the bacteria-laden bile into the intestine, at a time when the patient was not protected against infection. In support of the opinion that typhoid bacilli were an etiological factor in the formation of gall stones, Keen in his "Surgical Complications of Typhoid Fever" stated that typhoid bacilli had been found by several observers in the gall stones themselves, and in some cases apparently serving as a nucleus.

Dr. Robinson reported the case of a boy, who was treated at St. Luke's Hospital for typhoid fever. He apparently made a good recovery, and as he had been without any fever for at least eight days, he was allowed to go home. For some days previous to his discharge, his diet had been practically unrestricted. On the night of his arrival home, he had a high fever, and when Dr. Robinson saw him the next morning his temperature was 102.5° F. He was sent back to St. Luke's Hospital with a relapse which had lasted for several weeks. Dr. Robinson said he could explain the relapse only upon the basis that reinfection had occurred through the gall bladder.

Dr. James said he had seen a relapse occur as long as twenty-eight days after an attack of typhoid fever.

Dr. Peabody mentioned a case in which a relapse had occurred after three weeks.

Correspondence.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

Writing as I do at the beginning of the second week in February, I have no new information to transmit to you from the seat of operations, as matters have been for the past ten days at a complete standstill. At Modder River the camp is healthy, and there have been no casualties. The stories that the Boers in the trenches just ahead of Lord Methuen are suffering severely from typhoid fever and smallpox are all perfectly untrue. With General French's column a few casualties have occurred, but there has been no actual engagement on the Free State frontier; and while the present lovely weather lasts in South Africa the medical department of the forces is not likely to have much to do unless as a direct result of fighting. From Ladysmith the cheering account comes of a better state of health; the spread of typhoid fever has apparently ceased, and with this cessation the urgency to relieve the city has disappeared. Sir Redvers Buller has probably come to an understanding with Lord Roberts that he will not attack again till Lord Roberts is ready to move up also, a policy which the better public health of Ladysmith now renders practicable.

The Irish Hospital.—Lord Iveagh's hospital equipment, which is known as "the Irish Hospital," left Dublin for the Transvaal on February 3d, and had by far the most enthusiastic and popular send-off that has been accorded to any of the numerous bodies of men who have left Dublin for the seat of war. In Ireland the feeling among the lower orders, which it must be remembered is reflected by the members of Parliament, is more pronouncedly in favor of the Boers than it is in any other part of the kingdom. Many English and Scotch regret the war most sincerely, but all, whether they think the situation to have been inevitable or to have been brought about by faulty diplomacy, greedy capitalists, or ambitious politicians, hold that, being in the quarrel, Great Britain must bear herself as one that eventually intends to win. When the war is over, let the recriminations come. Not so many of the Irish people; so sincere is their hatred of England that they desire the Boers to win, although the most determined soldiers in the army that is fighting against the Boers are Irish by birth and recruited in Dublin. The "Irish Hospital," however, came in for no expression of ill-will; on the contrary, the aims of its generous donor and its staff were recognized in the heartiest way by the citizens. The hospital corps was played out of barracks by the band of the Royal Irish Constabulary, and marched through densely crowded streets to the North Wall. The whole line of the quays was a mass of cheering men and women, who made it sufficiently clear that all good wishes went to South Africa with the departing hospital and its officers. Dr. George Stoker was in command, Sir William Thomson, ex-president of the Royal College of Surgeons of Ireland and chief surgeon to the hospital, having previously started for the seat of war.

The Imperial Yeomanry Hospital Staff.—When the superior mobility of the Boers to the British—not to say the absolute uselessness of infantry attacks delivered point-blank against an ambushed enemy—had been demonstrated by three or four serious reverses, the British government decided to send out to the Transvaal ten thousand mounted volunteers. These, the Imperial Yeomanry, required to be supplied with a complete hospital equipment, and the personnel of the medical staff to accompany the hospital has now been announced. It is as follows: Lieutenant-Colonel A. T. Sloggett, R.A.M.C., military commandant of the Imperial Yeomanry Hospital and principal medical officer; Mr. Alfred Downing Fripp, assistant surgeon to Guy's Hospital, chief civilian medical officer; Dr. John Wichenford Washbourn, physician to Guy's Hospital; Mr. Raymond Johnson, assistant surgeon to University College Hospital; Mr. F. Newland Pedley, dental surgeon to Guy's Hospital; Mr. L. Vernon Cargill; Mr. Hamilton A. Ballance; Mr. William Turner; Mr. John F. Hall Edwards, surgeon-radiographer and photographer; Mr. Wallace C. G. Ashdowne; Mr. J. S. Christopherson; Dr. Andrew Elliot; Dr. H. W. Saunders; Mr. L. E. C. Handson; Dr. H. W. Bruce; Mr. A. P. Parker; Mr. G. E. Richmond; Mr. R. T. Fitzhugh, and Mr. Barclay Black.

The Excellence of the Medical Arrangements at the Seat of War.—On all hands it has been allowed that the medical arrangements in the Transvaal have been excellent. Correspondents with Buller's column and with Methuen's column alike have said that the Royal Army Medical Corps have discharged their duties both in the front and at the base, on the march and under fire, with calm and deliberate attention. There has been no sacrifice to display and no hurry. The wounded have been quickly collected, rapidly dressed, and comfortably transported to hospital. There has been but one voice dissenting to this view, a view that has been adopted upon the authority not only of special correspondents of all nations and of the medical press, but upon the direct reports of Lord Roberts, Sir Redvers Buller, and Sir Willam MacCormac. But an anonymous correspondent of *The Times*, writing late in January, sent back a message to England to the effect that the arrangements of one of the big base hospitals at Wynberg were bad, and that there was disagreement between the R.A.M.C. and the Red Cross organization. *The Times*' correspondent was quite inaccurate, and telegrams from the highest authorities at the Cape gave his assertions direct contradiction, and people are wondering how *The Times* came to print the insinuations and why the government does not print the rebutting telegrams.

Coxalgia with Abscess.—Iodoform in ether is painful as an injection; camphorated naphthol is toxic. Under camphorated menthol healing takes place in seventy-five per cent. of cases.—Ménard.

IDENTITY OF DIPHTHERIA AND MEMBRANOUS CROUP (?)—A COUNTRY PROTEST.

To the Editor of the Medical Record

Sir: It is taught and supposedly believed by the profession that these diseases are one and the same. I cannot think so, and I wish to state some of the reasons why I cannot. There is, I know, a diphtheria of the larynx, contagious and capable of reproducing itself in larynx or pharynx, nares, and elsewhere; but there is also another disease of the larynx, which we country practitioners call membranous croup, not specific in character, whose origin is much the same as that of pneumonia, and which is no more contagious than pneumonia. It originates sporadically and does not propagate itself. The desolating track of diphtheria by a little investigation may always be traced before and after, while in my observation this croup blew where it listed, and no man knew whence it came or whither it went. In many cases I have seen it have every opportunity of contagion, yet contagious it has not been in a single instance. Time and again have I seen it in the same house, in the same log cabin, in the same room, in the same bed with other children, yet no contagion. Often have I seen other children tucked under the same coverlet ere the "light that failed" dimmed in the eyes of the sick one; yet no contagion. I have seen little brothers and sisters kiss the dying forehead and mouth; yet no contagion. I have seen mothers hold the stertorous mouth of their gasping three-year-old to their breasts for hours, and then with unwashed hands, with unchanged dress, nurse their infants through garments sodden with the sick one's breath; yet no contagion.

Further, observation has given me some hope in the treatment of diphtheria, but this croup ever brings its rope and black cap, and I stand by its bedside as helpless as a mother by the gallows of her law-doomed child. I am compelled, therefore, to believe that, if these diseases are the same, "it is a sameness with a difference," both as to contagiousness and fatality, and different I assuredly believe them to be. I am aware that my limited experience entitles my opinion to little weight, yet I am convinced that if country practitioners will lay aside their fear of being accused of bucolic ignorance, and, like Sairey Gamp, "speak as they find," their aggregate voice will give my opinion substantial approval.

S. M. Worthington, M.D.

Versailles, Ky.

GUARDING AGAINST THE PLAGUE IN JAPAN.

(From our Special Correspondent.)

Tokio, January 12, 1900.

Preparations on a very extensive scale are being made to meet the epidemic of the pest, which it is feared will break out in the spring. The total number of cases up to the present time is fifty-five; namely, twenty-seven in Osaka, twenty-three in Hyōgō, and one each in Fukuoka, Nagasaki, Wakayama, and Shiznoka. Of these forty-five patients have died, and it is doubtful if some of the remaining ten will survive. Yersin's serum has been tried, but has not yet given evidence of a satisfactory nature as to its real value in the present appearance of the disease, which attacks and destroys the victim so quickly as to leave little time following its discovery for any measures whatever. It is said that the serum would doubtless prove useful as a preventive, if those exposed to contagion always made use of it. Three physicians have already contracted the disease while engaged in inspection, and died; while the wives of all three have likewise become infected, and may not survive. The infection is supposed to have been important from New-chwang, China, or Formosa, in which latter place it has existed for over a year, but in a far more malignant type than that of the disease now existing in Japan.

High fever, acute pneumonic symptoms, dyspnœa, and heart failure characterize the present appearance of the disease, which, it is thought by some, is carried in the air like influenza, an epidemic of which is now in progress.

Extensive and thorough sanitary measures are now being carried out, by which the examination of dwellings and the persons of the inhabitants of the lower class in cities threatened, and the complete isolation of patients suffering from the disease, or suspected of having it, are being accomplished; while special precautions are being taken upon all lines of travel for the inspection and detention when necessary of all suspects. These measures are being conducted under the supervision of Drs. Kitasato, Ogata, Nakahama, Shiga, and others, while Drs. Eldridge, Wheeler, and Koch, of Yokohama, are acting as an advisory committee in that port, where most of the foreign travel concentrates.

Dr. Eldridge, who as United States medical inspector has charge of the inspection of passengers proceeding on vessels to the United States, regards the outlook as serious, and considers most rigorous quarantine of new cases absolutely necessary, including the destruction of the buildings by fire when circumstances will permit.

In Tōkyō a wholesale cleansing has been going on for several weeks, including the taking up of floors and sweeping the ground underneath, as well as ceilings, when practicable. A price, 5 sen apiece (2½ cents), has been set upon rats and mice by the municipal authorities, and it is hoped that a general destruction of this kind of vermin will ensue.

The writer has driven rats out of his own house for a time by the use of a formaldehyde generator, placed between ceiling and floor, and phosphorus paste has also proved successful here, although neither of these means is applicable to the dwellings of the lower class in Tōkyō and other large cities in Japan.

THE APPENDICITIS QUESTION.

To the Editor of the Medical Record.

Sir: In the Medical Record for January 27, 1900, Dr. Morris asks if I know of any responsible surgeon who will operate for removal of the normal appendix. I do not, and I hope I never shall; but the logic of Dr. Morris' position must inevitably carry him to that very thing. It is only a step from operating on a very mild case because it is liable to become severe, to operating on a normal appendix because it is liable to become infected. If the doctor will divest himself of the glamour of hospital statistics, and put himself in touch with the sentiment of general practitioners and conservative surgeons, he will find that the appendicitis question is not an unending controversy, but that the great majority have practically settled the question of management in general, as follows:

"Operate as a rule in recurring cases. Operate in primary cases when circumstances arise which, in the opinion of the physician, make it justifiable."

There it is in a nutshell, as it were. Physicians might well wish it otherwise. What a weight of responsibility and care would be lifted from them, and how gladly would they adopt the exclusively surgical plan of operating on every case, if they could do so with justice and safety to their patients! Then it would simply be a matter of diagnosis, operation, and either recovery or leaving it to the surgeon to explain to the family how it happened; no worry, no responsibility, no drawing on the utmost resources of one's mind, that the best interests of his patients may be conserved. Yes, we would gladly adopt the surgical method, if we could honestly.

But again, if we would adopt the exclusively surgical plan, there is a practical obstacle to operating on very mild cases that would have to be overcome, that one in Dr. Morris' position is apt to lose sight of. A physician on reading the "Treatment of Appendicitis from a Surgical Standpoint" decides to follow it in his next case. He is called to see a patient supposed to be suffering from indigestion—belly-ache, or some kindred ill—and finds on careful examination that the patient has appendicitis. Although everything is apparently favorable for a mild attack, with every prospect of recovery, he calls the family and friends together, and tells them that the patient must immediately be cut open, and his appendix removed. They at once say to him, "Do you think he will die without operation?" and the physician, if honest, will answer, "No; the chances are ninety-nine out of one hundred that he will recover." "Then why do you advise operation?" they ask. He replies that something might come up in a few days that might alter the patient's condition, and make an operation advisable. Then he is met with the question, "Do you think there will anything arise?" and again, if he is honest, he will say, "There is a possibility that there may, but the chances are that there will not"; upon which they naturally wonder why it would not be advisable under the circumstances to wait until there was some sign of something unfavorable liable to set in in the case, before subjecting him to a serious operation. Then what will the physician do—insist upon an operation, and, if it is refused, retire from the case, because some surgeon high in the profession has said that every case, even if it were very mild, should be operated on? Or will he go on and treat the case in the manner which his judgment, based upon experience, and observation, and the accumulated experience of almost the entire medical profession, tells him to do?

There has as yet been no reason of sufficient importance presented to the profession why such a case should be operated on. "Sufficient unto the day is the evil thereof" is just as sound logic to-day as it ever was.

Dr. Morris says he has published letters from patients approving his method of treatment, and insists that we should be impressed by them: I am sure if the doctor would consider for a moment the thousands of letters published from patients testifying to the superiority of certain methods of treatment from cancers cured without knife or pain, to cases of locomotor ataxia cured almost while you wait, he would not lay so much stress on published letters.

Another point that Dr. Morris lays too much stress upon is the difference in the prognosis of cases treated medically and those surgically treated. He says we must tell the patient at the commencement of each case whether it is to be a mild or severe attack, or own up that the nature of each case is determined afterward. That saying would apply with equal force also in typhoid fever, pneumonia, scarlet fever, and many other diseases of which, of course, the positive outcome can be determined only afterward; but it is necessary for the successful physician to be able to make a prognosis beforehand, and it is certainly a matter of common knowledge that in any of the above diseases the physician will be asked immediately upon his diagnosis for a prognosis; and there are a certain group of symptoms taken together by which the physician is enabled to tell the patient's family, of course not positively, but very nearly so, that such and such a patient will recover unless complications set in; that another patient's chances are against him, and if it be appendicitis the experienced physician will be able to say with reasonable correctness that he will recover, or perhaps that his condition shows that an operation would give him a better show, or may be that he will probably die, but an operation may possibly save him, the prognosis depending upon the case and the circumstances. Now let us see what the surgeon would say. If it be a mild case and circumstances warrant, he can say that "an operation will probably result in recovery." I do not understand that Dr. Morris or any other responsible surgeon guarantees recovery in every case, even in operations on the mildest. If it be a primary case and complicated before the surgeon sees it, he will probably give a prognosis that is indicated by the gravity of the case. Therefore we see that the exact outcome can be determined only afterward in surgical as well as medical cases; as neither the physician nor the surgeon can guarantee recovery in a mild case, the relative value of their respective prognoses can be determined only by the results of similar cases in the past. In addition let us remember that the physician who has diagnosed a case of appendicitis, and has been enabled from the conditions to give a favorable prognosis, has in reserve the knife as a sheet-anchor, providing something does turn up to alter his first opinion.

Dr. Morris admits that he draws his conclusions from a careful comparison between the results of surgical and the medical treatment, as shown by hospital statistics. To show how unreliable and worthless to the profession such conclusions must be, we need only remind the doctor that the general practitioner does not employ the exclusively medical treatment, but also that hospital medical statistics show an immensely heavier rate of mortality than physicians find in their private practice. The uselessness of hospital medical statistics to the profession at large has already been published.

That Dr. Morris will never see the mode of treatment he upholds accepted by the profession at large I am confident, not only on account of any unsoundness which may exist therein, but also because it is essentially impracticable.

J. S. Horner, M.D.

West Pawlet, Vt., February 3, 1900.

OSTEOPATHY AND THE LAW.

To the Editor of the Medical Record.

Sir: Your editorial in the Medical Record of January 20th, on "The Set-Back for Osteopathy in Kentucky," ought to be a source of satisfaction to every one who has at heart the welfare of his fellow-citizens, not to mention the interests of the medical fraternity. That osteopathy unrestrained is not a harmless form of charlatanism, but a real menace to the life of many a poor patient, I have long been satisfied, and I wish to relate a case in point that a few weeks since drove conviction home to me more strongly than ever.

Called in great haste one morning to see a sick person in my neighborhood, I found a young woman dying in collapse—pulseless at the wrist; shallow, rapid respiration; ashen pallor, blue lips, pinched nose, clammy sweat; heart sounds feeble and very rapid, and temperature subnormal—but withal clear-minded. There was no pain, but profound weakness. She had had intense abdominal pain, especially in the right iliac region, since ten o'clock the previous day, but it had suddenly left her at about one o'clock in the night. Examination showed the abdomen moderately distended, tympanitic, quite rigid, and very sensitive, with marked resistance over the McBurney region. My diagnosis was ruptured abdominal abscess, probably appendical. In about five minutes after my arrival she lapsed into unconsciousness, and in ten minutes more was dead. Shortly before she died, another physician, summoned from a distance earlier in the day, arrived.

On inquiry of the friends as to the previous history of the case, I learned that she had for some days past complained of indefinite abdominal pains coming on at intervals, but had not taken to bed till the morning previous, and, indeed, had prepared breakfast for the family that day. Seized with severe pains about the middle of the morning, she went to bed, and had suffered intensely, vomiting several times, till the small hours of the following morning, when the pain suddenly subsided as I have said. I asked who was attending her, and was told she had had no physician, which I thought very strange, as they seemed intelligent people and were able to have one, and certainly her symptoms must have been alarming.

Returning to my office, I left affairs in the hands of the physician first called, as he was a friend of the family, and a little later was surprised to receive a call from him in company with the undertaker to get my signature on the death certificate. I did not see why he did not sign it himself, as he was quite as well qualified to do so as I, but he urged it, and I did so, and the body was immediately shipped out of town. The undertaker reported a discharge of pus through his needle when he inserted it to inject the peritoneal cavity, a confirmation of my diagnosis.

Later in the day I accidentally learned that the people in the flat where the young woman died were nearly all students of osteopathy, her own brother—who, by the way, is totally blind—being one of them, and that the president of the "college" had been called as soon as she had taken to her bed the day before. He had given her three "treatments" that day, and was in attendance upon her the morning of her death, and it was then at his suggestion that the physician had been sent for. I also learned that said physician—a graduate of Rush Medical College—is a teacher in the local "college of osteopathy" and is not infrequently called upon by osteopaths under similar circumstances (an osteopath cannot sign a death certificate here). Also, that upon being reproached one time by a former classmate for disgracing his profession by associating himself with charlatans, he replied in words to the effect that the profession might be ——, that he was out for money.

Being naturally indignant at the part I had been led to play in the affair, I resolved to find out if possible what diagnosis had been made, and what sort of treatment had been given, and accordingly called next morning on the president of the "college." He was nervous and fidgety when I mentioned the case, and spent some time assuring me that he would tell me exactly the conditions as he had found them. When he finally got down to business he stated that he found the patient had for some time been troubled with a little "stomach derangement" and "constipation," that the condition was somewhat exaggerated that day, but that she had presented "no alarming symptoms whatever," and he had assured the friends there was not the slightest cause for anxiety. Being asked what his diagnosis had been, he said he regarded her symptoms as due to a "posterior condition of the spine!" but did not deign to explain what that meant. Nothing could be learned about treatment, except that he had "treated" the lower end of the spine. Continuing, he said that when he visited her that morning he saw that "it was not a case for us to treat"—which meant he realized then that she was dying and that he might get into trouble, not being able to sign the death certificate—and so he had at once sent for the doctor before mentioned.

Since this episode I have taken the trouble to inform myself as fully as I could on osteopathy and osteopaths, visiting their "college," talking with devotees, reading their literature, and looking up their legal status here in Wisconsin. I have before me a copy of the *Wisconsin Osteopath*, a semi-occasional publication (price, $1 a year) which occupies the proud position of official organ to the "Wisconsin College of Osteopathy," and which at irregular intervals is left on our front doorsteps or tossed into our hallways. I quote briefly a part of the "farrago" of the osteopathic creed relative to the "spinal origin of disease," as set forth in its pages:

"Anatomists have discovered along the spine centres which control the various organs of the body, and in the development of osteopathy the whole system revolves to a certain extent about these centres, opening up great possibilities to the osteopath in overcoming disease. As before said, the nerves escape from the spinal cord through openings between bones, ligaments, and muscles with only a limited amount of space. The encroachment upon this space by the contraction of a muscle or the slipping of a bone may cause a disturbance in the organs of the body to which these nerves, with their sympathetic communications, pass. Upon these nerves the osteopathist must play, as upon the keyboard of a piano, removing any pressure or obstruction which would cause discord in the nerves, or in the functions of the organs which they supply. It is upon the spine, for this reason, that the osteopathist does the major portion of his work."

Could anything be more cunningly devised to catch the attention and appeal to the reason (?) of the average patient, who always wants to know the why and the how? That it does catch them is evident from the fact that the school has a large following both here in the city and all over the State, and it does a flourishing business in the turning out of new D. O.'s—Diplomates in Osteopathy—to catch the shekels of the unwary.

What is more surprising is that this official organ, distributed from house to house, contains in its reference column the names of some of our best-known citizens as indorsing osteopathy. They may have been benefited by their treatment—we all know that massage (or manipulation, as they prefer to call it) has a field of usefulness—but that they should be willing to have their names distributed about the town to advertise somebody else's business, is indeed astonishing. That is putting themselves in the same class as those who testify in the daily papers to the merits of "Lydia Pinkham," "Dr. Pierce," "Peru-na," etc.

To sum up the results of my investigations in brief: I find that the osteopathic principle of treatment is based on a substantial truth well recognized as valuable in certain conditions and long practised by the members of the regular profession, viz., digital manipulation of the body regions; that about this kernel of therapeutic truth they have constructed their "science," which to the laity appears most plausible, but to the enlightened is a meaningless mass of nonsense; that their etiology is mere fiction, their pathology a myth, diagnosis is a conjecture, and all are carefully planned to harmonize with and support their one uniform line of treatment. In other words, it is a made-to-order science. Their course of study in no way fits one for the intelligent care of the sick.

Now I am not opposed to specialties. We have specialists in all branches of our art, and if any one wishes to specialize in the treatment of proper cases by manipulation, well and good; but first make him comply with certain requirements of preparation, as all legitimate specialists are made to do, so that he will be presumably capable of selecting cases amenable to treatment by his methods—and then when he is found manipulating an appendical abscess or sticking his finger into a diphtheritic throat, let him feel the strong hand of the law, the same as any other malpractitioner. As matters stand now in most of our States, the osteopathists openly boast of treating anything and everything, advertise themselves as doctors, and yet are not amenable to law, because, forsooth, they do not give medicines, and so are not recognized and regulated. Is not this most unjust to the rest of us, as well as a menace to the public welfare?

PHILIP F. ROGERS, M.D.

MILWAUKEE, WIS.

SERO-THERAPY IN PNEUMONIA.

To the Editor of the Medical Record

SIR: Referring to the letter of Dr. Fanoni in the MEDICAL RECORD of January 27th, if Dr. Fanoni will consult the sixteenth volume of the "Twentieth Century Practice of Medicine," at pp. 122–129, he will be "really surprised" to find that I have discussed at considerable length the claims of sero-therapy in pneumonia.

ANDREW H. SMITH, M.D.

18 EAST FORTY-SIXTH STREET.

THE USE OF KOLA IN SEASICKNESS.

To the Editor of the Medical Record.

SIR: Some of your readers may be interested in my experience in the use of the kola nut for the amelioration of seasickness during the past fortnight in a voyage from Yokohama to San Francisco. The first five days of the trip were rough, the third being marked by a westerly gale. I am an indifferent sailor, and in such weather commonly find no little difficulty in doing my part in the care of a family of four small children. By keeping a piece of the dried nut in my pocket and frequently biting off a morsel to chew slowly I found myself free in the main from the swimming head and the sour stomach which would otherwise have attended the washing and dressing, the feeding, and other attentions necessarily rendered the little ones, who shared but slightly in my indisposition. If I waited till stomach symptoms appeared, no effect seemed to result from the use of the nut; probably because nausea and vomiting followed so rapidly as to forestall absorption. But when taken with a clear head and a sound stomach, as upon waking in the morning after a refreshing sleep, the effect seemed almost specific in preventing the severer symptoms of mal-de-mer. The effects are not immediate, but result in about twenty minutes or half an hour, and seem mainly to lie in the stimulation of the nervous system and the general toning up of relaxed tissues which are known to be the proper physiological effects of the drug. More especially did I note the freedom from bile among the stomach contents, even when the roughness of the sea and confinement to close cabins brought on fits of vomiting. The latter was mild in degree and accompanied by no retching or bitter taste. Moreover, at a later period of the voyage, with a much smoother sea, circumstances otherwise similar brought on repeated vomiting with deep retching and with the raising of bile and even of blood, soreness of the hypochondrium, lightness of the head, burning pain in the oculomotors, and all the other aggravating symptoms of seasickness.

I conclude that kola nut does not cure but decidedly ameliorates seasickness, if taken in time, through its familiar action as a cerebral stimulant.

C. C. VINTON, M.D.

SUCCUS CINERARIÆ MARITIMÆ IN CATARACT.

To the Editor of the Medical Record.

Sir: I read in the Medical Record of January 27th, p. 165, that the editor of *Experience* says: "The use of succus cinerariæ maritimæ, for the absorption of cataract, when dropped into the eye daily, two or three drops at a sitting, acts in many instances with results nothing short of miraculous."

Dr. Lewis F. Read, surgeon-general Pennsylvania National Guard, and myself used this remedy, as suggested, on the eyes of my mother, aged seventy-six years, a resident of Norristown, Pa., for eighteen months without any result whatever, except to give her needless pain.

Albert S. Ashmead, M.D.

New York.

OUR LONDON LETTER.

(From our Special Correspondent.)

WAR—INTESTINAL RESECTIONS—MASTOID OPERATIONS—SATURDAY HOSPITAL FUND—INFLUENZA—RECENT DEATHS.

London, February 2, 1900.

The medical world pursues its course amid the clash of arms, as in the times of peace. Every hour we are reminded that we are at war. Amid the curses, loud if not deep, which are being heaped on the War Office, it is cheering to find that even the "man in the street" has become aware that the doctors, at any rate, have not failed. Lord Methuen has said in a despatch that he was glad to have been slightly wounded, as in no other way could he have learned the care taken of the wounded, and how the medical officers never tired in their endeavors to alleviate the suffering. We may take this testimonial as a set-off against the spite of Lord Wolseley, who is now likely to have enough to do to defend himself against the charge of neglecting his obvious duty. The meeting of Parliament has already put the government and their experts on their defence. News from the front is continually coming to hand. Even the medical journals boast of their special correspondents in the field and at the several hospitals. Letters, too, are coming from Sir W. MacCormac and the other civil surgeons sent out by the War Office to disguise their own insufficient arrangements. But their letters can only describe the work of the army medical officers, to whom they give unstinted praise, and mention a few remarkable cases. It is too soon to expect much, but later on we may gather some valuable surgical lessons from the horrible conflict. I turn from it to the peaceful work we are engaged in at home.

At the Clinical Society on the 26th inst. Mr. Hutchinson, Jr., related two cases of resection of gangrenous intestine in cases of hernia. One was that of a woman with femoral hernia, five inches of intestine being removed, and the patient was found in good health six years afterward. The other was that of a man with strangulated inguinal hernia; ten inches were removed, and the patient recovered. He died three years afterward from ulcerative colitis, and Mr. Hutchinson obtained the specimens which he showed at the meeting. At the seat of resection, there was not the least narrowing. In both these operations suturing only was employed, and in reference to the relative safety of this plan and the use of Murphy's button, Mr. Hutchinson said he had collected from hospital statistics fifteen cases of primary resection for gangrenous intestine with the button and sixteen without. Of those with the button, only one patient recovered, or seven per cent.; of those without, six recovered, or forty per cent. Further, in the fatal cases sutured alone, the patients survived on an average twice as long as in the others. Three of the ten fatal cases simply sutured might have resulted in recovery but for complications—multiple strictures, obstruction by band, and phthisis. The post-mortem records showed, moreover, better union after simple suture. The longer time required for accurate suturing did not seem of great importance against the disadvantages of the button. It was necessary to excise enough to secure the sutures being inserted in healthy tissue, and it was generally advisable to do it through a median abdominal incision. If the intestine could be emptied and made to contract, this would favor union, and prevent infection of the stitch apertures by the contents. Possibly an aperient directly after the operation would improve results.

Mr. Barker preferred to dispense with the button, and insisted that the amount of intestine removed did not matter much; the one element of success was to place the sutures in healthy tissue, the walls of which had not been damaged by distention.

Mr. Marsh also insisted that no untrustworthy part should be included in the sutures.

Mr. Charters Symons was also against the button, and thought the great difficulty was to empty the bowel in order to prevent a continuance of the symptoms from its paralysis.

At the same meeting Mr. Gould read an account of the case of a man aged twenty years, who was accidentally shot in the abdomen with a small revolver. Seen an hour later, when he was partly under the influence of a morphine injection, the respiration was easy, and the pulse 96. There was still pain. The wound was found to extend into the peritoneal cavity; it was freely opened, and blood flowed out, but no gas or bowel contents. Four wounds were found in the jejunum, three perforating. They were closed with Halsted's sutures of sterilized silk. Two wounds of the mesentery close by were also sutured. The peritoneal cavity was cleansed, the bowel returned, and the abdominal wound closed. The man recovered. The bullet was located in the left buttock and was let alone. Mr. Gould approved the injection of morphine, as it relieved pain and shock and intestinal movements, thus lessening the chance of fouling the peritoneum. He thought the case showed the value of careful exploration in perforating wounds of the abdomen.

Other speakers concurred in the value of morphine, which some thought too much neglected at the present time. It was also agreed that exploration was desirable, when it could be done under favorable circumstances; if the patient was not seen until after the lapse of a long time it might be doubtful, and a recently reported case was referred to in which a bullet passed through the abdomen, and the man recovered though nothing was done. Saline injections were mentioned as useful for overcoming shock in some of these cases.

Three communications in one evening on such a subject as the mastoid operation make a full dose for even so grave and staid a society as the Royal Medical and Chirurgical, and not unnaturally led to an adjournment of the discussion to which the contributions are expected to give rise. Such was the course of events at the last meeting (January 23d).

Mr. Ballance opened the evening with an account of twenty cases on which he had operated, and six of his patients were shown. He advocated the treatment of intractable otorrhœa by two distinct operations. The first of these is the complete mastoid operation to get rid of the disease; the second is directed to the healing of the wound by epithelial grafting of the raw bone cavity. He noticed the difficulty of selecting cases for the mastoid operation, and thought clinical experience a safer guide than rigid rules. But the cases being suitable, he would certainly follow on with the grafting.

Sir William Dalby followed with a paper dealing chiefly with the selection of cases for operation. He said it was necessary (1) when septicæmia had begun; (2) when there was carious bone in the tympanic cavity, with ominous symptoms often recurring; (3) when there was evidently mastoid disease. On the other hand the question of operation was often one of doubt, even when dead bone was present, but without ominous symptoms. Cases also occurred in which a less complete operation might be done. It should not be forgotten that many persons went through long lives with perforations which at times discharged slightly, but at other times were dry and apparently healed, and that, too, without experiencing discomfort enough to make them desire active treatment. They could hear pretty well, and transact the ordinary business of life, and only of late had it been suggested to adopt severe measures in such cases.

The third communication was by Mr. Cumberbatch, who thought it was easier now than formerly to decide on the cases suitable for operation. First he specified three groups of cases, in which, speaking generally, he did not adviseo peration; *i.e.*, (1) when the whole or the greater part of the membrana tympani was destroyed, and the mucous lining of the cavity hypertrophied, but without bone disease; (2) when there was frequent discharge for a time, but easily arrested, the perforation being permanent or else closing on the cessation of each discharge; (3) when both ears were discharging, but the hearing remained good, and there were no symptoms calling for interference except the discharge. On the other hand, he specified four groups of cases in which the complete mastoid operation was advisable, viz.: (1) In recurrent discharges when every onset was preceded by malaise, headache, and rise of temperature with sometimes mastoid tenderness; (2) in "spoilt ears," which, after giving no trouble for years, suddenly developed symptoms of labyrinthine vertigo, showing that inflammation was involving the labyrinth, or some accumulation was causing pressure; (3) intermittent discharges with masses of sodden epidermis, often hiding small granulations, and when syringing constantly removed white shreddy patches, the usual treatment having failed; (4) periodical attacks of mastoid pain after active mischief had ceased in the ear, and when neuralgia could be excluded.

The Hospital Saturday Fund decided last week to distribute £17,013 13*s.* 8*d.* among the hospitals, dispensaries, convalescent homes, and auxiliary organizations, such as ambulance, surgical appliance societies, and institutions for the gratuitous nursing of the sick poor in their own homes. The gross income of the fund for 1899 was £20,023 5*s.* 3*d.*

Influenza is still decreasing. The deaths registered last week from this disease numbered one hundred and fifty-two as against two hundred and eight in the previous week. The average death rate in England and Wales was 22.6, as against 24.9, 29.1, and 30.9 in the preceding weeks, a steady fall chiefly due to the decline of the epidemic. Turning to the provinces, Birmingham is suffering from influenza and typhoid. At the same time whooping-cough and measles are so prevalent that the work of the schools is much interfered with. No less than one hundred and eighty-seven fresh cases of measles and seventy of whooping-cough were reported among the children attending the board schools last week. In most of the other great towns which have been attacked by influenza, there is an abatement of the disease, varying in degree with the date of its appearance.

Mr. Bernard Brodhurst died on the 30th ult., in his seventy-eighth year. He was for many years surgeon to St. George's and the Royal Orthopædic hospitals and published lectures on orthopædic surgery and other works.

Sir William Miller, J.P., M.D., of Londonderry, died on the 28th ult., aged seventy-three years. For more than forty years he held a most prominent social and professional position in his native city, where his father had had a similar position, being M.D. and J.P., and dying at the great age of ninety-two years. One of Sir William's sons is also in the profession.

Dr. T. J. Dyke, J.P., died on the 20th ult., aged eighty-four years. He was for over thirty-six years medical officer of health for Merthyr.

Another J.P. and M.O.H. was Dr. H. H. Vernon, of Southport, where he settled some thirty years ago. He died on the 16th ult., aged sixty-nine years.

Surgeon-Major A. C. A. Alexander of the Coldstream Guards died on the 23d. He served with his regiment in the Sudan, and last year had a sunstroke at Gibraltar, and regretted not to be able to go to South Africa.

New Instruments.

A RECTO-GENITAL IRRIGATING TUBE.

By RAMON GUITÉRAS, M.D.,

NEW YORK.

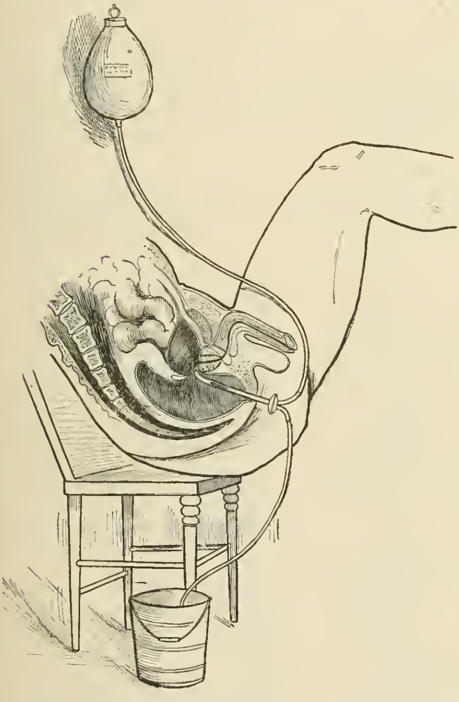
The tube under consideration is called the "recto-genital irrigating tube," because it is one which, although inserted in the rectum, is intended for the treatment of diseases of the internal genitals, and not for those of the rectum proper. The diseases of the internal genitals for which it is used are those of the prostate gland and seminal vesicles, and embrace acute and chronic seminal vesiculitis, acute and chronic prostatitis, prostatic abscess, acute inflammatory attacks occurring in cases of prostatic hypertrophy and certain functional disorders, as prostatorrhœa, spermatorrhœa, and atonic impotence.

Description of the tube: The tube is six inches long and one-half an inch in diameter. It is slightly curved at the end for insertion, thus presenting a convex and a concave surface, the latter better accommodating itself to the internal genitals, particularly the prostate. There are three openings near the end of the tube, one in the concavity and one on either side of the straight part of the shank. At the other end, the one which may be called the proximal, there is a shield with two pipes protruding from it, one of which connects by means of a piece of piping with a reservoir on the wall, and the other, or waste pipe, connecting with a receptacle upon the floor. The tube is so constructed that it is double throughout its entirety. The irrigating fluid comes down from the receptacle, generally a douche bag hung on the wall, enters the tube by means of a piece of tubing, and passes along the upper compartment, escaping through the opening in its concavity, and bathing the parts to be treated, the seminal vesicles or prostate. It then again enters the tube through the two openings in the sides and escapes by means of the attached tubing into a receptacle on the floor.

The opening in the concavity by which the fluid enters the intestine is smaller than the side openings through which it escapes, thus rendering the outflow more than twice as great as the inflow, and in this way overcoming the great difficulty which is usually encountered in rectal douches, namely, the over-accumulation of the fluid in the gut. The opening in the concavity also presents a decided advantage over one in the end, where it is usually situated, as the tube, being smooth at the extremity, enters more freely, and also because the fluid is discharged directly against the internal genitals instead of shooting by them up the rectum.

The material used for making the tube is generally hard-rubber or metal; the former is more liable to be injured and is not so easy to clean and sterilize as the latter.

Description of fluids: The fluids used are generally hot salt solution, or flaxseed tea. The former is made by adding a teaspoonful of salt to a quart of water, the latter by adding a tablespoonful of flaxseed meal to a quart of water, boiling and straining. Plain hot water seems to dry the parts, and is much inferior in its effects. The temperature of the fluid is generally from 105° to 120° F., a good rule being to use the water at the temperature which gives the most relief and produces the best results.



The technique of a rectal irrigation is as follows: The patient should assume a reclining position with the legs elevated. If he lies in the bath tub with his feet elevated on its sides, or if he reclines in a chair with his legs up, he is in a good position to receive an irrigation. The douche bag should be hung so that its bottom is just above the head of the patient, which will admit of an easy refilling if necessary, although it should be placed still higher in case the pressure of the fluid is not sufficient to allow it to make the circuit freely.

The tube should be lubricated, and inserted with a rotary movement. If the case be a prostatic one, two and three-fourths inches is sufficiently far, while if it be a disease of the seminal vesicles it should be pushed up from three and one-half to four inches. From one to four quarts of fluid should be used at each sitting. The best time for taking the irrigations is just before retiring. If the fluid is not escaping freely, and too much has accumulated in the intestine, the inflow tubing should be compressed until some of the fluid already in the gut has escaped. If the fluid does not escape freely, the tube should be moved about in the rectum until a better flow is established.

The diseases for which this method of treatment is generally used have already been enumerated. The benefit is derived from the effect of moist heat. In the case of acute prostatitis it gives great relief to the pain and at the same time diminishes the inflammation. In cases of prostatic abscess it stimulates the circulation in the gland, thus hastening either absorption or suppuration. In diseases of the seminal vesicles it also reduces the inflammation by the action of the heat, as is evident by the diminution of the pain and tenderness at each rectal examination. In prostatorrhœa it relieves any deep irritation of the genitals, upon which the relaxation may depend. In cases of atonic impotence the cause is often a chronic inflammation of the vesicles, which is benefited by the irrigation.

In almost all these cases amelioration is hastened by gentle massage of the internal genitals per rectum every four or five days. This not only tends to cause absorption of any inflammatory exudate, but it breaks up adhesions and strengthens the function of the prostate or vesicles.

When the inflammation has left the part, as is evidenced by the absence of tenderness on rectal pressure, then hot irrigations are of no further use, and can be discontinued, or if the parts are relaxed the tone may often be better restored by general tonics, the use of cold water by means of the recto-genital psychrophore, or by electricity administered through a rectal electrode. A recto-genital psychrophore is of the same shape and size as the tube under consideration, although it has no opening in its shank. The cold water simply circulates through the tube, thus applying constant cold to the parts.

63 West Fifty-fourth Street.

Medical Items.

The Influence on Health of Chemical Preservatives in Food.—As a result of an experimental investigation, Foulerton (*Lancet*, December 9, 1899) expresses the opinion that it is extremely improbable that boric acid or formic aldehyde, used in small proportions for the preservation of milk, would cause any injurious effect whatever to the average adult taking the ordinary amount of milk with his daily food; but because of certain possible injurious effects that might result, the use of such preserved milk for invalids and young children taking large quantities is to be condemned. So far as these injurious effects are concerned, it appears unlikely that the digestive processes would be materially affected—or, indeed, affected at all—by the boric acid, but that toxic effects in a more general way might be produced by this preservative. Formic aldehyde, on the other hand, would probably have no injurious general effect in small proportions, but would tend to lessen somewhat the digestibility of the milk. The necessity for legislation on this subject lies in the fact that these preservatives are, in small proportions, tasteless and so cannot be detected by the consumer. Such legislation should provide that no preservative should be used that is not sanctioned by the proper authority, and that the proportion should not exceed a certain maximum amount to be fixed officially; that the nature of the milk should be declared by the vender, and that it should be sold only as "preserved milk." The penalties for infringement of the law should be sufficiently heavy to render un-profitable the sale of "preserved milk" as fresh milk. There is no good reason for the presence of salicylic acid or other special preservative in such articles of food as jam, cheese, and pickles, while the use of certain preservatives as substitutes for alcohol is a matter of fraud pure and simple. The use of a tasteless preservative in butter must also be regarded as fraudulent unless the fact is declared. The use of boric acid for salting bacon and ham may or may not cause injury to the consumer, but such articles should not be sold with concealment of the fact.

Erythromelalgia.—Rosen (*Berliner klinische Wochenschrift*, December 4, 1899, p. 1081) reports a case of erythromelalgia in a demented individual, and from a study of the literature expresses the opinion that in the majority of cases of this disease the symptoms are dependent upon a lesion of the central nervous system. A number are in fact attended with symptoms of such lesions, and upon which the erythromelalgia may be considered as dependent. In another group of cases, however, there is no manifest organic lesion of the central nervous system, but in these also the disease, in its localization, in its course, in its association with various sensory and trophic disturbances, and in its combination with certain general manifestations, is suggestive of a disorder of the central nervous system.

Acute Acquired Internal (Idiopathic) Hydrocephalus.—Heidenhain (*Berliner klinische Wochenschrift*, December 4, 1899, p. 1078), upon the basis of four cases carefully studied and from an analysis of the literature, expresses the opinion that acquired idiopathic internal hydrocephalus is a disease *sui generis*. It may set in abruptly (serous apoplexy), or it may develop insidiously. Under the conditions first named, recovery may take place, while under the latter the disorder is probably incurable. The insidious variety either pursues an even course or is interrupted by exacerbations. These are characterized by sudden depression of temperature and of pulse far below the normal, with increasing restlessness. Death occurs with gradual perversion of consciousness in consequence of asthenia or intercurrent disease (pneumonia, severe digestive disturbances, etc.). With regard to the etiology, direct injury to the brain is not essential to the development of acquired idiopathic internal hydrocephalus. The disease is caused by cold, and must be considered a vasomotor reflex neurosis. With regard to the acute exacerbations these may be explained by the limitation of the serous effusion by the resistance of the elastic brain. If this subsides in the course of days or hours, a new effusion takes place, and this again is restricted by the limits of compressibility of the brain. The assumption that the brain first undergoes atrophy and that the effusion occurs at the same time in consequence of the rarefaction, is absolutely incorrect. The high degree of pressure under which the exudate exists is opposed to this view. In one of the cases recovery was observed in the sequence of subcutaneous injections of morphine, which not only induced rest and sleep, but allayed the vasomotor spasm. In the insidious cases persistent treatment with subcutaneous injections of morphine or suppositories of codeine may be recommended.

An Electric Danger for Horses.—Herr Rusterholz, writing to the *Schweizer Archiv* and reported in *The Veterinary Journal*, relates a somewhat startling story which may put veterinary surgeons on their guard in these days when electricity is used everywhere. He says that two carriage horses got into the habit of refusing to take their oats. They both appeared to be in perfect health, ate hay with appetite, and took their oats easily; but at a given moment after they had consumed a part of their ration, they tried to take up the oats at the bottom of their iron manger and suddenly recoiled, making curious movements with their heads. The animals did their work well and seemed to be in good spirits, but the same strange conduct was repeated at each meal. When Rusterholz was called in he began by examining all the food, especially their oats. All was found to be of excellent quality. Wishing to see if the oats lying in the manger had not undergone some deterioration which might explain the symptoms, he thrust his hand into the oats, which were now somewhat moist by admixture with saliva and water. Each time he did this he felt a curious tingling, such as is produced by an electric current. The stable being lighted by electricity, Rusterholz caused the wires to be examined, and this brought about the discovery that over the horses' heads the wire had become denuded of its insulating cover; the current was transmitted by the coat of paint, which had become an excellent conductor by reason of a slight coating of moisture deposited on its surface through the condensation of vapor, and this current reached the iron manger. It did not cause the animals any trouble so long as the oats were dry; but as soon as they became damp by the saliva and condensed vapor from the horses' breath it took effect, and the animals were subjected to it every time they took a mouthful of oats.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended February 16, 1900:

		Cases.	Deaths.
SMALLPOX UNITED STATES.			
Alabama, Mobile	February 2d to 10th	3	
Florida, Jacksonville	February 2d to 10th	1	
Georgia, Brunswick	February 5th	46	
Indiana, Evansville	February 2d to 10th	8	
Kentucky, Atchison	January 27th to February 10th.	3	
Mound Valley	November 3d to February 8th.	17	
Louisiana, New Orleans	February 3d to 10th	39	7
Shreveport	February 3d to 10th	12	4
Mississippi, St. Louis	January 22d to February 3d	13	
Ohio, Cincinnati	February 2d to 9th	1	
Cleveland	February 3d to 10th	30	
Youngstown	February 3d to 10th	1	
South Carolina, Greenville	February 3d to 10th	2	
Tennessee, Nashville	February 3d to 10th	8	
Utah, Salt Lake City	February 3d to 10th	2	
Virginia, Portsmouth	February 3d to 10th	10	
SMALLPOX—FOREIGN.			
Austria, Prague	January 13th to 20th	4	
Belgium, Antwerp	January 13th to 27th	11	7
Ghent	January 27th to February 3d	..	1
China, Hong Kong	December 16th to 23d	1	1
Colombia, Barranquilla	January 22d to 27th	1	1
England, Leeds	January 27th to February 3d	1	
Liverpool	January 22d to 27th	1	
London	January 22d to 27th	24	
Southampton	January 13th to 27th	2	
France, Paris	January 22d to 27th	..	1
Germany, Konigsberg	January 13th to 20th	..	1
Greece, Athens	January 22d to 27th	3	1
India, Bombay	January 2d to 16th	..	239
Calcutta	December 22d to January 6th	..	13
Japan, Formosa, Tamsui	October 1st to 31st	6	
Mexico, Chihuahua	January 27th to February 3d	..	6
Mexico	December 24th to January 28th.	69	41
Vera Cruz	January 27th to February 3d	..	1
Russia, Moscow	January 13th to 20th	2	
Odessa	January 13th to 27th	24	
St. Petersburg	January 13th to 20th	21	8
Warsaw	January 13th to 20th	..	4
Spain, Corunna	January 22d to 27th	1	1
Madrid	January 20th to 27th	..	13
Turkey, Smyrna	January 7th to 21st	..	3
Straits Settlements, Singapore.	December 13th to 30th	..	2
Switzerland, Geneva	January 4th to 13th	1	
YELLOW FEVER.			
Cuba, Havana	January 31st to February 6th	1	2
CHOLERA.			
India, Bombay	January 2d to 16th	..	7
Calcutta	December 22d to January 6th	..	34
PLAGUE—UNITED STATES.			
Hawaii, Honolulu	December 12th to January 23d	52	41
PLAGUE—FOREIGN.			
China, Hong Kong	December 8th to 23d	5	5
India, Bombay	January 2d to 16th	..	752
Calcutta	December 22d to January 6th	..	97
Kurrachee	January 1st to 14th	13	8
Japan, Formosa	October 1st to November 30th.	40	27
Kobe	November 11th to December 23d	21	16
Osaka	January 7th	41	38

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Original Articles.

SPINAL FRACTURE—PARAPLEGIA.[1]

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THE subject on which I have been asked to make some remarks to-night is one that interests not only the surgeon but the physician, because of the certainty that every physician may, sooner or later, be brought face to face with this distressing accident of a broken neck, or of a broken back, in the person of patient or friend.

One sees children fall in climbing trees, or from swings, or over banisters; youths suffer broken necks in diving, workmen falling from scaffolding, elevator accidents, falling from cars or out of carriages, horseback falls; and in all cases the sudden, horrible, and instantaneous paralysis of the body faces the physician, and it is of the greatest moment to him that he should be able to say to the distressed family what the probable future will be, and what can be done at the moment or in the future. Life-long paralysis will inevitably follow the accident in perhaps the great majority of cases in spite of all care, because the accident, as we shall see presently, produces a fracture of the bodies of one or two vertebræ, with instant dislocation and crushing pressure upon the soft spinal cord.

In many cases, after the damage, the displacement is spontaneously corrected in part by the rebound of the body to its natural position, so that after being damaged the cord is not compressed within the canal, but in most cases the sharp angular deformity within the canal produced by the impaction of the fractured vertebræ holds the spinal cord tightly squeezed against the posterior laminæ. In these cases there is less chance for restoration of the damaged cord after nature has absorbed the temporary hemorrhagic pressure.

It is from a rather large experience in cases of broken neck and broken back, including two gunshot paraplegias also, that I venture to speak of the following points.

Let us group the cases one sees according to symptoms with which the physician should be familiar, and note the correspondence between the early symptoms of damaged cord and the intensity of the damage. Before studying these let us note one condition allied to and simulating broken neck which stands out in bold relief and should be ever present in the mind of the physician; that is, "dislocation of the neck."

I am able to show to-night a good radiograph illustrating for the first time the real deformity (Fig. 1). It has been supposed, heretofore, in the absence of post-mortem opportunities, because the cases are almost never fatal, that the characteristic deformity of dislocated neck is due to the displacement of one articular facet backward into the notch on the upper side of the vertebra below, thus giving the peculiar cock of the head and slight rotation of the face to the affected side.

The case in which this radiograph was taken is of a boy aged nine years, who fell down one flight of stairs last July, and instantly his head was fixed immovably in the characteristic position; there were little pain and no paralysis. The radiograph shows a dislocation of the axis upon the atlas of one side.

The deformity has usually been imagined to exist between the middle cervical vertebræ, but in both lateral and front views of this case these vertebræ are clearly seen to be in their normal relations.

It is of interest in this case that the reduction was spontaneously accomplished during sleep the second night after the accident; the boy awakening to find his neck perfectly supple and correct. The explanation is readily seen: the muscular relaxation during sleep, with the leverage afforded by the patient's restless movement on the pillow, accomplished what would have been done under ether and by surgical manipulation.

To grasp more easily the relations between the damage in broken-neck cases and the group of symptoms following, let me illustrate this large and varied class of accidents by three cases of broken neck from diving, which have come under my observation this last year.

CASE I.—A man, aged twenty-eight years, was diving in shallow water, sandy bottom; he suffered instantaneous paralysis below the neck; he was rescued quickly and found to be unable to move the muscles of the body, but on examination directly after it was found that there was slight voluntary motion of the limbs and only partial loss of sensation. Soon after the accident the predominant symptom was increasing and incessant jactitation of all the limbs, which did not subside for some days. After the third day better voluntary action ensued, numbness diminished, and in three weeks the patient had excellent control of all his muscles.

CASE II.—Boy, aged nineteen years: he was diving in shallow water with sandy bottom and struck his forehead; he instantly realized inability to move anything below his neck. Consciousness was perfect. He noticed a flapping motion of the limbs in the water, and held his breath until rescued. He was absolutely paralyzed below his neck for three days. Sensation was almost entirely lost, but he could feel pin-pricks at some points; the arms also had a prickling sensation as if asleep. After two days he could move the tips of the fingers and draw up the left leg, and could bear his weight on one leg in two weeks, and in three weeks could walk. He made a rapid convalescence. Six months from the accident, there remains some wrist-drop of the right hand, feeble grasp still improving, but otherwise nearly normal. The case might well have been regarded as one of hemorrhage only, within the vertebral canal, with very slight damage of the cord; no deformity of the spine could be discerned either in the pharynx or by external palpation. It remained, however, for the radiograph, which I show here, to show a most perfect comminuted fracture of the body of the fifth cervical, which is clearly shown to be crushed into a wedge instead of a square shape. The displacement forward of the upper segment is less than usual in these cases, and explains graphically why the cord was contused rather than crushed, and hence the transient paralytic symptoms.

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[1] Read before the Practitioners' Society, December 5, 1899.

Case III.—A young athlete and skilful swimmer was diving in three feet of water; his forehead struck the sand, the head being thrown forward with chin upon the sternum. Immediately instant paralysis ensued. Consciousness was retained. He held his breath until rescued. He was seen by me two hours afterward. I found motor paralysis absolute below the neck, except for the fifth root group of the shoulder, viz., deltoid, brachialis anticus, and triceps, giving the arms the characteristic position, elbows held out from the sides, hands resting on pectorals. Respiration was entirely by the diaphragm. To my surprise the skin was sensitive over most of the body, even down to the feet, and the patient had made voluntary flexion of two middle toes of the right foot. The head, neck, and chest were encased in a plaster-of-Paris support, traction of the spine being maintained during hardening to correct the deformity as much as possible. Two unusual features in this case justified a shade of hope in an otherwise unpromising outlook, viz., the apparent, slight, voluntary action in the right foot, and the retained sense of touch over the body; both arguing an incomplete destruction of the cord. A successful radiograph was taken promptly, showing a comminuted fracture of the body of the fifth vertebra. The posterior bony wall of the canal, marked by the laminæ, was apparently nearly flat. The alignment of the spinous processes also seemed nearly normal, from which it appeared that the cord remained under pressure, which the removal of the posterior wall (laminæ and spine) would relieve. The patient urgently desired an operation at the earliest possible moment; but it was not until the fifth week that any interference could be tolerated. Meanwhile, evidences of local myelitis and meningitis ensued—namely, a severe girdle pain at the limit of anæsthesia, jactitation of the lowest unaffected muscles, and loss of any muscle action below.

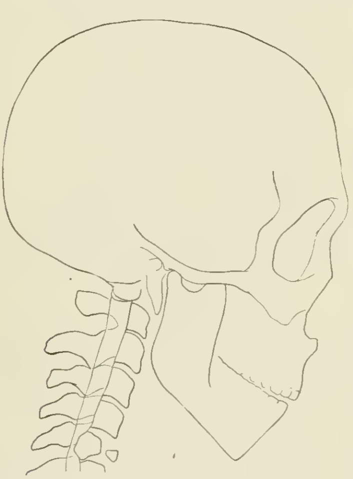
Fig. 1.

Cutaneous sensation with thermal sense was carefully noted by Dr. Pearce Bailey from day to day, who found but little change. After the second day, however, acute pulmonary œdema with rusty expectoration and hypostatic pneumonia (temperature, 104° F.) prevented any operative interference.

The temperature during five weeks after the accident varied from 101° to 103° F., with exacerbations due apparently, in some instances at least, to intestinal putrefactive changes relieved promptly by calomel purge. The patient wasted much during his confinement.

Operation six weeks after accident: cutaneous and deep muscular anæsthesia by cocaine (fifteen drops two-per-cent. solution) was resorted to, general anæsthesia being impossible on account of diaphragmatic respiration. The laminæ of the fifth vertebra were found fractured, close to the transverse processes on either side, and removed with the greater portion of the lamina of the sixth also, and the spinous processes all but the tips. The underlying dura was found of a deep mahogany red and exquisitely sensitive to the pressure of a sponge, and rounded up into a full, soft swelling immediately upon removal of the flat bony pressure. The acute sensitiveness of the dura to the slightest touch was most interesting evidence of the local meningitis, and corroborates what I have noticed before in serous membranes, that, when uninflamed, there is no pain sense, but when inflammation sets in the pain on handling is very acute.

Owing to the opportunities afforded by cocaine operations, one may occasionally compare the uninflamed dura mater, knee joint serous surfaces, and peritoneum with the same membranes when inflamed, and find that these membranes are absolutely free from pain-sense when handled in the uninflamed condition, but that the slightest touch in the inflamed condition elicits a cry of pain from the patient.

The cord being thus relieved of all posterior pressure, the wound was closed, and the patient felt no ill effects from the operative procedure.

On the third day after operation the temperature declined to nearly normal for the first time since the accident, and continued until in another week it was running normal morning and evening. The girdle pains progressively diminished and soon entirely disappeared. The general cutaneous circulation continued to improve, so that the nurses volunteered the statement that pressure points required less care to maintain good circulation. General nutrition improved and the extremities seemed warmer. The patient soon became entirely free from muscular jerkings of the arm and chest muscles. Frequent rigors, to which the patient had been subject, and which were independent of much temperature elevation, but which always called for blanketing and hot bottles, now ceased. The posterior splint upon the neck was removed eight weeks from the time of accident, the bony spine being then well united. He soon regained full and painless use of his neck.

Twelve weeks from the time of accident the patient was allowed to sit up in bed, and one week later was allowed exercise in a wheel-chair in the upright posture.

At the end of the sixth month from the accident the patient's condition is as follows: Sensation is almost complete over the entire body, being restored in some anæsthetic areas which were present after the accident upon the lower extremities. Sensation in the left little finger, absent after the accident, returned after four months. No voluntary motion has yet returned in the paralyzed muscles. The power of motion in the upper extremities has steadily increased, so that the patient can now raise his hands to his face and forehead. This seems rather due to better voluntary control and coordination of the lowest group of unparalyzed muscles.

Dr. Pearce Bailey, examining the patient at the expiration of six months, reports: "The improvement in his condition is most gratifying. With the exception of the anterior tibial groups, all the muscles respond to faradism. This is true not only for those in which voluntary motor power has returned, but also for those which are still totally paralyzed. This persistence of faradic irritability is a reliable indication that muscles which are now partially useful will become more so, and that there will ultimately be some return of power to those which are still powerless. Thus, I think we have strong reason to hope that in the upper extremity the deltoid, the biceps, and the extensors of the wrist and fingers will get steadily stronger, and that in time the triceps, the flexors of the wrist and fingers, and the intrinsic muscles of the hand will undergo some restoration of function. The same holds good for the muscles of the thigh. The anterior tibial group of muscles do not respond to the faradic current, the current, when applied to this region, passing through and causing a contraction of the posterior groups. While this cannot be construed as a positive indication that these muscles will remain totally and permanently paralyzed, it is certain that if power returns to them it will be at a much later date than to those which respond to faradism."

The patient's general health is otherwise restored. The temperature has been continuously normal. The diaphragm has accustomed itself to the perfect management of respiration. Nutrition is good, so that he has reached almost normal weight. The digestive functions are perfect. The patient sleeps regularly and without pain; he sits upright in a wheel-chair two to four hours daily, having perfect control of his head, and using his neck naturally without apparatus.

We see in this case a more hopeful condition than when the complete crushing of the cord is shown by symptoms of complete sensory and motor anæsthesia and absence of knee jerk. In the latter case there is usually a sequel of symptoms which tend to exhaust the patient and end life within a few weeks, viz., pain, distributed on the border line of anæsthesia and at the site of fracture, requiring morphine sooner or later in considerable doses; cellular œdema of the extremities, bed sores, and cystitis; pulmonary engorgements and intestinal disturbances.

The combination of symptoms, sensory and motor paralysis with loss of knee jerk, is not necessarily a hopeless one, as is shown by the following interesting case:

Case IV.—E. M——, a stout muscular man, aged thirty-five years, war correspondent in Cuba, was shot by a Spanish Mauser bullet over the second left sacral vertebra and was instantly paralyzed below the hips. Two months afterward he came under my care, still suffering complete sensory and motor paralysis of both extremities and loss of knee jerk. An *x*-ray photograph showed the bullet at the site of the right renal vessels; to have traversed this course it must have ascended alongside the lumbar vertebræ and deflected across the first lumbar. Examination by Dr. Pearce Bailey established the lower segment of the cord as the part injured. I operated, removing the laminæ of the last dorsal and two lumbar vertebræ, the middle portion of this section showing a crushed-in lamina. The patient began to recover sensation and motion within two weeks, and one month later had all the muscles restored excepting those supplying the left foot and ankle, which portion also remained without sensation subsequently. He was able to go about on crutches, but he demanded amputation of the left foot a year later on account of its dragging, so that he might use an artificial foot.

Operation in Cases of Fractured Spine.—Since 1875, when I had the opportunity of caring for my first case of broken neck under the guidance of Dr. Sabine, the attending surgeon at St. Luke's Hospital, I have watched the course of many victims of spinal fracture which were refused operative treatment; but ten years ago, under the stimulus of Thorburn's writings, I felt that these cases might have some little hope of relief held out to them; I now feel justified in saying that the operation presents little danger to the patient, and gives sufficient improvement to justify the time given to the operation. This improvement may not often be seen in the restored power of motion, but in minor evidences of the removal of the persistent meningeal irritation from pressure; relief of girdle pains, improved vasomotor conditions of paralyzed parts, and muscular twitchings. No surgeon would refuse operation for depressed fracture of the skull, leaving bone pressure to irritate the brain. I think it equally logical that the spinal cord should also be treated with the same care.

I have on several occasions in late operations upon spinal fracture found complete occlusion of the canal by adhesion of the meninges at the site of pressure, preventing the flow of cerebro-spinal fluid from above downward. I would repeat here, in brief, the method of operation for laminectomy devised by me, and which is the most simple and bloodless of all and gives perfect access to the cord.

Method: A straight incision, six inches long, is made a little to one side of the spinous processes, the knife passing between the muscle and the spines directly down to the laminæ; the muscles are then easily separated by blunt dissection from the laminæ on one side, and the tips of the spinous processes, with the interspinous ligament unbroken, are separated by cutting-pliers. These, with the opposite side muscle, are then easily dissected in the opposite direction, the muscles being very loosely attached to the laminæ, and the method comparatively bloodless. A rongeur is now used to gnaw away the base of the spines and as many laminæ as are required to expose the cord.

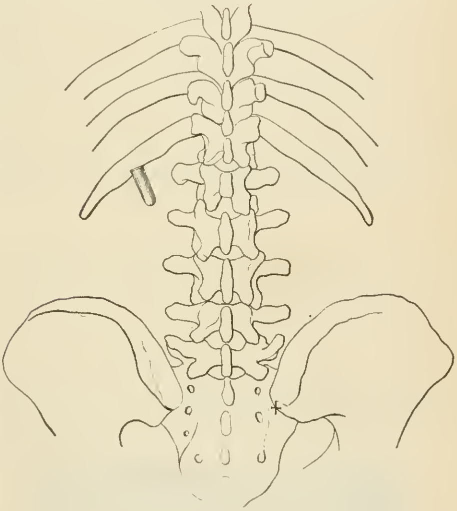

Fig. 2.

Summary of Observations.—The immediate signs and symptoms of fracture paraplegia give fairly accurate data for prognosis.

If loss of sensation and motion below the injured part is complete and instantaneous, and the patella reflex (knee jerk) is lost, the outlook for recovery is almost hopeless. Yet knee jerk, sensation, and motion may be absent, as in one case just reported (E. M——), and recovery takes place after operation.

Partial loss of sensation or motion gives hope that a large degree of recovery may be looked for, the cause in such cases being hemorrhage within the central canal or in the cord substance and meninges. Distribution and absorption of blood-clot take place usually within ten days or a fortnight, and returning sensation follows.

Return of motion in complete paraplegia cases does not always go on to perfect restoration. Wrist-drop of one hand, or dragging of one foot, may still remain two or three years after.

In cervical-fracture paraplegia the fifth vertebral body is most often injured, hence the phrenic nerve derived from the third and fourth branches of the cervical plexus gives the only supply to a respiratory muscle, to wit, the diaphragm.

The labored respiration by diaphragm only usually results in pulmonary œdema and hypostatic pneumonia a few days after the accident. This may be overcome by nitroglycerin internally and frequent change of posture.

Intestinal fermentation with temperature disturbance easily occurs in high paraplegias, and is speedily relieved by calomel.

Regeneration of a pulpified cord is impossible. Restored function is probably always due to absorption of blood, or of the secondary inflammatory deposits which prolong the pressure symptoms.

The persistence of bone pressure at the site of injury justifies operation as much as in depressed fracture of the skull, because through pressure an injured cord must be further degenerated.

Laminectomy should be done as promptly as possible. If the subject be favorable, it may be done by expert use of cocaine. It will be less painful if done before local meningitis sets in.

An *x*-ray view of the fracture can be readily taken in these cases by from ten to fifteen minutes' exposure, and greatly aids the surgeon.

AN EASY METHOD OF REDUCING DISLOCATIONS OF THE SHOULDER AND HIP.

By LEWIS A. STIMSON, M.D.,

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DURING the last three months the following method of reducing anterior dislocations of the shoulder has been employed exclusively at the Hudson Street Hospital, and has proved so effectual and easy that I think it has earned the right to be more widely known.

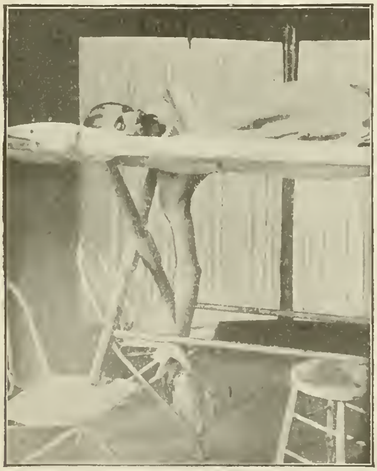

FIG. 1.—Reduction of Anterior Dislocation of the Shoulder.

I was led to devise it by the success that had followed the employment during a number of years of a similar method in reduction of dorsal dislocations of the hip. It has now been tried in about ten successive recent cases; it has failed in none, and has never required more than six minutes to effect reduction.

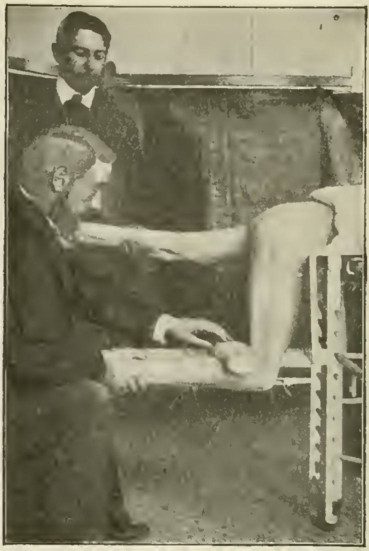

FIG. 2.—Reduction of Dorsal Dislocation of the hip. (Dislocation was not present in either of the patients photographed for these illustrations.)

The principle is that of steady moderate traction upon the arm in abduction, and the procedure is as follows:

A round hole about six inches in diameter is made in the middle of the canvas of a cot, about eighteen inches from one end. The patient is placed upon the cot with the injured arm hanging down through the hole, as shown in the illustration. The cot is raised upon blocks so that it will be at a sufficient height from the floor, and a ten-pound sand-bag is made fast to the wrist of the dependent arm. After a wait of a few minutes reduction is found to have taken place. None of the patients has complained that the procedure is painful. I recommend it as an effectual, easy, expeditious, and apparently safe method.

Theoretically it would be better to attach the weight to the arm close above the elbow, but in practice the wrist has proved to be the better place, for some of the patients would grasp the legs of the cot with the free hand, and thus interfere with the action of the weight. Possibly, lacking a cot, two tables might be used, placed end to end, the head resting on one, the body on the other, with the arm hanging down between. But the lack of snug support of the shoulder might induce a muscular effort, which would defeat or at least delay success.

The same method could be employed in dislocation of the elbow whenever the joint can be freely extended without the aid of anæsthesia, but under such circumstances traction by the hands alone is usually sufficient.

In dorsal dislocations of the hip the method is applied as follows: The patient is placed prone upon a table in such a way that his thighs extend beyond its end. The uninjured thigh is held horizontal by an assistant, to prevent tilting of the pelvis, and the injured one is allowed to hang vertically, while the surgeon, grasping the ankle, holds the leg horizontal (right-angle flexion at the knee) and gently moves it from side to side. If relaxation of the muscles is slow to appear, a sand-bag—five or ten pounds—is placed on the leg close behind the knee, or pressure is made there with the hand. This has succeeded in more than four-fifths of the cases in which I have employed it, and often without the aid of anæsthesia. In the two cases in which it failed, reduction was accomplished by traction in a line midway between right-angle flexion and full extension. I presume they were cases in which the bone had left the socket at a higher point than usual, probably dislocations "above the tendon," so called.

THE RELATIVE MERITS OF OPERATIONS FOR THE EXTRACTION OF VESICAL STONE IN THE MALE; WITH OBSERVATION ON THE SUPRAPUBIC AND LEFT LATERAL PERINEAL METHODS.[1]

By SCHUYLER COLFAX GRAVES, M.D.,

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Mr. President and Gentlemen: The index of merit associated with the performance of any surgical operation is the mortality rate. Where the figure is low, success is frequent; where the figure is high, failure comes far too often. Eyes beaming with gratitude are the handmaid of the former; and sighs and sobs the mournful accompaniment of the latter. That the joy of the world may increase, and the grief decrease, is the ever-present desire of the medical profession. We all know this, and are doing what we can to multiply the comforts of life and eliminate the woes by a constant endeavor to minimize mortality percentages. Trusting that the thoughts contained in this paper may be productive of good along this line, the same is respectfully presented.

Let us turn, first of all, to the mortality tables bearing upon this subject as prepared by J. William White for Dennis' "System of Surgery." These tables are arranged to cover the three operations done during three different epochs of life, viz., "(*a*) Infancy to puberty; (*b*) puberty to middle age; (*c*) middle age to old age," and are as follows:

a	1. Suprapubic,	13.1%.	*b*	Suprapubic,	11.3%.	*c*	Suprapubic,	18%.
	2. Perineal,	3.1		Perineal,	9.7		Perineal,	19
	3. Litholapaxy,	1.7		Litholapaxy,	4.5		Litholapaxy,	7

It will thus be noted that the Bigelow operation bears the lowest rate in each instance, and this fact is evidently due to the greater dangers at present connected with the cutting operations.

I now invite your attention, briefly, to a schematic exposition of the general merits and demerits of these three operations:

1. The Bigelow (litholapaxy): *A*, Advantages—(1) Avoidance of cutting; (2) abbreviated convalescence. *B*, Disadvantages—(1) Danger of damage to the bladder wall; (2) liability of laceration from incarcerated fragments; (3) Greater possibility of recurrence from failure to extract all particles; (4) poor drainage; (5) amount of time required; (6) inefficiency in case of very large calculi.

2. The suprapubic: *A*, Advantages—(1) Adaptability in case of large or impacted stones; (2) Ocular inspection and digital touch; (3) avoidance of hypertrophied prostate and tortuous prostatic urethra in the aged; (4) possibility of drainage. *B*, Disadvantages—(1) Danger of opening the abdominal cavity; (2) danger of sepsis from urinary infiltration; (3) Excessive detail in technique.

3. The perineal: *A*, Advantages—(1) Rapidity of accomplishment; (2) digital touch; (3) drainage. *B*, Disadvantages—(1) Hemorrhage: (*a*) artery of bulb; (*b*) internal pudic; (*c*) prostatic venous plexus. (2) Opening of pelvic connective-tissue planes, with sepsis from urinary infiltration; (3) section of ejaculatory duct; (4) rupture of entire urethra.

The operation of litholapaxy requires a very delicate and highly educated touch for its proper performance, and this means that many patients must suffer to enable the surgeon to develop that touch. It also often consumes considerably more time, even with the most skilled of operators, than prudence will permit, and furnishes real danger in the guise of laceration, infection, and the risk of recurrence. However, it must be admitted that when vesical calculus is very common, and under the old régime, this procedure, in the hands of the few, has given the best results; but in the hands of the many, and in localities where stone is not often seen, it is my sincere belief that the suprapubic or perineal methods, modified as will be observed later, will yield results in percentage rates fully as good as, and better than, those following litholapaxy in the same hands.

These modifications I shall now proceed to epitomize, and then discuss.

A, Improvements on the suprapubic method: (1) Horizontal incision; (2) Bristow's modification; (3) Harrington's modification; (4) Senn's modification; (5) writer's modification.

B, Improvement of the left lateral perineal method: Dilatation of the prostatic urethra, as well as the vesical neck, instead of section. Advantages: (1) Maintenance of prostatic and vesical integrity; (2) diminution in amount of traumatism; (3) avoidance of hemorrhage from prostatic plexus; (4) avoidance of damage to the ejaculatory duct; (5) avoidance of urinary infiltration; (6) avoidance of separation of bladder from urethra; (7) avoidance of much filthiness in surroundings; (8) more or less urinary control; (9) ease of drainage in cases requiring it; (10) rapid convalescence.

A (1) I cannot recall the reference; but some time ago my attention was drawn to an article by a Western surgeon advocating a transverse incision in cases requiring the high operation. This suggestion is a valuable one, and has been employed by the writer on several occasions since then with much satisfaction. The cases have not been lithotomies, for I have preferred the low operation in the stone patients who have come to me; but were cystotomies for (*a*) urinary distention from a hypertrophied prostate, and (*b*) urinary infiltration from a urethral tear made during the passage of a sound for stricture dilatation. The principle, however, is the same. The incision is made along the upper border of the pubis, and, in connection with other details, best exposes the space of Retzius (cavum Retzii), thus avoiding as much as possible the prevesical peritoneal fold. The tendons of the recti may be snipped or not as the case demands.

(2) Bristow, of Brooklyn, has developed an important modification of the high operation, and I would respectfully refer you to his original article.[1] His idea is to distend the bladder with air instead of water in the effort to render accessible the cavum Retzii. The doing away with the nuisance of stuffing the rectum with a water-bag, the diminished danger of vesical rupture from hydrostatic pressure, and the lightness, elasticity, and compressibility of air are advantageous points fully developed in his essay. Bristow originally inflated the bladder directly from his lungs,

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[1] A paper read before the Calhoun County Medical Association, at Battle Creek, Mich., December 5, 1899.

[1] Bristow, A. T.: "The Use of Air to Dilate the Bladder in Suprapubic Cystotomy." Annals of Surgery, 1893, vol. xvii., p. 667.

although now he recommends a bicycle pump (a suggestion of F. Tilden Brown), used after the initial incision is made, in order to permit of inspection during the process; and he claims that by his method the peritoneum can be lifted from two to three inches above the symphysis without the use of a rectal bag, while the vesical injection of ten ounces of water will lift it only about one-half an inch under the same conditions. He also states that the injection of four ounces of water has caused vesical rupture.

Some criticism was offered as to the applicability of this plan in actual practice, Bristow having based his statements on cadaver experiments without reference to bladders altered by disease; but as high an authority as Professor Pilcher, of Brooklyn, came to the rescue by a practical substantiation of its claims, even in bladders softened by advanced disease and extensive ulceration, and since then Bristow himself has had abundant opportunity to prove the practical value of his suggestion. There can be no doubt, however, that in cases in which the bladder has undergone great inflammatory thickening and contraction, this procedure will, at least occasionally, be found inefficient if not actually dangerous. Such cases are not suitable for the suprapubic operation.

(3) In 1893 Harrington, of Boston, published an article[2] recommending intraperitoneal cystotomy in selected cases. This theme has been discussed, and several additional cases have been added to the record, by Richardson, also of Boston.[3] From a perusal of these papers it seems that this procedure is at times both justifiable and successful. Richardson's cases were lithotomies, and in neither of them was any prevesical space present or even obtainable, because of small or chronically contracted bladders. In one he managed to stitch the summit of the bladder to the abdominal wall, thus partially shutting off the general peritoneal cavity, opening the bladder through its anterior aspect; in the other this could not be done, and the bowels had to be protected solely by sterile gauze. In both cases the vesical cavities were packed with aseptic mull for several days, for purposes of drainage, and both patients recovered.

When the suprapubic route seems preferable in any case, and the cavum Retzii is found to be absent, the Harrington plan should be adopted. As a matter of fact, however, such a condition of affairs is not often observed, and the inherent dangers associated with the intra-abdominal section of a calculous bladder are sufficient to deter many operators from its performance.

(4) In an article published for Senn by the *Medical News*,[4] in 1893 (later than the Bristow essay), the Chicago man recommends a truly life-saving innovation in the performance of this operation, viz., division into two stages. He cuts to the bladder, then packs with iodoform gauze, and waits five days for the appearance of the "cobble-stone" granulations. In this way microbic infection and the absorption of ptomains from urine, often exceedingly offensive and poisonous, are almost entirely obviated.

(5) It occurred to the writer that he could contract Senn's five days into five minutes, by the use of the cautery, actual or chemical, or by some protective powder, as the stearate of zinc, and later this was successfully done in a cystotomy for urinary retention, the wound being thoroughly treated with the "solid stick" ($AgNO_3$). By this suggestion it may become possible to cut to and open the bladder at the same sitting, and thus save days of pain and delay and danger to the patient.

B. When about to do a lithotomy on a boy aged seven years (February 5, 1896), the knowledge that so great an operator as Sir William Ferguson had, in a similar case, completely severed the bladder from the urethra in his endeavor to dilate the parts with his finger, the accident naturally resulting in the boy's death, caused the writer to think of the advantage of instrumental over digital dilatation; and so, in this case, after severing the fibres of the compressor urethræ, an ordinary grooved director was slipped into the bladder, the staff was withdrawn, and the tips of a double uterine dilator were passed along the director's groove into the vesical cavity. The parts were then easily dilated so that the finger could readily be passed into the bladder, and at this juncture, with a Longyear forceps, the calculus, which was about the size of the terminal phalanx of the little finger, was withdrawn. The wound was packed and the bladder drained for eight hours, after which no urine came through the incision, micturition being accomplished normally. The convalescence was very rapid, as is the case generally with children.

If the parts can be dilated in the child, they ought to be dilatable in the adult, and it was not long before the opportunity to decide the matter came. A young adult, twenty-seven years old, had stone, of four months' standing, complicating a vesical tuberculosis. The bladder was very much inflamed, hemorrhages were frequent, and the urine was purulent and exceedingly foul. After some preliminary treatment he was placed on the table (March 5, 1896), and the deep tissues were exposed by the usual lateral incision. The membranous urethra alone was cut, the dilator being used as in the case of the boy, and the parts were readily stretched. Inasmuch, however, as the stone was a large one, and the patient was quite weak and also the subject of organic disease of the heart, I deemed it advisable to crush the calculus in order to save time. This young man acted as did the boy. His urinary control was almost perfect. He held his water, and, when the impulse came, voided it, the stream passing through both wound and penis, as in the case of perineal section external to the compressor urethræ. There was very little incontinence, and in spite of a delay of eight days from hemorrhage caused by the ravages of tuberculosis, as a result of which, upon the expulsion of clots, it was deemed necessary to institute siphon drainage, the wound closed the sixteenth day, the urine being voided thereafter through the normal passage until about the thirtieth day, when after considerable straining some urine forced its way through the site of the incision. From that time on a tuberculous fistula persisted.

The question naturally arises: Was the outcome in these two cases exceptional or the result of prostatic and vesical integrity, purposely maintained? I think the latter, particularly in the case of the adult.

Although the idea of dilatation was original with the writer, he has since learned, by reference to the history of lithotomy, that it has been practised by mediæval and later operators, although not in the same way. Two methods are described:

Forcible dilatation, the so-called Marian operation, named from Marianus Sanctus, a pupil of the celebrated De Romanis, an Italian operator of the sixteenth century. This plan consisted in forcibly dilating the parts until they ruptured, the idea being that cutting was more dangerous than tearing. The results, however, must have been equally disastrous.

2. Gradual dilatation, the method of James Arnott, an Englishman of the earlier portion of the present century. He recommended gradual dilatation, ex-

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[1] "Tuberculosis of the Bladder; Suprapubic Cystotomy." Annals of Surgery, 1894, vol. xix., p. 370.

[2] "On the Feasibility of Intraperitoneal Cystotomy, with a report of a Case." Annals of Surgery, vol. xviii., p. 408.

[3] "Two Cases of Intraperitoneal Suprapubic Cystotomy for Stone." Annals of Surgery, vol. xxiii., p. 132.

[4] "Suprapubic Cystotomy in Two Stages." Medical News, July 1, 1893.

tending over hours or days, by hydrostatic force applied through the proper placing of a dilatable bag at the neck of the bladder. The method has never been much used.

Turning to the dicta of modern operators let me quote: The section of both prostate and bladder is to-day recommended by White (Dennis' "System"); Thomas Bryant ("American Text-Book of Surgery"), Wyeth, Moullin, Jacobson, and Treves. Roberts cuts the prostate alone. Joseph Bryant cuts the prostate and dilates the vesical neck, and so do Morrow and Keyes, the latter two also recommending section of bladder neck in the case of children. All recommend section of the prostate, and almost all section of the vesical neck as well.

The prostatic urethra and neck of the bladder can be readily dilated. Leidy[1] states, in reference to the prostatic urethra, that "it is the widest and most dilatable portion of the canal," and Roberts[2] speaks of "dilatation of the prostatic urethra and vesical exploration."

No modern author, as far as my observation goes, recommends the innovation which the writer offers, and no author, of any age, recommends the same procedure.

A word in possible explanation of the evidence of more or less urinary control following the modified operation. In doing the operation on the old plan it will be noticed that there are occasionally two separate gushes of urine, one when the fibres of the compressor urethræ are severed, and the other upon the division of the prostate and vesical neck.

Henry Morris,[3] in discussing the prostate, says: "The organ itself is composed of muscular and glandular tissue. The muscular element represents about three-fourths of the entire mass, and consists principally of unstriped fibres, continuous above with the vesical sphincter, and forming in the upper third of the organ a ring of great firmness and strength, lying above the urethral orifices of the ejaculatory ducts, and discharging in all probability the function of intercepting the backward flow of semen and prostatic fluid into the bladder during sexual congress."

Again, in reference to the presence and nature of the vesical sphincter, I quote from Leidy:[4] "At the neck of the bladder the internal (muscular) stratum is thicker, and thence extends upon the urethra, where it forms the circular vesical sphincter."

Associated with these unstriped fibres is more or less elastic tissue, adding strength and solidity to the compound. The phenomenon of double gush during the lateral lithotomy incision is thus explicable. Now, if the prostatic sphincter can prevent the backward flow of semen, it can at least assist materially in preventing the outward flow of urine, and thus it can be seen that, after the operation described above, the muscle, itself unimpaired, together with a tonic sphincter vesicæ, can account for post-operative urinary control.

Gentlemen, I cannot consider it bad surgery, even with the evidence of litholapaxy statistics, to recommend for the aged, for those who have enlarged, inflamed, and lobulated prostates, the modified sectio alta, and for the middle-aged and the young the modified sectio lateralis.

Bleeding of the Gums after Extraction of Teeth.—In five severe cases J. Munk (*Aerztlicher Central-Anzeiger*, 1899, No. 27) has seen almost immediate cessation of the hemorrhage follow the placing of a stypticin tablet upon the previously cleansed gum.

THE APPLICATION OF THE ELECTROSTATIC WAVE CURRENT.

By WILLIAM BENHAM SNOW, M.D.,

INSTRUCTOR IN ELECTROTHERAPEUTICS IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

Since the introduction of this new contribution to electrotherapeutics by Dr. W. J. Morton, those familiar with it have had reason to congratulate themselves on the possession of a more potent agent than any of the older electric currents. The writer's familiarity with the current, having used it now for more than a year in private practice and in the electrotherapeutic clinic at the New York Post-Graduate Medical School and Hospital, furnishes material for the following observations.

During the summer of 1898, a patient under two months' treatment for a condition of general decline due to advanced age, receiving treatment of one-half hour's duration three times each week, made such marked improvement that it became evident that this current was an agent of no mean value. In this case a spinal electrode of sheet lead one and one-half inches in width, and ten or twelve inches long, was applied over the spinal column in close contact with the skin. The patient became stronger, and all his functions resumed their normal tone and activity, while he was receiving no other treatment, and this during the depressing humidity of that summer in town. Realizing that one case would not establish a precedent, but confident that to it much was due, I began to use the new current in all cases of malnutrition, neurasthenia, insomnia, and migraine, and in every instance was reassured and gratified with the result. In these cases I employed a block-tin electrode about one inch in width and sixteen to twenty inches in length, applied next to the skin over the vertebral column.

In patients whose secretions were inactive, marked improvement took place in every case. A patient who would barely perspire under the plate at the first sitting would perspire sensibly over the whole surface after the third or fourth application, and the feeling of exhilaration that followed each treatment for a few hours would become longer, until a sense of well-being became constant, with improvement in appetite and all other functions. This will be true in cases in which no serious organic disease exists, and even these will receive proportionate benefit. When such cases are treated and muscular contractions do not interfere (as they may when the patients are spare, with muscles well developed) a spark gap at least four inches in length should be allowed to discharge between the balls of the prime conductors, after the first tingling sensation disappears, which will be when the surface becomes moist between the surface of the body and the plate electrode.

These treatments should not be for less than twenty minutes, and daily for the first week or more, as the case may require.

In cases of headache or neurasthenia, the point electrode, having a good ground connection, should be placed over the head or on a level with the knees in front, and in either case at a distance just far enough to allow the spark gap to discharge uninterruptedly.

Patients of a congestive type and full habit are usually benefited by placing the point in front of the knees, causing the main drift of the current to flow in that direction, while weak or anæmic patients feel greater relief when it is placed over the head.

The anodyne effects of the current were not realized until the writer, after failing to give relief in an acute case of tic douloureux with the friction spark and short sparks, when treated for upward of half an hour, succeeded on the following day, after fifteen minutes' application of the "wave current," in completely relieving the pain for fifteen hours, when it returned with much less severity. No other anodyne had given so much relief with one administration for so long a time before, and when followed up for five days it effected a complete cure. Other cases of severe neuritis, as sciatica and brachial neuritis, have been completely relieved and cured in my practice without recourse to other measures, which establishes beyond question the claim. Attacks of neuralgia, when not due to pressure or necrosis, are without exception promptly relieved by the same method.

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[1] "Human Anatomy," second edition, p. 641.
[2] "Modern Surgery," p. 690.
[3] "Human Anatomy," p. 1037.
[4] "Human Anatomy," second edition, p. 631.

The next surprise was received when the writer sought to relieve a timid patient who came to his office suffering from a swollen and painful knee joint (rheumatoid arthritis), without recourse to sparks. The joint was put up in a bandage of block tin, and the current, with a four-inch spark gap discharging, was continued for twenty minutes. The relief was so complete that the patient left without limping, after having suffered and grown worse for seven weeks. In a few weeks this patient, the first case of joint disease treated by the "wave current," was completely relieved, and has remained cured for one year. Since then many similar cases, as well as sprained joints, have been greatly benefited or cured by the same treatment.

Dr. Gibson, of Birmingham, Ala., reported at the meeting of the National Association of Electrotherapeutists, held in Washington in September last, a case of acute rheumatism in which a complete cure was caused by one treatment.

The treatment of paralyses by this wave current is far more satisfactory in our hands than by any other current. I find, however, in some forms that combining it with sparks gives best results.

This current is administered without the least unpleasant sensation as soon as the skin once becomes moist beneath the metal electrode, unless it is given strong enough to cause muscular contractions. It may be administered in any of the cavities or canals of the body without discomfort if metal electrodes are used without insulation. The results as far as known are most satisfactory, excelling and fully succeeding the sinusoidal and faradic currents whenever this treatment has been adopted. New fields for the use of this current will suggest themselves as time goes on, and the greatest of electric currents for therapeutic use will find new friends who must concur in the above statements, which are not at all extravagant. Before condemning it, every detail of the technique must be understood and practised, and those who ridicule the electrotherapeutist because the subject is too technical for their investigation will realize, after all, that he has at least one agent potent to relieve human suffering.

That there may be no misunderstanding, by those who have machines, in properly managing the current, I will briefly add the essential features:

1. Ground one pole of the machine to a gas or water pipe. A good ground is imperative, and the matter of polarity, so far as known, is immaterial.

2. Always treat the patient on the insulated platform.

3. Always employ metal electrodes (lead or block tin are best because pliable), and see that no material is between the electrode and the patient's skin.

4. Connect the patient by one rheophore, or more if several joints or parts are being treated at one time, to the side of the machine not grounded.

5. Close or nearly close the prime conductors, and start the machine.

6. Gradually separate the prime conductors until there is commencing discomfort from muscular contraction, or a burning sensation, which will disappear as soon as the skin becomes moist, or pain if applied over a neuritis. After short intervals the spark gap may be increased from time to time to get the best results.

7. In treating a neuritis do not make the electrode too large, or the current will be too much diffused to produce the best result.

8. Allow no object that would draw off the current to come near the platform, and be careful that no one touches the patient, for obvious reasons.

There are very many lesser details, but the above I believe sufficient for practical application; but every one is essential.

Clinical Department.

ONE RESULT OF ATTEMPTED ABORTION IN THE EARLY WEEKS OF GESTATION.

Dr. L. S. Alexander, of St. Augustine, Fla., writes that in many cases of tubal pregnancy he has, on close questioning, obtained a history of attempted abortion by drugs. The attempt is made almost immediately upon the non-appearance of the desired menstrual flow, conception being feared, to establish the catamenia by the use of oxytocic drugs. The action of this substance in contracting the circular muscular fibres prevents the descent of the fructified ovum, and tubal pregnancy, followed by rupture, results. In the South a favorite combination for this purpose is a mixture of cotton root and ergot.

PEANUT IN THE AIR PASSAGES.

By R. C. SHULTZ, M.D.,

LOS ANGELES, CAL.

This case is of interest only as adding to the statistics of results of foreign bodies in the air passages without operative interference. A girl, fourteen years of age, while buggy-riding with another miss, got some peanuts, which she was eating, into the air passages, and coughed most violently. She continued having attacks of coughing, and a whistling sound was audible part of the time to people in the room. A few days later a general practitioner made examination and expressed the opinion that the foreign body was in the right bronchus. An intended railway journey of some days was postponed, but was carried out without untoward incident between September 27th and October 6th. On the latter date I made a casual examination of the chest and distinctly heard a prolonged whistling, moaning, uncanny sound, only on expiration, all over the chest, but loudest a little above the right nipple and at the same level behind. At some subsequent examinations the sound was audible on inspiration, or on both inspiration and expiration, and with varying intensity, being occasionally heard, after coughing, at a distance from the patient.

On October 8th, after exposure, she had a severe nasal catarrh and enlargement of the tonsils. This had about subsided when, on October 16th, she had a most severe coughing spell, and coughed up profusely (which she had not done before); she felt some peculiar body reach the upper air-passages, which after a moment was expelled forcibly on the floor. The mother and the patient said the body was of the size and shape of a complete peanut kernel, hardest within, and which crumbled when picked with a pin. They felt sure it was the offending peanut. The patient experienced immediate relief and soon quite ceased to cough.

The same evening I was able to hear only a few coarse râles over the lower right lung; the whistling sound had disappeared; the breathing was deep and free over the entire chest. The patient's risibilities are very excitable, and I have cautioned her, as I think all ought to be, against uncontrollable laughter during eating.

VACCINELLA.

By E. V. MOCK, M.D.,
CAMBRIDGE, ILL.

READING the account in the MEDICAL RECORD of the patient with tertiary syphilis who after vaccination developed "vaccinella" brings to mind a case of which I kept a record while house surgeon of the workhouse hospital, Blackwell's Island. The patient was a woman, aged thirty-five years, admitted to the medical ward of the prison hospital with a severe attack of lobar pneumonia. She had fallen asleep in the street, drunk, during a cold rain, and was arrested and sent to the workhouse. Besides the pneumonia she had an extensive ulcer above the knee, which I diagnosed as specific after obtaining a history of syphilis of five years' standing. By the tenth day her temperature was running at 99° F., and she seemed in a fair way to recover, when she suddenly grew worse and the temperature rose to 104° F. Within a few hours an eruption appeared on her breast, spreading to her arms, abdomen, and legs. The eruption progressed from macular to papular, to pustular, and resembled so closely a smallpox eruption that I asked an attending surgeon to see the case. He advised isolation, and the sending for a dermatologist from the health board, which I did. After the pustular stage was well developed, the health board dismissed the case as one of tertiary syphilis. During the last stage pulmonary gangrene developed, and the patient died on the twentieth day after admission to the ward. The similarity of the two cases was such that I thought a comparison might be of interest.

SURGICAL ODDS AND ENDS.

By WILLIAM ANDERSON PAYNE, M.D.,
PATHOLOGICAL INTERNE, KINGS COUNTY HOSPITAL, BROOKLYN, N. Y.

AT St. Mary's Hospital, Hoboken, N. J., I met with the following cases that I hope will be of interest to the profession, not so much on account of their practical bearing, as for the lesson they teach one to be prepared at all times for all things. The conditions here presented are rare, if I may be allowed to judge from the statistics at hand.

CASE I.—Fracture of the mandible at both angles. This case I saw in consultation with Dr. Stack. The patient, eighteen years of age, was hit by a thrown brick on the side of the lower jaw, while walking through an ill-lit park. Nothing presented to make him think of fracture, and he thought the jaw merely out of place, until on examination the next day we assured him of the true condition. He could make himself well understood, and in articulating moved the symphysis considerably. He could eat food that required no chewing, and complained of nothing save slight pain, greatly increased on moving or manipulating the maimed member, and deformity. On inspection there was much swelling at both angles of the jaw, not unlike a double parotitis, and had I not observed the deviation of the chin to the left, I would surely have thought of that condition. The mouth was open and he could not close it. The manual examination showed free motion of the symphysis downward and upward, as well as from side to side, yet in this latter attempt I failed to bring the chin to the middle line. Grasping the molar teeth with two fingers, I found that I could move the ramus of one side with my other hand, and this procedure and result I demonstrated on the other side as well. The mucous membrane was untorn. So easily did I obtain the false points of motion and crepitus that from these signs alone I was warranted in making the diagnosis. The deformity and position left no room for doubt. With my thumbs in the mouth and fingers grasping the lower border of the bone, I reduced the fracture, and maintained the jaw in its proper place by a plaster splint, moulded snugly, and so broad as to embrace the angles thoroughly. The line of fracture on both sides was quite the same, extending from behind the last molar teeth to the angles.

A fracture at this point is not common, and when it occurs on both sides and with such manifest symmetry it becomes rare indeed. The mild type of symptoms should also be noted, and it would really appear as though a double fracture of this nature would be preferable to the usual single and compound fractures of the symphysis. These fractures, besides being simple, were unaccompanied by injury to the contents of the inferior dental canal. The attachment of the masseter muscle to the fragments of both sides must be given credit for the mildness of the subjective and objective symptoms, for it bound the pieces together and constituted a natural splint and at the same time lent its action to either fragment. After four weeks the patient was quite well and without deformity.

CASE II.—Rupture of the internal lateral ligament of the knee, with gunstock deformity of the leg. This patient was a strong, robust man, aged thirty-one years. He fell from a scaffold twelve feet high, and landing on his outstretched feet was thrown forcibly to his right. He was unable to arise, and was brought to the hospital in the ambulance. On examination I found his leg occupying an angle of 135° with his thigh. With little force this angle could be made more acute, but all efforts to reduce the deformity failed. The inner hamstrings were quite taut, but none of them was ruptured. The inner portion of the capsular ligament had been torn across, and the ruptured ends of the internal lateral ligament could be felt in their retracted positions. In this rent I could thrust my finger tips between the intact head of the tibia and the inner condyle of the femur, and in this intervening space I could feel what I believed to be the dislocated internal semilunar fibro-cartilage. To its detached presence between these articular surfaces I attributed my failure to bend the leg inward to its normal position. It greatly hampered, furthermore, the movements of flexion and extension, and only through a very small arc and with great difficulty could I accomplish this movement.

By manipulation with the fingers of my right hand in the situation described, and by vigorously moving the malplaced leg with my right hand, I was suddenly conscious of a click, and the leg once more occupied its normal position. This click was produced by the slipping of the cartilage into its proper site. The inflammatory reaction was great, but after several days spent in combating it the whole limb was encased in plaster. At the end of six weeks this was removed, but so weak was the joint that a reapplication of plaster was deemed necessary. It, however, bade fair finally to regain its strength. At this point I lost sight of the case.

CASE III.—Inward dislocation of the foot, without fracture. This man, aged thirty-three years, stepped on the end of a plank; the other end went up, and he was thrown forcibly on his left side. He managed to get to a car and from the car walked unaided into the hospital. His right foot was dislocated inward. If it had been outward instead, one would, after inspection, have diagnosed it as a Pott's fracture with the accompanying deformity. The sole of the foot, however, was parallel to the floor. The foot was pushed inward, and the internal malleolus rested on the middle of the trochlear surface of the astragalus. This malleolus being intact, I was curious (and am yet) to know how the inner articular surface of the astragalus passed under it and to its inner side. Surely it could not have passed directly inward, for the projecting malleolus and the capsular ligament offered a formidable barrier, to say nothing of the adjacent prohibitory structures. To go around the malleolus would have been easier, and I am forced to conclude that this is what happened. Considering the articular surface of the astragalus as a segment of a wedge with its base forward, we must regard the route pursued by this in freeing itself of the malleoli on either side as a forward one. When it had passed sufficiently far anteriorly the inner malleolus slipped outward on its posterior surface, and from this situation the malleolus passed forward, by the flexing of the foot in walking. So we find the tip of this process resting firmly against the centre of the trochlear surface, probably indenting it, and maintained in this position by the strong upward pull of the adjacent ligaments and tendons. The external lateral ligament was ruptured; the internal one was not and could be felt as a taut band running from the malleolus almost horizontally inward to the displaced astragalus. On the outer side the malleolus had nearly penetrated the skin and was felt beneath it as a sharp projection. At one point I could pass my finger between the outer surface of the astragalus and the inner surface of the malleolus. With the patient under chloroform I succeeded by repeated efforts in forcibly replacing the foot. The patient remained five weeks in the hospital, and was left without deformity and with a leg of normal usefulness.

Case IV.—Fracture of the fourth metatarsal bone. How a force of any kind could act on one of the inner metatarsal bones alone is rather remarkable, unless it be from some pointed object. This case, however, presents further interest, in that the man with foot strongly extended had the anterior part of the sole and toes come in contact with the pavement. I shall not attempt to disclose the selective action of this particular pavement. There was swelling over the outer part of the foot. A tap on each of the toes elicited pain only when the fourth toe was struck. I could get fremitus and a false point of motion, and these combined with the signs above brought me to the diagnosis as recorded.

Case V.—Incised wound of the ischio-rectal fossa produced by breaking of a chamber vessel. These trips to Chinatown are not infrequent, and I do not mention it on account of its oddity, but rather to show the beautiful effects of saline infusions in the treatment of hemorrhage.

This heavy old woman produced by her great weight breaking of the night-glass beneath her, and incurred thereby a wound four inches long, extending deeply into the ischio-rectal space. When she reached the hospital it was quite evident that a severe hemorrhage had occurred. All the symptoms of hemorrhage were present, but the absence of the radial pulse alone sufficed to indicate that our patient was on the verge of death.

Besides the usual remedies we started the flow of saline solution into the buttocks and beneath the breast. Gradually the pulse increased in strength, and the patient before long was placed on a fair basis of life. By far the greater part of this improvement was directly traceable to the salt solution. I could feel the pulse come up as the fluid filled the vessels. Unfortunately the patient died of hypostatic pneumonia two weeks later. The danger of such accidents impresses upon one the fact that beneath the bed there often lurks the enemy of womankind.

HYPODERMOCLYSIS IN TYPHOID FEVER.

By O. O. BURGESS, M.D.,
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In typhoid fever several important factors are regularly or occasionally at work to reduce the quantity of circulatory fluids in the body. Among these may be mentioned the increased consumption of fluids incidental to febrile movement; the lessened absorptive activity of the stomach and intestines, hemorrhage, colliquative diarrhœa and sweating, etc.

In view of the fact that solutions sufficiently salt to provoke increased endosmosis cannot, consistently, be introduced into the stomach and by way of the stomach into the intestines, why should it not be good practice to use the decinormal salt solution, upon occasion requiring it, by way of high rectal injection if practicable, or by hypodermoclysis, or in emergency by the intravenous method? In addition to the usual advantages of hypodermoclysis, we should thus secure the introduction into the blood-vessels of a pure liquid, uncontaminated by the bacilli and ptomain products which liquids by way of the stomach and intestines are pretty sure to pick up, and the probability of decreased exosmosis should not be lost sight of.

Indications for the use of the decinormal salt solution should not be limited to hemorrhagic cases, but the method should be resorted to in all cases in which the usual methods of treatment fail to accomplish the desired result. It seems highly improbable that any harm could come of it.

THE AUDITORY CANAL AS AN INCUBATOR.

By A. J. HOLMQUIST, M.D.,
COMO, COLO.

R. B——, male, aged seventeen years, presented himself for treatment late in the afternoon of August 14th, with the following history: While out on a fishing trip, a fly, supposedly a blue-bottle, had entered the left auditory canal. From the irritation produced and the consequent buzzing he supposed the offending object still present. A speculum was introduced, but examination revealed only a mass of cerumen impacted against the drum. As this was easily accountable for the buzzing I naturally discredited the patient's statement concerning the fly in his ear, especially as examination revealed no trace of it. Hence my first treatment was directed toward clearing the canal of its accumulated cerumen. A softening mixture of glycerin and water with sodium carbonate was prescribed for use at home, and a pipetteful of pure hydrogen peroxide was instilled into the canal. This was followed by syringing, which resulted in bringing away only a few small flakes of wax. The patient here stated that his mother had introduced some warm lard into his ear to allay the irritation. This having united with the cerumen probably accounted for the syringing being so ineffectual. On the patient's return the next afternoon he complained of intolerable buzzing and acute pain. A few drops of blood also had oozed from the canal. Examination, as before, was negative except revealing the mass impacted against the drum. Hydrogen peroxide was again employed in full strength, followed by syringing, which failed to dislodge the wax. Two hours later the patient returned with a living maggot, which had wriggled out of his ear. A mixture of alcohol and turpentine, equal parts, was prepared, and between fifteen and twenty drops introduced into the canal, the patient's head being held so that the full effect of the medicament could be exerted against the drum. He complained of excruciating pain and increased buzzing. As soon as the latter ceased the head was inverted and irrigation with warm water from a fountain syringe was employed. This resulted in the expulsion of a dirty mass of detritus containing two dead maggots. A quarter grain of morphine sulphate dissolved in warm vaseline followed the irrigation, to allay the pain caused by the turpentine, and no further trouble was reported. A week or two afterward the patient, on being questioned, remembered that before applying for treatment he had removed from his ear between twenty and thirty white, elongated objects which resembled the larvæ of an insect. This would account for the small number (three) of maggots being found, as the detritus from the last irrigation revealed no larvæ. What seems a remarkable feature is the short time required for the incubation of the larvæ, as only twenty hours elapsed from the time the fly entered the ear until bleeding from the canal occurred. However, the medium of the warm lard and the normal body temperature must have proved favoring factors to rapid incubation.

FLOATING KIDNEY MISTAKEN FOR AN APPENDICITIS AND OVARIAN TUMOR—OPERATION AND RECOVERY.

By H. T. MILLER, M.D.,

SURGEON TO MITCHELL-THOMAS HOSPITAL, SPRINGFIELD, OHIO.

In a recent issue of the Medical Record, there was reported a case of "nephrorrhaphy and stripping of the appendix through lumbar incision for floating kidney and painful appendix." Though the case I am about to relate is not a parallel one, yet it suggests the possibility of mistaking a right floating kidney for an appendicitis, or, in a woman, for an ovarian tumor.

Mrs. R——, aged forty-four years, occupation domestic, entered the hospital on March 29, 1899, suffering from pain in the right iliac fossa, about one inch below McBurney's point. This pain had commenced about one year previous to the above date, and had continued up to the time of operation. During this period an enlargement made its appearance in the right iliac region. A few days previous to the operation an examination could not determine anything distinctly characteristic in the outlines of this tumor to prompt an absolutely positive diagnosis, nor did the subjective examination determine anything further than that the patient was incapacitated for about a year by almost constant suffering from pain in the right iliac fossa. At infrequent intervals there was a slight rise of temperature.

The outlines of this tumor were not at all distinct, and because of its location it could easily be mistaken for either an appendicitis or an ovarian tumor; then, moreover, the subjective examination could not determine whether the enlargement had appeared gradually or suddenly, whether it was preceded or followed by pain, or whether the fever was short or long in duration; in fact, the history of the case was *nil*. However, the opinion seemed to favor the possibility of the tumor being ovarian, so it was not a little of a surprise when, upon exploration by median incision, a right floating kidney was discovered.

In order to complete the history of the case, I would add that the median incision was at once closed, and a lumbar incision was made, commencing at the twelfth rib to the crest of the ilium. In order to get hold of the kidney and bring it to the margin of the incision, a pair of vulsellum forceps was used, and the organ was secured to the posterior abdominal wall by three large-sized interrupted catgut sutures, no drainage being used. The patient left the hospital on the sixth of May following, cured.

A recent examination showed the kidney still securely anchored.

CONGENITAL HERNIA OF THE UMBILICAL CORD.

By GEORGE KESSEL, M.D.,

CRESCO, IA.

In the Medical Record for November 4, 1899, is an article on "Congenital Hernia of the Umbilical Cord," with a history of two cases. I want to add the history of a case.

On August 2, 1899, I delivered a healthy woman in her first confinement of a healthy girl baby. The labor was normal. But I was astonished when I took my first look at the child and saw the large hernia of the cord. The coils of intestine and the liver could be seen clearly through the transparent membranes of the cord. Apparently all the abdominal viscera were in the tumor, which was as large as the child's head. These contents could be easily reduced. Being afraid to leave the tumor over night as it was, I immediately performed the operation of stitching the freshened edges of the incomplete umbilical ring together with silk. But the child died during the night. Death seemed to me to be due to the pressure of the abdominal contents within the abdomen, for every time I reduced the contents the pulse weakened and failed, and upon relaxing the pressure it grew strong again. If I ever see another case of the kind I shall wait a day or two before I operate.

A CASE OF TETANUS IN WHICH THE MOUTH WAS THE PROBABLE SOURCE OF INFECTION.

By E. K. LOVELAND, Ph.G., M.D.,

WATERTOWN, CONN.

During the night of September 19th, I received a hurried call to see a child. The messenger said the little patient had just had a severe convulsion, and he wished me to get there as soon as possible. On arriving at the house about an hour later, I found a healthy-looking, well-nourished, plump, and exceptionally bright-appearing, twenty-months-old girl sitting in the lap of an anxious mother. On inquiring into the history of the case, I found that the child had been unusually healthy during her entire life up to the present sickness, which commenced two days before, when it was noticed that she awoke from her afternoon nap with a sudden start, crying. Her parents thought nothing in particular of this at the time, as the child had played exceptionally hard before her nap and continued to do so during the rest of the day. That night the child awoke once or twice with a sudden start, crying for a second or two as if in severe pain, but dropped off to sleep again very soon, and the parents attributed it to her having become over-tired the day before. The following day she seemed well and had a good appetite, but during the night that followed, she had a repetition of the symptoms of the night before, except that the spasms of crying and sudden awakening seemed to be more severe; but in the morning she seemed quite bright again and also through the day, eating well; but they noticed that she acted as if her throat were a little sore. The next night (September 19th), the little one awoke suddenly out of a sound sleep, and crying out as before went into a convulsion, upon which they sent for me. At this time when I reached there, as I have already stated, she was very bright, sitting in her mother's lap, but had a temperature of 100° F. with a tense, rapid pulse. She dropped to sleep repeatedly while in her mother's lap, as often as once in five minutes, and each time awoke with a terrible jump and a contraction of the muscles of the back of the neck and throat, which lasted but a few seconds and then passed off, and the child again dropped off to sleep. On trying to open her mouth to examine her throat, I found that I could not separate her jaws, which were tightly closed, and although she was a bashful child, and generally cried when strangers were present, yet she did not do so now. The parents said that they had also tried once or twice that day to see her throat, but could not get her mouth open. I left her some bromide, also some aconite to reduce the fever and tension of the pulse.

I called the following morning and found that she had had no more convulsions nor much sleep since the night before, owing to the fact that she could sleep but a few minutes before she would be awakened by a sudden contraction of the muscles, followed by a peculiar cry, probably due to pain; but she would not weep, nor did she from now on, during her entire sickness. The muscular contraction and cry during the past twelve hours had not seemed to be quite so severe, probably due to the bromides; her temperature was now 99° F. and the pulse was not quite so full and snappy as it had been the night before. When evening came I found her with a pulse more rapid and fuller, with a temperature of 101½° F., and she had had two spasms during the day; the jaws were tightly locked, and in trying to open them they were strongly forced together and closed so firmly upon the spoon handle that it was really with difficulty that I could remove it, and on doing so I found the print of her teeth upon the spoon; the patient immediately went into a spasm, probably due to the irritation, in which the opisthotonos was very marked and there was a marked sardonic grin. I then felt confident that I had a case of tetanus to deal with, and, although the parents had told me two days before that there were no scratches, cuts, or sores of any kind on the child, yet I examined her carefully myself to see if I could find any kind of flesh wound. On the calf of her leg I found where there had been a slight scratch, said to have been three weeks old; it was about a half inch long and the scab had already dropped off; there was no inflammatory action present, it being entirely healed and well. There was only one other mark anywhere on the child's skin, and that a very small scar, over the left eye, which was due to a dog having bitten her five months before, but there was no inflammation here nor did any develop during her sickness, and the dog is still living and well. There seemed to be considerable trouble somewhere in the throat, as there was a large amount of ropy mucus, mixed with pus and blood, with a powerful odor, which was constantly discharged from both nose and mouth, and her neck was swollen over the tonsils; but as yet I had been unable to get her mouth open enough to examine her throat. I left instructions with the nurse to increase the dose of bromides and give three grains of chloral each three hours. The next morning (the 21st) she had slept more, and yet had had two or three spasms during the night. She was still taking some nourishment from her nursing bottle, she herself folding the rubber nipple and crowding the same between her teeth at such times as she was able to get her teeth apart, the opening probably amounting, at the most, to something less than a quarter of an inch. I wished for counsel, and Dr. E. C. French, of Watertown, met me with the patient that afternoon. We considered the antitoxin treatment, but it was not thought favorably of by the family and we did not press it. We now felt that she was getting neither the nourishment nor the stimulant by the mouth that she needed, so we commenced giving her pre-digested food with stimulants by enema; also the chloral and bromides with a very little morphine were given by the rectum, and pushed almost to the extreme of tolerance during the night, as the spasms and opisthotonos had been repeated at intervals of a very few minutes all day, and the risus sardonicus was now almost constant. The child had worked at her nose almost constantly during her sickness, crowding her little fingers into her nostrils as far as she could. I examined her nostrils as far back as possible, using my head mirror. As far back as I could see there was considerable inflammation, and at this time there was an increase of the flow from the nostrils of a sero-sanguineous pus, which had an extremely sticky consistency, and this continued to increase up to the child's death four days later.

The next day the temperature went down to normal, where it remained. The pulse was short and snappy, but was readily softened by the use of veratrum viride. The following day the jaws relaxed fully three-quarters of an inch, and the spasms were not so intense (probably due to the use of anodynes), and, on examining the posterior nasal pharynx with a head mirror, I found quite a large sore on the back of the mouth surrounded by a boggy, honeycomb tissue which involved uvula, tonsils, base of the tongue, and particularly the palate, and this was, I believe, the original site of the infection. I then asked if the child had at any time been putting things into her mouth while at play from which she could have received any injury. The parents recalled that, two or three days before she was taken sick, she was playing in the attic with a kit of old cobbler's tools, belonging to her father, and they thought that she put some of the tools in her mouth, and said that she might have got scratched in that way, although they did not remember hearing her complain. My belief is that she, while playing with the rusty nails, awls, etc., to which more or less earth was adherent, put them in her mouth, and from these received a slight scratch on her palate, and this was the source of tetanus infection.

AN UNPRECEDENTED CASE OF PROLONGED ANÆSTHESIA WITH NITROUS OXIDE AND OXYGEN.

By S. ORMOND GOLDAN, M.D.,

NEW YORK.

SELDOM if ever can the efficacy of any anæsthetic be more severely tested than in the following case:

Mrs. J——, aged seventy-six years; general condition fair; type of patient anæmic though stout; previous narcosis, none; respiratory system normal, though respiration was slightly increased in frequency, being 24; circulatory system normal; slight arteritis considering the age of the patient, arterial tension slightly increased; pulse, 84; urine analysis negative. The anæsthetic used was nitrous oxide and oxygen throughout. The operation was for extirpation of both breasts with axillary contents, the narcosis lasting two hours and forty minutes.

Dr. Hewitt's apparatus was used with Barth's arrangement of cylinders. the precaution having been taken to turn the stopcock at right angles to the face piece, which I have found by experience, in using this apparatus with the patient in the recumbent position, insures more perfect working of the valves, which is of the greatest importance when using the mixed gases.

The percentage of oxygen during the first half of the anæsthesia varied according to this apparatus between six and eight per cent., during which the patient's pulse averaged about 70; respiration about 20; the pupils were normal, or moderately dilated. Cyanosis was entirely eliminated; in fact, the patient's color was better than before the administration was commenced. There was some slight venous oozing during this part of the operation. During the second part of the operation I found the patient stood ten per cent. of oxygen, and only at twelve per cent. or more did she evince signs of returning consciousness. There was no venous oozing during this part of the operation. I found no stimulation necessary before, during, or after anæsthesia, nor did any untoward symptoms develop. Consciousness was regained immediately upon removal of the inhaler, and no excitement developed, which is not infrequent after the use of nitrous oxide and oxygen. Following the removal of the inhaler the patient objected in vigorous tones against the application of dressings and tight bandages, which shows the transitory effect of this anæsthetic when compared with ether and chloroform. There was slight temporary nausea, but no vomiting following the anæsthesia.

The rapid convalescence of the patient shows that the anæsthetic shock was entirely prevented, for it is extremely doubtful whether this patient could have stood ether or chloroform for this length of time.

The case demonstrates the importance of reducing or entirely eliminating the anæsthetic factor.

The surgeon, Dr. H. J. Boldt, informed me that the urine analysis was negative in its results during convalescence. There was also, I am told, a circumscribed area of dulness in the right lung posteriorly. I might also say that during the operation upon the left side the pleura was perforated. Neither occurrence had apparently any effect upon the patient's convalescence, for the temperature and pulse were hardly ever much above the normal. At this writing only ten days have elapsed, and the patient was up the day following operation. Dr. Boldt tells me that this is his usual custom whenever practicable after any operation or anæsthetic, to avoid secondary pulmonary complications, and I must say it is a most commendable one.

While a mixture of gas and oxygen is the safest of all anæsthetics, eliminating the unpleasant features of the gas when used alone, it is, however, the most expensive. In this patient the nitrous oxide used was fifty-five ounces by weight, two hundred and twenty gallons by volume. The oxygen was eleven ounces by weight, sixty gallons by volume; making a total cost of the gases used $7.40. Nitrous oxide is two and oxygen five cents per gallon, as supplied by the dental companies of this city.

As far as I have been able to learn after careful investigation, this is by far the longest period of time in which surgical anæsthesia was ever maintained with nitrous oxide and oxygen. When we consider the age of the patient, the nature and duration of the operation, and the rapid convalescence, the case is certainly remarkable and leaves nothing to be desired.

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Mild Types of Typhoid Fever.—George Murray Waters questions whether cases of typhoid fever, in which all the symptoms are lacking, can really be called typhoid at all, although conceding that two or three of the symptoms can be absent without invalidating the diagnosis.—*Columbus Medical Journal*, January 5, 1900.

The Laryngoscopic Image.—R. Forns makes a diagrammatic study of the elementary action of each group of the laryngeal muscles (intrinsic). He finds in the special innervation of the crico-thyroid the key to the various clinical appearances found.—*Annales des Maladies de l'Oreille, etc.*, December, 1899.

Abdominal Extravasation of Bile.—B. Poulton reports a case in which the symptoms were so urgent that a laparotomy was performed. The muscles and fasciæ were loaded with bile, and on opening the peritoneum seven ounces of bile were collected. The gall bladder was distended and very large. Continuous irrigation with hot saline solution was carried out, and through incisions made in the right loin and over the pubis large tubes were carried into the lumbar region and the pelvis. No lesion was found in the gall bladder. The author thinks it was a case of perforating ulcer of the common duct, due to impaction of stone.—*The Australasian Medical Gazette*, December 20, 1899.

Excretion of Urinary Water and Urea by Diminished Kidney Weight.—John B. Nash, from a study of three cases and laboratory experiments, concludes that if one kidney be removed, three years later the healthy kidney will excrete more urine than the average excreted by two normal kidneys, and the average amount of urea produced by two healthy kidneys. The same results follow as regards urine if one-half of a kidney be removed, but the urea will be unaffected. After removal of one kidney, the urine excreted during the immediately succeeding seven weeks will be below the average daily amount. The urea will be less than the average for two healthy kidneys. —*The Australasian Medical Gazette*, December 20, 1899.

Immediate and Remote Effects of Nasal Obstruction.—F. R. Reynolds states that by the successful treatment and permanent relief of nasal stenosis, many diseases are prevented, relieved, or cured. Among these are anæmia, marasmus, hay-fever, asthma, and laryngismus stridulus. Reflex cough may be due to hypertrophic rhinitis. Also gastralgia, cardiac palpitation, neuralgia of the trigeminus, scotoma, migraine, cephalalgia, ciliary neuralgia, vertigo, photophobia, neurasthenia, spasmodic cough, spasm of the glottis, frontal and supra-orbital headache may all have their origin in an exciting nasal focus. Emphysema and bronchitis often accompany nasal stenosis. Nasal stenosis not rarely has a deleterious effect on the ears. —*The Medical Age*, January 25, 1900.

Remarkable Tolerance of the Young Child for Opiates.—Borde relates his experience in the use of opiates for young children which seems to be at variance with the generally accepted views on the subject. He gives a summary of his treatment of sixty-four cases, the patients ranging in age from one month to twenty-five months. He declares that he has never observed signs of intoxication from opium—that is, coma, contraction of the pupils, cessation of urine, anorexia, arrhythmical respiration, flushed face, convulsions, etc. Borde uses opiates most frequently in fetid diarrhœa. His successful experience has been too wide to be called accidental. He has used four different preparations: first, the syrup of diacodium, which he uses no longer on account of its feebler activity; second, laudanum, which he has now ceased to use because its activity can be modified by its age; third, syrup of thebaine; fourth, syrup of morphine, which he prefers because it contains only one alkaloid, and because its standard does not vary. He believes that the child has a much greater tolerance for opiates than the adult.—*Journal de Médecine de Bordeaux*, December 31, 1899.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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REGULATION OF THE PRACTICE OF MIDWIFERY AND PROVISION FOR THE LICENSING OF MIDWIVES IN NEW YORK CITY.

AN assembly bill has recently been introduced with the above object in view. The bill in question seems to present several objectionable features, and could be greatly improved by much judicious revision. Probably were a vote of the members of the medical profession throughout the State taken as to the necessity or desirability of licensing midwives, the consensus of opinion would be against such a course.

A very large number of physicians think that the licensing of midwives would be by no means a step in the right direction, but rather hold that a parturient woman is likely to receive more beneficial treatment at the hands of a skilled medical practitioner than if placed in the charge of a midwife. If, however, a bill of this description is to come into force, at any rate it will be well to have as satisfactory a one as is possible. The bill in its present form does not fulfil these conditions. Exception may be taken to its first section, in which it is provided that the mayor of the city of New York shall appoint the examining-board. Surely such an appointment should be left to the discretion of the Medical Society of the County of New York. Another provision of the bill which will decidedly meet with the disapprobation of the medical profession is that a board of examiners should be appointed to serve without compensation. Physicians already perform more than their fair share of gratuitous work, and why they should be required to fill posts of this nature for "love and good-will" alone is a thing, in the words of the immortal Lord Dundreary, "no feller can understand." Again, grave objections must be brought against that portion of the bill which provides for a board of examiners for New York City only. Physicians in all parts of the State should insist upon this clause being struck out or altered. The Medical Society of the State of New York has always strongly opposed bills to create examining-boards for midwives in separate cities and counties, and has insisted, and rightly so, that if midwives are to be licensed the practice should include the whole State. If this provision were allowed to become law, an extremely awkward precedent would be established: other cities in the State would probably follow suit, and would in the long run bring about a state of chaos.

There has been but little convincing testimony forthcoming that the midwives bill is called for. On the contrary, the mass of evidence tends to point in the opposite direction. Doubtless the services of a midwife who has undergone an examination testifying that she possesses a certain amount of experience and skill would be preferable to those of one who has been put to no such test. But, on the other hand, the fact must be plain to the veriest tyro that even a licensed midwife cannot be expected to grapple with all the complications which may occur, with the confidence of a qualified medical practitioner. In the end it will assuredly be found cheaper to employ skilled attendance, and when the public has grasped this truth the present class of ignorant midwives will in the natural course of things pass away.

The duty of medical journals is to bring the minds of the community at large to a realization of this fact.

MANAGERS AND PHYSICIANS.

IT is proposed to establish a hospital for the care of indigent crippled and deformed children who may have resided in this State for a period of not less than a year, and for that purpose a bill has been introduced into the House of Assembly. The aforesaid hospital is to be located within a reasonable distance of the city of New York.

The object is most meritorious, and will without doubt prove a great boon to the many unfortunate little ones who by reason of their infirmities are a burden on their people, and who live in too many instances a life of the utmost misery amidst the dirt and vice of this great city. At the same time the bill contains certain clauses which are deserving of sharp criticism. Section 3, after detailing the duties of the managers, reads as follows: "They shall not receive any compensation for their services, but shall receive actual and necessary travelling and other expenses." Section 5 commences thus: "All the surgical and medical officers of the hospital shall render their services gratuitously," and ends with these words: "For the first two years the attending surgical and medical officers shall provide their own surgical operating-instruments."

Now there can be no particular objection to the managers receiving actual and necessary travelling and other expenses, but why should the surgical and medical officers be expected not only to give their services, but should also be required for the first two years to provide their own surgical operating-instruments? Is it because the duties of the managers are so much more onerous than those of the medical staff that this seemingly unfair discrimination is made? Impartial, unprejudiced persons, who are familiar with the manner in which hospitals in this State are conducted, are of the opinion that the contrary is the case. This is without doubt the fact, and it is the fault of the members of the medical profession themselves that they do not receive adequate compensation for the work they perform. If the physicians and surgeons of this State were one and all to insist—barring very exceptional circumstances—upon being paid for services rendered, the cause of charity would not suffer, and an excellent example would be set to their professional brethren in all parts of the country. The medical profession throughout the world might with advantage take to heart and act upon the good old Bible precept, "The laborer is worthy of his hire."

STATUS EPILEPTICUS.

The symptomatology and pathology of status epilepticus are deservedly receiving much attention at the hands of neurologists. The status in epilepsy is fairly well recognized now to be the acme or climax of the disease; that is, given the greatest number of contributing causes, the epileptic is foredoomed to die of the status as the maximum development of the disease. Certainly chance plays no part in the production of status.

Throughout all the present-day definitions of status epilepticus, we find that the constant factors of rapidly repeated seizures and the progressive deepening coma are always included as the essentials of the condition. There is also a marked elevation in the fever, pulse, and respiratory curves. Some still hold that status is seen only in certain kinds of epilepsy; but by far the greater number of authorities maintain the more logical ground that the condition may occur in all epilepsies. An interesting point is disclosed by recent investigations, as there appears to be a necessity for reviving the old theory of cortical heat centres (Eulenburg and Landois) to explain the high temperature in status epilepticus composed entirely of psychic attacks. The fever curve of status still remains mysterious, although it is generally in direct ratio with the severity and number of epileptic convulsions. Inasmuch as this rule is not always true, there are evidently latent factors in heat production in the epileptic paroxysms, which are not referable to the muscular convulsions. The understanding of the anomalous fever curves in status will probably rest for ultimate solution upon its etiological pathology. After all, the enigma of the fever curve is not more difficult of solution than the loss of consciousness in isolated convulsions of epilepsy proper. The length of time after the disease of epilepsy begins and the time when status will occur is a point of great practical importance to all physicians. Recent statistics seem to prove that epilepsies developed in later life have status in a shorter period of time than when the epilepsy is contracted in early life. However this may be, it is certain that the disease of epilepsy in the majority of cases must be very well established before status will supervene. Epileptics may never have more than one status period, or may have six or seven, although the latter number is quite rare. Cases are not unknown in which patients have recovered from status and also from the epilepsy proper; although it is now generally conceded that status is the severest manifestation of epilepsy, and but few patients ever recover from their disease when status has once occurred.

The influence of menstruation and pregnancies upon the production of status in epileptic women is *nil*. It is as infrequent a clinical experience to see true status develop from the menstrual period as it is common to see serial attacks of major hysteria at such epochs. This fact alone aids one much in the differential diagnosis.

The immediate cause of status is still as indefinite as that of epilepsy proper, and the solution of the problem probably rests upon the discovery of the pathology of the affection and the modifying agencies of the individual's resistance to the progress of the disease. Its pathology, beyond a vascular and cellular degeneration of the cortex, is still obscure. Oftentimes the vascular and cellular degeneration is really a result rather than a cause of the status. The actual onset of status does not differ from the beginning of serial attacks, and serial periods, without status, are frequently termed aborted or pseudo-status. Careful attention to these periods frequently delays the presence of true status epilepticus in the individual patient. The gradual, step-like advance of the grave symptoms is the cardinal factor in forming a prognosis of status.

The advance of our knowledge of treatment of status is not great. A significant fact of the futility of medicinal treatment is seen in that all plans of medication are of service in isolated cases. The percentage of recoveries remains about sixty or seventy in spite of improved methods of treatment. In the medication of status it should always be borne in mind that that which is indicated for the convulsive stage is contraindicated for the stuporous stage, and that the administration of large doses of chloral, uncombined with other drugs, has come to be considered as dangerous medication, in the light of depressing effects obtained from chloral upon weak hearts. Notwithstanding the frequent abscess formations from hypodermic bromide medication, this line of treatment is steadily growing in favor in the severest cases of status. Good general nursing is nowhere more needed than in giving proper care to epileptics suffering from status, either in their own homes or in special hospitals for this disease.

SCIENTIFIC PREFERMENT IN CUBA.

Complaint is made in the February number of the *Archivos de la Policlinica* of Havana, concerning the manner in which medical appointments are made under the present régime. Formerly (that is, under Spanish rule), our esteemed contemporary says, scientific merit was the means by which posts of honor and profit were obtained, and medical men were thereby stimulated to study and to conduct original investigations. Under this stimulus the laboratory of the *Crónica Médico-Quirúrgica* and the Free School of Medicine were established, the attendance at the meetings of medical societies was large and enthusiastic, and the first insular medical congress was held. Now, however, desirable positions are obtained through personal friendships, and there is no necessity for superior knowledge nor any reward for study. At first, the *Archivos* says, these appointments were made for political merit, and to this no objection is made, since the country owes its existence to the army, but now, it complains, not the most fit among the politically deserving, but the most friendly to the new powers are selected. And recently, indeed, even political merit no longer counts, but only personal favor. Influence is now the sole recommendation to preferment. We trust the condition is not universally so bad as that, and that one or two specific instances have led our esteemed contemporary to a generalization. But there should not be even one such instance, and certainly the present military governor of the island, who is himself a scientifically trained medical man and no friend of place hunters, does not countenance such abuses. The medical men of Havana should take their complaints to General Wood, for he will heed them.

News of the Week.

Philadelphia County Medical Society.—At a stated meeting held February 14th Dr. Thomas J. Mays exhibited a number of patients with phthisis treated with injections of silver nitrate. Dr. B. Franklin Stahl presented a communication entitled "Copy the Formula on the Label." Dr. John H. Gibbon presented a communication entitled "Rupture of the Plantaris (Lawn tennis Leg)."

College of Physicians of Philadelphia: Section on General Medicine.—A stated meeting was held February 12th, when Dr. Frederick A. Packard read a paper entitled "Diet in Typhoid Fever." He pointed out that the most important cause of death in typhoid fever is the intoxication or the asthenia, and he analyzes the suggestions that have been made by various clinicians to enlarge the customary diet employed in this disease with the object of averting the dangers arising from these conditions. While he has himself not gone beyond the conventional diet as yet, he proposed to do so as soon as a suitable opportunity offered. He laid emphasis upon the administration of water in generous amounts. Dr. John H. Musser read a paper entitled "The Use of Stimulants in Typhoid Fever." He pointed out that alcohol is not required in the sthenic cases, and is needed in the asthenic cases only when the tongue becomes dry, the secretions are diminished, the urine is deficient, and muttering delirium, with picking at the bed-clothes, is present, and the pulse is soft and feeble, and the sounds of the heart are weak. Dr. James M. Anders read a paper entitled "The Use of Intestinal Antiseptics in Typhoid Fever." He pointed out that in accordance with present conceptions of the disease little can be hoped for from the administration of antiseptics in the treatment of typhoid fever. It is his custom when the diarrhœa is not present to administer calomel at the outset, and when meteorism is present and the character of the intestinal evacuations furnishes the indication, to administer salol in doses of gr. iii. at varying intervals, and occasionally to make antiseptic injections into the bowels. Hydrochloric acid is useful both as an antiseptic and as an aid to digestion. Dr. James Tyson said that as milk contains all of the necessary elements of food, and that, as in the case of infants, it seems designed by nature as a suitable article of diet, it appeared to him the most available form of food in cases of typhoid fever. So many of the unpleasant symptoms previously observed have disappeared since the more general adoption of the Brand method of treatment that the need for stimulants has been greatly diminished. So, too, a better appreciation of the nature of typhoid lever has removed the indication for intestinal antiseptics. Dr. Judson Daland stated that it is his custom to supply fluid to the body by means of rectal injections of salt solution. He pays especial attention to the condition of the mouth. Dr. B. F. Stahl stated that milk can be made more available as a food in the management of febrile conditions if more attention is given to variations in its preparation; for instance, by greater dilution the dangers from the formation of large curds is easily obviated. Dr. H. A. Hare stated from personal experience that he felt it desirable to feed typhoid-fever patients more liberally than has been the custom in the past. In his own practice patients are permitted to have from two to four eggs, soft boiled, daily, and with the approach of defervescence also corn starch and tenderly boiled rice. Strychnine should not be given for too long a time, as it is a cardiac stimulant and may cause abnormal cardiac activity.

Antirabic Inoculations in Berlin.—Three hundred and eighty-four persons bitten by mad dogs and cats were treated during the past year in Berlin by means of antirabic inoculations. Three hundred and seventy-eight of these recovered, and three of the six who died were already suffering from rabies when treatment was begun.

Philadelphia Pediatric Society.—At a stated meeting held February 14th, Dr. A. A. Eshner presented a case of mitral obstruction and pulmonary obstruction, occurring in a girl nine years old. Dr. J. P. Crozer-Griffith presented a case of congenital heart-disease, with great cyanosis and clubbing of the fingers, in a boy of about six years. Dr. G. G. Davis presented a case of double congenital dislocation of the hips in a girl five years old, in whom permanent reduction had been effected upon one side at the age of three and one-half years, and after other measures had failed an artificial acetabulum was created at the age of four years on the other side, with retention of the head of the femur in the new socket. The previously marked lordosis had quite disappeared, and there was but little shortening on the side operated on. Dr. J. P. Crozer-Griffith presented a case of cerebral diplegia with choreiform movements, and also a case of stenosis of the larynx in the course of typhoid fever. Dr. A.

M. Seabrook read the report of a case of hemorrhagic purpura in a new-born infant. Although the umbilical wound had healed smoothly, hemorrhage occurred from the umbilicus on the fifth day, requiring the application of hare-lip needle ligatures. At the same time large oval ecchymotic spots appeared in numerous situations. The needles were kept in place for sixty hours; the ligatures came away in a week, and recovery ensued. Dr. F. A. Packard read a paper entitled "A Brief Note on Kernig's Sign in Infants," relating cases of meningitis in children, in which extension of the leg upon the flexed thigh could be effected with the patient in the sitting posture.

A State Hospital for Inebriates.—It is stated that a bill will be introduced into the New York legislature during the present session to establish an institution for the treatment of the victims of alcohol and drug addiction. The bill provides for the appointment by the governor of a board of managers who will receive compensation during the time they are engaged in making plans for the institution. After it is ready for the reception of inmates, the managers are to serve without pay, each for a term of three years. The institution is to have accommodations for three hundred inmates. Incurables will not be admitted. Inebriates may be committed for terms of five years, but it is purposed to have a parole system similar to the one now in use at the Elmira reformatory. Commitments will be made by magistrates, although persons seeking to enter for treatment will be accepted when there is room for them. The cost of maintenance of inmates committed by magistrates will be charged against the counties from which they have come.

Limiting the Output of Doctors in Russia.—The Russian government has grappled with the question of the over-production of medical practitioners in a drastic manner peculiarly its own. By a recent decree of the minister of education the admission of first-year students by the several medical faculties throughout the empire is restricted to a fixed number. The University of Moscow is limited to 250, Kieff to 200, Charkow to 175, Dorpat to 150, Warsaw to 100, Tomsk to 120, and Kasan to 100. The total number of first-year medical students in the dominions of the Czar must, therefore, not exceed 1,095. This number does not include the students of the St. Petersburg Medico-Military Academy, which is allowed to admit 250 first-year students.—*British Medical Journal.*

Prevention of Venereal Disease in Norway.—Dr. C. R. Drysdale writes to the *British Medical Journal* regarding a bill recently introduced into the Norwegian Storthing. This bill was drawn up by a committee of statesmen and physicians, and was presented for discussion to the members of the Brussels Congress. Many of its sections, the writer says, are quite unsuited to a country so little accustomed to paternal government as the United Kingdom, and we may add the United States, but he thinks the following sections might serve as suggestions for some future bill to be drawn up for the United Kingdom: "Section XI.—Every practitioner who examines a person affected with a venereal disease is required to inform his patient of the contagious nature of his disease; and at the same time must seriously explain to the patient his legal and moral responsibilities, in case he shall communicate the disease to another person, or expose others to contract it from him. The practitioner must, above all, call the attention of the patient to the danger of contagious relapses of his malady; and of the consequences of it to his children, and at the same time inform him that he should frequently have himself examined in case such a relapse may occur. [The practitioner must also tell the patient what means he should employ to prevent such contagion to others.] The Minister of Public Health may cause printed instructions to be drawn up, and given by the practitioner to his venereal patients. Section XIV.—Every practitioner who treats a venereal patient and who knows that the patient by his conduct is exposing others to contagion, must immediately make this known to the president of the health commission."

Corresponding Members of the Academy of Medicine of Paris.—At the session of the Paris Academy of Medicine, held January 30th, Drs. Kaposi, of Vienna, Erb, of Heidelberg, and Hansen, of Bergen, were elected foreign correspondents.

An International Congress of Medical Electrology and Radiology will be held in Paris the week previous to the meeting of the International Medical Congress, from July 27th to August 1st. Those desiring to take part in this congress are requested to communicate with Dr. E. Doumer, secretary-general, 57 Rue Nicholas-Leblanc, Lille.

Tuberculosis in Denver.—According to the annual report of the Denver board of health, there were 536 deaths from tuberculosis in that city during 1899. In 1898 there were 505 deaths from this disease, and in 1897 489. Only 58 of the deaths in 1899 were of persons who had contracted the disease in Colorado, this comparing favorably with the 99 fatal cases of tuberculosis acquired in the State in 1898, and 88 in 1897.

Dissatisfied Homœopaths.—The members of the homœopathic and eclectic State medical examining boards of Pennsylvania are dissatisfied with the distribution of fees under the act of assembly providing for the examination of applicants for license to practise medicine. Each applicant pays a fee of $25, and the fees, less expenses, are distributed among the three boards. As many applicants appear before the regular board, representing the Medical Society of the State of Pennsylvania, and comparatively few before the other two boards, the former have not complained of their remuneration, while the latter are correspondingly unhappy.

The Paris Congress.—The Compagnie Générale Transatlantique announces a reduction of ten per cent. on tickets from New York to Paris to members of the International Medical Congress. The French railway lines offer a round-trip ticket for a single fare. The secretary-general of the congress, Dr. A. Chauffard, 21

Rue de l'École de Médecine, Paris, has arranged to provide early applicants with lodgings at the rate of 5 francs a day. This includes light and service, but not meals.

The American Medico-Psychological Association.—The meeting of this society in Richmond, Va., will be held May 8th, 9th, 10th, 11th—not May 1st, 2d, 3d, 4th, as heretofore announced. The change in date is made to enable members to attend the Congress of American Physicians and Surgeons in Washington, May 1st to 4th.

Vinegar as an Antidote to Carbolic Acid.—Dr. Edmund Carleton of this city requests that proper credit be given to him for the discovery that vinegar will relieve both internal and external burns from carbolic acid. We give it to him with pleasure, but must add that the same fact was noted in *The Lancet* four years ago (p. 255, i., 1896).

"The Medical Examiner," a journal hitherto devoted to the interests of medical examiners for life insurance and others, and ably edited by Dr. George W. Wells, is to enlarge its field of usefulness. The editor says that, as every part of medicine bears upon the duration of life, he will henceforth admit to his columns articles upon any medical subject, and the title of the journal is accordingly enlarged to *The Medical Examiner and General Practitioner.*

A Mysterious Dog Malady in England.—A correspondent of *The Medical Press and Circular* suggests that the plague may be existent at present in England. This surmise is based upon the fact that some six or eight months ago there appeared at Southampton a disease which attacked dogs, and proved so fatal and infectious that in a short space of time the town was practically cleared of its canine population. Since then the disease, which appears to be of a highly specific nature, has spread slowly but surely over many parts of the United Kingdom. Deaths from this epidemic are occurring at the present time in London, and veterinary surgeons are now everywhere alert as to its occurrence. The points suggestive of plague are the invasion of a seaport town, where dogs might easily become infected through ship rats, and the fatal nature and the high degree of infectiousness of the malady. On the other hand, as our contemporary remarks, it is hardly likely that, if plague had really attacked so widely domesticated an animal, the contagion would not quickly have been communicated to man.

Medical Expert Testimony.—A good story is republished in *Law Notes* from the reports of the supreme court of California. A woman named Doolin brought an action against the Omnibus Cable Company for damages for injuries alleged to have been received by her in the derailment of one of the defendant's cable cars. Some months before the trial an examination of Mrs. Doolin was made by six physicians, three appearing in her behalf and three for the defendant, for the purpose of ascertaining her physical condition. At the trial several of these physicians testified that they had ascertained during the examination that she was suffering from a tumor, either ovarian or uterine, and of about the size of a cocoanut; but they differed as to its precise location. As to the existence of the tumor there seemed to be no dissent. The family physician of the plaintiff testified that the tumor had increased in size until it had become about four times as large as when the examination was made. The defendant contended that plaintiff's ailments were caused by the tumor and not by the accident of the cable car. On the other hand, the plaintiff sought to show that the tumor was the result of the accident. Ten days after the trial Mrs. Doolin gave birth to a child at full term. On the appeal each side admitted that such was the fact, and that she had not been suffering from a tumor at all.

Christian Science and Life Insurance.—There is a case now before the supreme court of Connecticut in which the question is to be decided whether a life insurance company can be compelled to pay a claim when a Christian Science policy holder dies after having refused all medical treatment.

A Privat-Docent Expelled from the University of Berlin.—Dr. L. Arons, a privat-docent in electricity at the University of Berlin, has been expelled by the State authorities because he is a member of the Social-Democratic party. The senatus of the University was requested to do this some months ago, but refused, so the government has taken upon itself to expel him.

The Gonococcus as a Therapeutic Agent.—A correspondent of *The Medical Press and Circular* says that one of the best remedies with which he is acquainted for habitual excessive indulgence in alcoholic beverages is the gonococcus. Over and over again, he says, he has failed to induce patients with this particular weakness to control their appetite for alcohol. Promises of reform were made only to be broken. Then they contracted gonorrhœa, and forthwith, without any pressure, for three long months at least, they forewent their tipple, and recovered the strength of will which they had lost. He says he could point to a number of cases in which the drunkard's progress has been summarily arrested by an intercurrent attack of gonorrhœa with the most satisfactory results in respect of his after life, and he thinks it is really open to question whether in refractory cases this treatment might not offer an alternative to seclusion in a home for inebriates.

The Long Island Hospital.—The board of managers of the Long Island State Hospital recently adopted resolutions of protest against the failure of Governor Roosevelt to reappoint Dr. Truman J. Backus as a member of the board. After a preamble expressing regret that the governor did not reappoint Dr. Backus according to promise, the board resolved: "That the method of procedure through which Dr. Backus was retired from the office of manager of this board is a disappointment and discouragement to its members, and should be to all honorable and manly State officials, who gave their time and energies in furthering the philanthropic obligations of the State to its wards, without reward of any kind whatever, except that which comes through the pleasure of personal identification with good works and the promptings of a right conscience. Against the continuance of such methods this board respectfully and earnestly protests." Copies of the resolutions were sent to Governor Roosevelt, to the Commission in Lunacy, and to Dr. Backus.

The Medical Census of Great Britain.—The recently issued Medical Directory contains the names of 35,651 qualified medical practitioners, an increase of 534 over the number of last year. In the London list, however, there is a falling off of 15 names. The number of surgeons in the army, navy, and Indian medical service is larger by 177 than it was a year ago, despite the vigorous protests against unfair treatment of army surgeons by the line officers.

A Judicial Opinion on Medical Honesty.—During the trial of a case of assault before one of the New York police magistrates recently, a certificate from a physician was presented to the effect that one of the parties to the case was unable to appear in court. Then, "Oh, these doctors' certificates don't amount to anything," the magistrate is reported to have exclaimed. "You can get them for ten cents over in the Essex Market district, and I guess it is just as easy to get them over here. I won't recognize any certificates except those from hospitals or hospital doctors."

A New Harlem Hospital.—The department of charities has determined to build, as soon as possible, a new Harlem hospital, and ground will be broken for it in the spring. It is thought a site will be purchased in Lenox Avenue, between One Hundred and Thirty-fifth and One Hundred and Thirty-sixth streets, embracing twenty-six city lots. The hospital, when completed, will cost, inclusive of the plot, in the neighborhood of $500,000, and will be one of the most attractive public hospitals in the city. At first it is probable that only one section will be built. An effort is being made to induce the department to put a part of the new hospital in charge of homœopathic physicians.

Damages Claimed for Antenatal Injuries.—The supreme court of Illinois has recently handed down a decision in a peculiar case. It was that of an infant who claimed damages for a deformity alleged to have resulted from injury to the mother before its birth. The mother, while pregnant, was injured in an elevator accident at St. Luke's Hospital, Chicago, her left leg being caught and crushed. When the child was born, his left leg was deformed. The hospital authorities settled with the woman for her injuries, and then she brought suit in the child's name for $50,000 damages for the deformity, which it was claimed was due to the same accident. The court dismissed the suit on the ground that at the time of the accident the child could not be credited as a separate being, capable of sustaining an action independent of the mother.

Filtering Croton Water.—A resolution was introduced at a recent meeting of the New York board of aldermen, requesting the board of public improvements to inform for Municipal Assembly whether a filter could not be arranged in the Croton aqueduct which would prevent the water from getting dirty and muddy.

Dr. Henry E. Muhlenberg has been elected mayor of the city of Lancaster, Pa.

Philadelphia Polyclinic.—Dr. Jay F. Schamberg has been elected professsor of diseases of the skin in succession to Dr. J. A. Cantrell, resigned.

Munificent Bequest.—By the death of the widow of the late Benjamin D. Maxham the sum of $100,000 will revert to the New Jersey Training-School for Feeble-Minded Children at Vineland.

Yellow-Fever Ships.—Several vessels have recently arrived here from Santos infected with yellow fever. What with the plague and the yellow fever it is becoming the rule for coffee ships from Santos to be kept in quarantine on their arrival at this port.

Measles on Randall's Island.—The Infants' Hospital on Randall's Island has been quarantined on account of an epidemic of measles that threatened the children. Ten cases of the disease have been discovered, but all have been isolated, and the epidemic is now apparently under control. Foundlings will be sent to the New York Foundling Asylum until the measles have disappeared.

Opposition to a Pest-House.—Smallpox having recently broken out in New Rochelle, the health authorities took measures for the erection of a pest-house on the outskirts of the city. Farmers in the neighborhood, however, opposed the placing of the hospital near their homes, and when they found that their protests were unavailing they organized a band and drove away the builders with threats of violence.

Defeat of the Barber Licensing Bill.—The Brennan bill, providing for the appointment by the governor of a State barbers' examining-board, also requiring the examination and licensing of barbers and the inspection of the sanitary condition of their shops, was killed in the Assembly last week when it came up on the order of second reading. It was moved to strike out the enacting clause, which motion was carried by a vote of 70 to 42.

A Crowded Hospital.—Bellevue Hospital has had so many calls on it of late that its facilities have been taxed to the utmost. A large number of patients were transferred one day last week to the City Hospital on Blackwell's Island. Before the transfer there were eight hundred and twenty-eight patients at Bellevue. The hospital accommodates eight hundred and fifty persons, but sixty of the cots are for insane or alcoholic patients. The congestion was due to the many cases sent from other hospitals to Bellevue.

Liberal Bequests.—By the will of Elizabeth W. Baker, who died recently at Philadelphia, two bequests of $5,000 each are made to such hospitals as her executor, Dr. George Fales Baker, shall select, her own preference being in favor of the Pennsylvania or Presbyterian for the one, and the University Hospital for the other, for the endowment in perpetuity of five free beds.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending February 24, 1900. February 16th.—Pharmacist R. Waggener granted sick leave for four months. February 17th.—Assistant Surgeon J. R. Murphy appointed assistant surgeon. February 19th.—Assistant Surgeon Karl Ohnesorg ordered to temporary duty at the Naval Academy. February 21st.—Medical Director W. G. Farwell commissioned medical director from January 22, 1900. Medical Inspector D. N. Bertolette commissioned medical inspector from January 22, 1900.

The Plague is thought to have been overcome in Honolulu; at least there had been no cases reported for ten days prior to February 16th, the date of the latest advices. The disease has appeared elsewhere in the islands, however, news of seven deaths in Kahului, on the island of Maui, and of one at Hilo, on the island of Hawaii, having reached Honolulu. The same energetic measures were instituted at Kahului that had been successful at Honolulu. Chinatown, which was found to be in a fearful sanitary state, was burned to the ground, and two hundred and fifty Orientals were put in the detention camp. The sheriff organized a posse to search all persons who had been in Chinatown within the period of infection, and on the plantations a regular system of inspection was adopted.—A despatch from Aden, under date of February 23d, states that six cases of the plague and one death have occurred there. Drastic measures have been taken to prevent a spread of the disease. The infected districts have been isolated. Another case of the plague has been discovered in Sydney, N.S.W., and many persons who had been in more or less intimate contact with the victim have been quarantined.

The Author of the "Gold-Cure" Treatment Dead.—Dr. Leslie E. Keeley, who won fame of a certain kind and a large fortune through the exploitation of the "gold cure" treatment of inebriety, died of heart disease at Los Angeles, Cal., on February 21st. He was born in St. Lawrence County, N. Y., about sixty-eight years ago, and was graduated from the Rush Medical College, Chicago, in 1864. He entered the army as acting assistant surgeon upon graduation and served until the close of the war. He then settled in Dwight, Ill., where he practised medicine for many years in a conventional way. A few years ago he announced that he had discovered a remedy for the cure of alcoholic addiction, and opened a sanatorium for the reception of patients with this habit. Later he closed this institution, saying his treatment was not perfect, and he wanted to discover something to counteract the influence of the bichloride of gold on the system. After two years he resumed his treatment, and though his claims were disputed and his theories ridiculed, he prospered financially, and soon a company was formed for the establishment of "gold-cure" institutes in various parts of the county. He owned a half interest in this company, and is credited with having made more than a million dollars while the gold-cure boom lasted.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended February 24, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Alabama, Jefferson Co	February 5th	86	
Mobile	February 10th to 17th	3	1
Florida, Jacksonville	February 10th to 17th	3	
Illinois, Aurora	February 10th to 17th	6	
Danville	February 3d to 10th	1	
Idaho, Eastern towns	February 9th	Prevalent.	
Indiana, Evansville	February 10th to 17th	3	
Kansas, Wichita	December 30th to February 10th.	15	
Kentucky, Louisville	February 15th	2	
Louisiana, New Orleans	February 10th to 17th	62	31
Shreveport	January 27th to February 3d	14	
Minnesota, Minneapolis	January 27th to February 17th	49	
Mississippi, Greenwood	January 27th to February 10th	216	6
Montana, Butte	February 7th	150	
Oregon, Eastern towns		Prevalent.	
New York, New York	February 10th to 17th	1	
Ohio, Cincinnati	February 9th to 16th	4	
Cleveland	February 10th to 17th	27	
Youngstown	February 10th to 17th	1	
Tennessee, Nashville	February 10th to 17th	1	
Utah, Salt Lake City	February 10th to 17th	3	
Virginia, Martinsville	February 7th	1	
Portsmouth	February 10th to 17th	6	
Richmond	January 1st to 31st	21	
Washington, Spokane	February 10th to 17th	6	
SMALLPOX—FOREIGN.			
Austria, Prague	January 20th to 27th	1	
Belgium, Antwerp	January 27th to February 3d	7	
Brazil, Rio de Janeiro	December 15th to January 12th.	..	102
Canada, Amherstburg	February 10th to 17th	1	
Quebec	February 3d to 9th	4	
Egypt, Cairo	January 16th to 21st	4	
England, Leeds	February 3d to 10th	..	1
London	January 20th to February 3d	45	
France, Lyons	February 20th to 27th	..	1
Nice	January 20th to February 3d	5	2
Paris	January 27th to February 3d	..	2
Germany, Königsberg	January 20th to 27th	3	
Gibraltar	January 22d to 28th	2	
Greece, Athens	January 27th to February 3d	2	
India, Calcutta	January 6th to 13th	..	9
Kurrachee	January 16th to 21st	12	1
Madras	January 13th to 19th	..	1
New Brunswick	February 10th	Prevalent.	
Nova Scotia	February 10th to 17th	Prevalent.	
Mexico Ciudad Porfirio Diaz.	February 10th to 17th	5	3
Vera Cruz	February 10th to 17th	..	5
Russia, Moscow	January 20th to 27th	2	
Odessa	January 27th to February 3d	10	2
St. Petersburg	January 20th to 27th	26	6
Warsaw	January 25th to February 1st	..	5
Spain, Corunna	December 9th to February 3d	5	4
Straits Settlements, Singapore	December 31st to January 6th	..	3
Switzerland, Geneva	January 21st to 28th	6	
Turkey, Smyrna	January 29th to February 4th	..	1
YELLOW FEVER.			
Brazil, Rio de Janeiro	December 15th to January 12th.	25	30
Cuba, Havana	February 7th to 14th	2	
Mexico, Vera Cruz	February 10th to 17th	..	2
Curaçoa	February 3d to 10th	1	
CHOLERA.			
India, Calcutta	January 6th to 13th	..	30
PLAGUE.			
Brazil, Rio de Janeiro	January 20th	1	
Sao Paulo	January 20th	1	
India, Calcutta	January 6th to 13th	..	45
Kurrachee	January 16th to 21st	21	13

Obituary Notes.—DR. ERNEST BREWSTER SANGREE, late professor of bacteriology and pathology in the department of medicine at Vanderbilt University, Nashville, Tenn., died at the home of his father, in Harrisburg, Pa., on February 23d. Dr. Sangree was also bacteriologist of the State of Tennessee prior to relinquishing the professorship of Vanderbilt University to accept a similar place in the University of Illinois. He was thirty-six years old, and was a graduate of the Medico-Chirurgical College of Philadelphia in 1889.

Dr. Joseph M. Creamer died of pneumonia at his home in Brooklyn, N. Y., on February 23d, at the age of forty-nine years. He was a graduate of the medical department of the New York University in 1873. He served a term as coroner in 1892.

Dr. Henry B. Moore died at Colorado Springs on February 21st, of pneumonia. He was born in Maine, and was graduated from the Jefferson Medical College in 1886. He served a term as interne at the Blockley Almshouse in Philadelphia, and practised for a while in this city, but was obliged to remove to Colorado on account of his health.

Dr. Andrew R. Wright, a prominent homœopathic physician of Buffalo, N. Y., died in Chicago on February 25th, at the age of seventy-four years. He was born at Crawford, N. Y., and studied at the Buffalo Medical College and in Paris, but obtained his degree from the Homœopathic Hospital College in Cleveland, O., in 1858. In 1898 he was president of the American Institute of Homœopathy.

Dr. James L. Watson died in Brooklyn on February 22d, of cardiac disease following influenza. He was born in 1830 and was graduated in medicine in 1857. He was the last surviving member of the old City Guard of Brooklyn, which was merged into the Twenty-third Regiment. He served as surgeon in the civil war, and was for some time surgeon-general of the Grand Army of the Republic.

Dr. William Edward Walmsley died at his home in Brooklyn on February 25th, at the age of forty-five years. He was born in Rochester, N. Y., and was graduated from the medical department of the New York University in 1877.

Dr. I. B. Lathrop died at Springville, Pa., on February 20th. He had been engaged in the practice of medicine in Susquehanna County for nearly fifty years.

Dr. I. F. Schminkey died at Gratz, Pa., on February 19th, at the age of sixty-seven years. He was at one time a member of the State legislature.

Vibration as a Hypnotic and Anæsthetic.—B. F. Ward advances the theory that narcosis and anæsthesia may be produced by vibratory force, and that the vibration, in order to exert its specific effect upon the nerve centres, must be uniform and rhythmic, and to reach its greatest intensity the vibratory wave must gradually and steadily increase in force. The writer says it would be impossible to devise any appliance which would so fully meet these indications as the relations that exist between a steel rail and a revolving car wheel, because the vibratory thrill will begin to be faintly delivered while the train is still many miles away, and with every revolution there will be a uniform and perfectly rhythmic increase in the force of the vibratory wave. He suggests that it would be possible to mechanical skill to devise a metallic operating-table with wheels run by electricity against rails attached to the under surface that would impart to the table and the subject thereon a vibratory force exactly similar to that which the rail receives from the revolving wheel and equally potent, and that a perfect anæsthesia might thus be secured as free from danger as natural sleep.—*Journal of the Mississippi State Medical Association*, February, 1900.

Progress of Medical Science.

Journal of the Amer. Med. Association, Feb. 24, 1900.

Treatment of Typhoid Fever. — Frank Billings says that at present the specific treatment of typhoid fever is on trial, although the success so far attained gives us hope of still better results. He sums up the methods of treatment under the heads of efficient nursing, a proper diet, and the elimination of the toxins, and concludes that for the latter purpose hydrotherapy is best.

Treatment of Typhoid Fever in Private Practice.—William E. Quine discusses this subject under the heads of prevention, general management, diet, water, medicines, and hydrotherapy. The writer says that although it be admitted that the Brand treatment effects a saving of life in hospital practice amounting to six or seven per cent., its use in private practice must necessarily be of slow growth.

Treatment of Medical Complications of Typhoid Fever.—George W. Webster discusses the treatment of thrombosis, of respiratory complications, and of pain as among the possible problems for the physician in typhoid fever. He says that most important of all is the support of the right heart. As soon as this begins to flag, we must make use of strychnine, digitalis, ammonia, oxygen, camphor, or caffeine.

Tobacco Amblyopia.—Francis Dowling gives the results of some recent examinations made to determine the influence of tobacco on vision among the employees of the tobacco factories of Cincinnati. He thinks that a tobacco-laden atmosphere is not enough to produce poisoning so far as the eyes are concerned, but that these symptoms are the result of smoking or chewing.

Electro-Cautery in Affections of the Lids and of the Cornea.—Flavel B. Tiffany enumerates the many affections of the lids and cornea in the treatment of which he has found the electro-cautery a valuable agent. Among these affections may be mentioned ulcers and fistula of the cornea, phlyctenular keratitis, pannus crassus, trachoma, keratoconus, staphyloma, ectropion, entropion, distichiasis, and trichiasis.

Craniectomy for Epileptiform Seizures and Grave Mental Disturbances following Head Injury without Apparent Fracture.—H. Reineking reports this case as illustrating what violent disturbances may follow comparatively slight traumatisms of the head. Operation was followed by immediate recovery.

Silver Catgut and How to Tie it.—Eduard Boeckmann says that although several improvements must be made before we can speak of ideal catgut, still the catgut impregnated with metallic silver is so nearly perfect that it can successfully take the place of all other kinds of material for sutures and ligatures.

A Sulpho-Salt of the Aliphatic Creosote-Esters and its Therapeutic Usefulness.—Heinrich Stern reports cases of diabetes insipidus, diabetes mellitus, and chronic ulcerative phthisis in which eosolate of calcium was employed with varying results.

Scarlatina and Scarlatinous Sore Throat.—W. J. Class reports in detail three cases in which cultures from the secretion of the throat and the blood showed the presence of the micro-organism described in the Medical Record, vol. lvi., pages 330 and 513.

Cremation.—Robert Marsena Stone thinks that very soon cremation will be adopted by the educated class in all communities, and argues for the æsthetic as well as the hygienic virtues of this method.

Food and Drink.—In this article Elmer Lee discloses the secret of long and healthy life, namely two meals a day and profuse water drinking.

Philadelphia Medical Journal, February 24, 1900.

The Etiology of Sydenham's Chorea.—Joseph Collins and I. Abrahamson analyze one hundred cases. No disease except rheumatism seems to be an etiological factor. The exciting cause is psychical trauma or physical exhaustion, very seldom gastro-enteric irritation or eye-strain. Mental symptoms were noted in fifty-four of the cases studied.

Subhyoid Pharyngotomy for the Removal of a Malignant Growth of the Larynx.—F. J. Lutz reports this operation in a man, aged seventy-three years. The patient survived a month, the dyspnœa and dysphagia from which he had suffered being entirely relieved.

Certain Effects of Benzoic Acid upon the Urine.—William W. Ashhurst finds benzoic acid has an inconstant diuretic action, diminishes the acidity of the urine slightly, retards or prevents alkaline fermentation, and inhibits the growth of micro-organisms.

Inter-Scapulo-Thoracic Amputation.—William D. Hamilton reports a case of sarcoma of the shoulder following repeated injuries in a man, thirty-two years old. Amputation of the upper extremity with clavicle and scapula was successfully performed.

The Resuscitation of Apparently Dead New-born by Laborde's Method.—Francis Eustace Fronczak reports four cases of resuscitation of asphyxiated infants by rhythmical traction of the tongue.

A Case of Successful Symphyseotomy.—Joseph B. De Lee reports a case in a secundipara, about thirty-one years old.

New York Medical Journal, February 24, 1900.

The Benefits of Balneotherapy in the Treatment of Chronic Rheumatism and Gout.—H. H. Schroeder prefers the spa with its change of climate and other stimulating environments to the average hydropathic institute with its sick and grumbling inmates, and describes a place in the Rocky Mountains which in his judgment offers ideal advantages. The author then discusses the details of treatment, stating that it is well to warn the patient that an increase of joint pains is liable to occur during treatment, but that as a rule the pain soon ceases.

The Treatment for Hypertrophy of the Inferior Turbinated Bone.—E. Harrison Griffin precedes operation by the use of bromide and quinine internally for some days before operation. He believes that this course diminishes the hemorrhage during operation and lessens the tendency to chills and fever afterward. Removal of the offending tissue is made with the saw under the bone, the line of section being from below upward and inward. For after-plugging, he prefers absorbent cotton to iodoform gauze.

The Surgery of the Superior Cervical Sympathetic Ganglion.—G. F. Suker finds that in the resection of one or both of these ganglia for glaucoma, simple optic atrophy, Basedow's disease, and perhaps epilepsy, we have a definite surgical intervention yielding positive results, so far as we now know, in selected cases in which heretofore we were at a loss what to do in like cases.

The Determination of Sex at Will.—According to J. G. Davis, the "great law of vibrations" is the only thing which will throw any light on this subject. When male issue is desired, sexual congress should not take place until ten days after the cessation of menstruation. Congress within two days after the cessation or within three days of an expected menstruation will result in female issue.

Studies on Internal Antisepsis.—E. Klebs narrates the results of his experiments on rabbits with inoculation of staphylococcus and nosophen. He considers that this remedy and antinosin (considered in the first instalment of the paper) of great importance in septic infections caused by streptococci and staphylococci.

An Operation for Divergent Strabismus.—D. Webster describes an operation consisting in division of the tendon of the externus and advancement of that of the internus, which gave extremely satisfactory results in a case of divergent squint.

The Treatment of Iritis by the General Practitioner.—N. B. Jenkins advises hot foot baths, salts, and small doses of calomel. The local treatment consists in atropine, darkness, hot applications, and puncture of the cornea.

Albuminate of Mercury (Sapodermin) in the Treatment of Parasitic and Fungoid Diseases.—G. J. Bucknall commends the use of this agent in scabies and reports some cases in which it was employed.

Medical News, February 24, 1900.

Experimental Researches on the Effects of Increased Barometric Pressure and of Foreign Bodies in the Pharynx, Œsophagus, Trachea, and Larynx.—George W. Crile still further confirms the results of other experimenters that animals under chloroform anæsthesia are decidedly more liable to respiratory failure than animals under ether anæsthesia. There is also greater tendency toward reflex inhibitory phenomena in chloroform anæsthesia. On the other hand, the patient may be more quietly and readily reduced under chloroform than under ether, and the tendency to the secretion of mucus is less. In every case where it is possible, local rather than general anæsthesia should be employed. Cocaine is preferable to eucaine. A foreign body lodging in the trachea and not dislodged during coughing can produce only the effect indirectly produced by the powerful respiratory alterations in the act of coughing. If the tube is completely obstructed symptoms of asphyxia will appear. If the foreign body is in the larynx attacks of cyanosis will be likely to occur.

Some of the European Sanatoria for Consumptives, and the Final Aims of Phthisiotherapy.—W. Freudenthal believes that all patients with incipient phthisis should be occupied in some rational muscular work, such as gardening, snow shovelling, light carpentering, and agricultural work of various kinds. Every sanatorium should be provided with facilities to teach these occupations. All this work should go under the supervision of physicians. Sanatoria for the rich and for the poor should be under one financial management, though not necessarily in the same place. A society should be formed by the people most affected by it, viz., the lodges, in order to send the patients to a milder climate, where they can work constantly in the open air; for example, certain parts of Arizona and New Mexico.

A Clinical Contribution to Thyroid Therapy.—Charles E. Hirsch speaks of an affection designated by Jeulain as thyroid chlorosis, which represents the symptoms of ordinary chlorosis together with those of exophthalmic goitre, in which the administration of iodothyrin produced a remarkably rapid and decided improvement. He also reports the happy effect of this treatment in cases of obesity.

Notes on Plague.—By H. E. Deane. A continued article.

Boston Medical and Surgical Journal, February 22, 1900.

On the Advisability of a More or Less General Exploration of the Abdomen when it Has Been Opened for an Operation.—John Homans says that it has several times happened to him to discover conditions and diseases different from the one for which he had opened the abdomen. Three times he removed gall stones whose presence was unsuspected, and whose removal did more for the patient's recovery than the removal of the tumor for which the abdomen was opened. Therefore he advises general exploration in the course of operations without lengthening the original incision.

A Clinical Study of Heroin.—James R. L. Daly considers that this drug possesses many advantages over morphine as a respiratory sedative. It is not a hypnotic.

A Case of Old Shoulder Dislocation.—Frank E. Peckham describes a case of twenty-two months' duration, upon which he operated successfully.

The Unity of the Acute Psychoses.—By Philip Coombs Knapp. See Medical Record, vol. lvi., p. 137.

Psychology and Heredity.—By Robert MacDougall. A continued article.

Wiener klinische Rundschau, February 4, 1900.

Bacterio-Therapy of Leg Ulcer.—Ivan Honl describes his method of treating ulcers of the leg. It consists in the application of substances extracted from the bacillus pyocyaneus. The bacterial flora of leg ulcers presents no specific characteristic elements. Pathogenic as well as saprophytic micro-organisms are present. As to the patient, he is to lay the affected leg in tepid water from time to time. The protein is applied twice daily, while sterilized absorbent gauze thoroughly saturated with the protein is laid on the ulcer, covered with wadding, and fixed by a bandage. Honl declares that this protein cures leg ulcers without exception and in a shorter time than other methods. He also recommends its simplicity and comfort.

An Hour-Glass Stomach Resulting from the Corrosion of Hydrochloric Acid; Gastro-duodenostomy.—Emil Klein reports this case, giving a diagram of the stomach as well as four others representing dried specimens in the pathologico-anatomical museum of the Vienna University. This condition may be either congenital or acquired. As causes of the acquired may be mentioned scar contractures following round ulcer, carcinoma, syphilis, corrosions. In the present instance the patient, a man, drank fuming hydrochloric acid into which matches had been thrown. Two months later gastro-duodenostomy was performed with the happiest results.

Berliner klinische Wochenschrift, February 5, 1900.

Syphilitic Goitre.—E. Werman records the case of a man aged twenty-four years, who passed through a severe stage of specific infection lasting over several years, during which time he was regularly treated. Tertiary symptoms developed as evidenced by cerebral pressure, irritability, loss of palate, etc., and finally an enlargement of the thyroid body. This enlargement diminished under treatment, but recurred upon its cessation. The author calls attention to the fact that enlargement of the thyroid has also been observed after influenza and measles, and he notes the danger of initial changes in the early stages of syphilis, which may be so slight as to escape notice, but which may lay the foundation for serious trouble later.

The Mechanical Distribution of Bony Growths.—H. Maass points out the effects which such conditions may produce in the development of the bony skeleton, especially when the growths occur before the final union of epiphysis and diaphysis.

Cerebral Pressure Symptoms in Typhus Fever.—H. Salamon reports five cases in which the pressure symptoms were due, he thought, to an intra-meningeal exudate excited by the toxins of the disease.

Epidemiology and Prophylaxis of Malaria from the Most Recent Etiological Standpoint.—By A. Celli. A continued article.

Chronic Villous Polyarthritis and Arthritis Deformans.—By Max Schueller. A continued article.

Vratch, January 15 and 22, 1900.

Corporal Punishment in Russia on the Eve of the Twentieth Century.—D. N. Zhbankoff reviews the various opinions expressed by physicians and others regarding whipping as a punishment for crime, and argues forcibly against its continuance. He says it was the hope of many that the new century would see no more of this barbarous punishment in Russia, but we are already on the eve of the twentieth century and there is no sign of its abolishment. He cites with astonishment and reprobation a statement in an English journal that the New York Medico-Legal Society had advocated public whipping as a punishment for certain crimes, but says that the existence of such views in a country where lynch law prevails is quite comprehensible. All physicians, he argues, should protest energetically against the continuance in Russia of what he calls this epidemic of legalized traumatic lesions which exerts so malign a psychical influence over the entire nation.

Post-Partum Sloughing of the Uterus.—Under this title V. G. Bekman describes puerperal gangrene of the uterus. The disease may vary in extent from a small area of the uterine wall to the entire organ, and perforation may or may not occur The affection is much more frequent, the author believes, than is usually supposed, constituting a very appreciable proportion of puerperal affections of the uterus, but it is thought to be rare because many cases pass undiagnosed. This is owing partly to the want of a lucid description of the disease in the text-books—a want which the writer meets in his article. He reports twelve cases occurring in his own practice, five of which have never before been published.

Treatment of St. Vitus' Dance with Large Doses of Arsenic.—V. E. Chernoff reports several cases of chorea in children from eight to twelve years of age, in which he employed arsenious acid in the average daily dose of one-third of a grain, which is larger than that usually allowed for adults. The results of this treatment were excellent, but the author calls attention to its obvious dangers, and says a child taking such large quantities of arsenic should be seen by the physician at least twice a day. The treatment is therefore more feasible in hospital than in private practice.

Bathing of the New-Born.—G. O. Kovarski reviews the arguments for and against the bathing of new-born infants, and concludes that there are no convincing arguments or scientific facts in proof of any injurious effects of baths upon children in the first days of life, and consequently that this old custom may profitably be continued.

Epidemic of Plague in the Village of Kolabovka, Astrakhan Government.—M. I. Arnstamoff gives the histories of the twenty-four cases of plague which occurred at this place in the summer of 1899, the epidemic of which was also described by Levin in the issue of December 4, 1899, of this same journal. See MEDICAL RECORD, vol. lvii., p. 29.

The Bitter Lakes of Batalpashinski.—V. A. Popoff describes two lakes in the Kuban district of the Caucasus, the waters of which contain a large proportion of magnesium sulphate, iron, and aluminium.

The Value of Widal's Serum Diagnosis of Typhoid Fever.—By Th. A. Dombrovski. A continued article.

Progressive Spinal Paralysis.—By L. R. Krever. A continued article.

La Riforma Medica, January 29 and February 6, 1900.

The Resistence of the Red Corpuscles in Some Diseases of the Skin.—Francesco Cenci, from numerous experiments, found that the blood of patients suffering from purpura hemorrhagica was no more resistant than normal blood. There was an increase in leucocytes. Under the action of $FeCy_6K_4$ the red cells are less changed than those of normal blood. The blood of a syphilitic patient treated with NaCl and $FeCy_6K_4$ behaved exactly like normal blood. Treated with pepsin it became darker than normal blood, and the cells changed more quickly. Pancreatin caused no different changes in healthy and abnormal blood. Lactic acid gave the same results in both. The serum of horse's blood (tuberculized) retarded the solvent effects of solution of pepsin, pancreatin, and lactic acid.

Rudimentary Anomalous and Complicated Forms of Mitral Stenosis.—G. Rummo describes cases of pure congenital or fœtal mitral stenosis, of extrafœtal or rheumatic stenosis of a truly inflammatory nature, and of stenosis combined with insufficiency, and gives directions for their diagnosis.

French Journals.

Experimental Tuberculous Meningitis.—A. Sicard concludes that it is possible to produce disseminated tuberculous meningitis either through the blood or by inoculating the cephalo-rachidian fluid directly. The lymphatic system plays no rôle. In the majority of instances there is a diffuse process, but a meningitis *en plaques* may at times occur. The toxins of the bacillus play an important part in the process. The cerebro-spinal fluid is an essential factor in the dissemination of bacilli and their toxins. Exudations and granulations situated in the region of the pia mater are not the result of a polymicrobic infection, but the Koch bacillus or its toxins are alone capable of creating these granulations.—*La Presse Médicale*, February 7, 1900.

Acute Traumatic Arthrites of the Knee in Children.—A. Broca, basing his remarks on a case described, concludes that treatment by arthrotomy is superior to resection of suppurating arthritides of the knee in children, whatever their origin may be. The anterior incision sometimes recommended along the border of the patella should not be practised, but a long incision should be made on either side at the posterior part of the lateral surfaces of the knee, with a large transverse drain under the knee cap. He rarely has occasion to employ lavage.—*La Presse Médicale*, February 7, 1900.

Alimentation in Typhoid Fever.—H. Vaquez considers whether typhoid patients are properly and sufficiently fed by present methods; whether there is danger in giving more food and in a different manner: and what would be the advantages of other methods. The gravity has been diminished by balneotherapy, and the writer believes that to the Brand method can be wisely added that of superalimentation by giving in addition to milk the yellow of eggs, somatose, farinaceous soups, etc.—*La Presse Médicale*, February 10, 1900.

Localization, Elimination, and Origin of Arsenic in Animals.—A. Gautier has shown that certain organs normally contain arsenic. He now studies the origin in alimentary sources and finds minute traces of arsenic in various substances. He also finds that perfect health is incompatible with complete disappearance of arsenic from the system, and points out the medico-legal aspects of detection of minute traces of arsenic in the secretions and organs. (See MEDICAL RECORD, vol. lvii., p. 29.)—*Le Bulletin Médical*, February 7, 1900.

Cancer of the Large Intestine.—H. Lardennois studies the question in all its bearings. Out of two hundred and fifty-five observations collected of total ablation, the mortality was 32.9 per cent. In thirty-two cancers of the colon observed by Brahman the radical operation was performed fourteen times. Six patients succumbed and eight were cured. When the radical operation is possible, it should be attempted. In complications a palliative operation (entero-anastomosis, exclusion, artificial anus) may be done.—*Gazette des Hôpitaux*, February 10, 1900.

Appendicular Colic.—Ch. Talamon studies the prognostic value of colic in the region of the appendix—seven observations. Two lessons are drawn: First, at the onset of colic a purgative should never be given, as one is too much tempted to do; second, the patient should be immediately and strictly immobilized until all pain in the iliac fossa has completely ceased for several days.—*La Médecine Moderne*, February 10, 1900.

Two Cases of Nerve Elongation.—R. de Bovis gives two observations. In one of Raynaud's disease, or local syncope of the extremities, nerve elongation resulted in disappearance of the trophic troubles, but with persistence of a certain degree of paræsthesia. The second case was one of gangrene of the foot due to syphilis and arteriosclerosis. The tibial nerves were elongated with negative result.—*Gazette des Hôpitaux*, February 8, 1900.

Pylorectomy by Billroth's Method.—Guillot, in an article to be continued, finds that pylorectomy by the Billroth operation is preferable to that of Kocher, which in some instances is more difficult, increases the chances of infection, and prolongs unnecessarily the intervention.—*Gazette des Hôpitaux*, February 13, 1900.

The Remote Results of Brushing in the Treatment of Granular Ophthalmia.—Felix Lagrange reviews the technique, and out of one hundred and twelve eyes treated finds seventy-eight per cent. of cures, 4.5 per cent. of improvements, and 17.5 per cent. of failures.—*Le Bulletin Médical*, February 7, 1900.

Treatment of Exophthalmic Goitre by Stabile Voltaization.—L. R. Regnier gives five observations in which good results were obtained, and thinks electric treatment should be tried before surgical procedures. —*Le Progrès Médical*, February 10, 1900.

Archives of Otology, Vol. xxviii., Nos. 5 and 6, 1899.

A Case of Influenza followed by Mastoid Abscess, Sinus Thrombosis, Meningitis, and Death; Autopsy.—F. Allport gives the history of a man aged seventy-six years, who contracted influenza in January, 1899. The attack was severe and accompanied with delirium. During the attack he had abscess of the left ear followed by a swollen and painful mastoid for several weeks. The ear was simply syringed by the attendant. The patient was first seen by Dr. Allport six months later. Soreness of the mastoid on pressure was found, with fistula of the lower posterior bony meatus emitting copious foul pus. The membrana tympani was intact. The operation was done in the usual manner. The bony covering of the lateral sinus was necrosed and the sinus exposed, but was apparently healthy. Recovery from the operation was good, but on the fifteenth day symptoms of meningitis developed, and death resulted fourteen days later. Cerebral abscess had been suspected, and the patient was trephined, but no pus cavity was found. The dura was completely adherent to the skull by old adhesions. There was also a slight puriform thrombus in the left lateral sinus. The author observes that a subnormal temperature as shown in this case does not always indicate a cerebral abscess (none was found on autopsy), and may exist with an acute intense meningitis.

Tinnitus Aurium.—R. Panse concludes a careful study of this phenomenon as follows: Almost all sounds should be designated by their pitch. The pure conduction sounds arise from the diminished outlet of sound, due to rigidity of the conducting apparatus. Inasmuch as the motility of the latter is required for hearing only low notes, its fixation is an obstacle to the outlet of these notes alone. Pure conduction sounds are mainly placed between sixteen and two hundred and fifty-six vibrations. The higher pitched sounds are due to processes in the inner ear. They may be produced (*a*) by reflex from the external meatus, middle ear, and many different parts of the body; (*b*) by changes in the inner ear or the nerve itself. In rare cases, however, low sounds may, perhaps, also originate in the inner ear. Hearing of complex sounds, like melodies, etc., is not prima-facie proof of a cerebral affection. In respect to treatment he gives the rule not to perform any grave operations upon the conducting apparatus when the sounds heard are high pitched, and especially not to attempt removal of the stapes.

On the Thyroid Treatment of Chronic Deafness. —A. Bruck collates the experience of the profession along this therapeutic line, but has not personally seen a single case of positive improvement in the hearing. The translator of the original article, J. A. Spalding, adds that, from his limited experience with thyroid, he should be inclined to recommend it in the early stages of those cases which are likely to result in the so-called chronic catarrh of the middle ear.

Occidental Medical Times, February, 1900.

Leucopathia Unguium.—W. A. Briggs gives the details of a case to which he assigns a neuropathic origin. He also describes a disease of the nails attributed to a mycotic source, and presenting a separation of the distal part of the nail from its bed.

The New Materia Medica and Modern Doctors. —H. D. Powers condemns the multiplication of new and useless remedies, and thinks that students should be taught more thoroughly about the old and reliable ones.

Report of a Case of Sub-Glottic Tumor.—G. H. Powers reports a case of epithelioma. Tracheotomy was done, but the growth extended below the bottom of the tube, and the patient died during the operation.

Report of a Case of General Tuberculosis. Dextro-Cardia, Meningitis; Lumbar Puncture.—S. J. Hunkin reports a case of this nature in a child aged six years. A fatal result followed the operation.

Large Solitary Tubercle of the Heart.—A. W. Hoisholt describes the case of an asylum patient whose heart showed on autopsy a tuberculous growth from the lining of the left ventricle.

Hydrocephalus; Cranial Paracentesis; Lumbar Puncture.—W. N. Sullivan reports a successful case of this description.

Illinois Medical Journal, February, 1900.

The Treatment of Goitre.—A. I. Bouffleur commends the internal use of iodine or thyroid extract or the intra-parenchymatous injection of iodoform or carbolic acid. These failing, enucleation or partial thyroidectomy is indicated. Cysts should be evacuated and injected with iodoform emulsion, this failing, enucleation should be done.

Fatal Perforation of a Uterus Partially Atrophied Post Partum; a Medico-Legal Case.—C. S. Bacon and M. Herzog record the case, and give a *résumé* of the legal points brought out on the trial of the physician who curetted the uterus twelve hours before the patient's death. The physician was acquitted.

The Prevalence of Alcoholism and its Influence on Mortality.—G. W. Webster discusses the points of heredity, inebriate heredity in crime, suicide, insanity, special senses, healing of wounds, sunstroke, tuberculosis, and heart affections.

Nervous Complications and Medico-Legal Relations of Alcoholic Insanity.—D. E. Brower considers some of the nervous diseases set up by alcoholic excess, and considers that the jurisprudence of inebriety needs to be rewritten.

A Sociological View of Criminal Abortion.—W. J. Fernald studies this question from the standpoint of modern sociology, believing that many of the ills of modern society follow from making marriage a civil contract instead of a religious vow.

Traumatic Rupture of the Urethra.—E. J. Senn gives a general description of the condition, and records the clinical history of a case.

Abstract on Pulmonary Tuberculosis.—T. H. Stettler commends the employment of large doses of carbonate of guaiacol.

General Uveitis.—Description of a case by J. W. Smith, with some observations on the subject in general.

Operative Treatment of Exophthalmic Goitre.—A historical and statistical study by Karl Doepfoner.

The Laryngoscope, January and February, 1900.

Appropriate Treatment of Certain Varieties of Nasal Deflections and Redundancy.—D. Braden Kyle considers the following classification of septal deformities: split septum with bilateral bulging, dislocation of the columnar cartilage, simple deflection with thinning, letter-S deflection, deflection with involvement of the bony septum, split cartilage with unilateral bulging, and finally deflection with redundancy of tissue overlapping the septum and extending close to the nasal floor. Deflections may be congenital, from disease, and from trauma. The condition does not always demand surgical intervention. Most of the surgical methods are but modifications of the original Adams operation. Details are given of the various devices which in Kyle's experience have given most satisfaction in the different forms of deviation. He strongly advocates the employment for retention apparatus of malleable tubes which can be moulded to fit each individual case. He has followed the plans advocated in thirty-seven cases, and has had failures in six. For post-operative irrigation he prefers a weak solution of boric acid in sterilized water. Cases must be carefully watched, and the calibre of the tube altered if necessary to prevent undue pressure.

The Principles of Stuttering; Therapeutics.—R. Coen advocates the methodical continuance of breathing-exercises, enumerating, as the principal ones, deep continued inspiration, short expiratory movement of the breath, gradual prolonged expiration, and the holding of the breath. In addition the vocal and speech-producing organs must be regulated. All disturbances which lead to altered innervation must be controlled, the will-power of the patient strengthened, and the general system toned up.

Papillomatous Growth of the Tonsil.—Payson Clark reports the case of a boy aged eight years in whom an irregular mammillated mass occupied the site of the right tonsil. Removal was effected with the cold snare without any special bleeding. Examination of the growth showed that the central part was composed of more or less dense connective tissue with vessels, etc. The peripheral lobulated parts were made up of lymphadenoid tissue and of cellular connective tissue covered with mucosa.

The Therapeutic Gazette, February, 1900.

Some Points of Interest in Connection with Chronic Urethritis.—Orville Horwitz says chronic gonorrhœa is a very grave disease. Besides the long list of dangers to the subject himself there are those to the wife. In follicular urethritis the best results are obtained by steel bougies anointed with Finger's ointment and left *in situ* for five minutes. Congested patches are best treated by protargol, one per cent. gradually increased to two. Granular patches should be treated with solutions of iodine, silver, or copper through an endoscope. Erosions and ulcerations should be treated in much the same way. In prostatic irritability the Winternitz psychrophore often gives good results. When local remedies have been long employed without benefit, they should be discontinued and constitutional treatment given.

Santonin in the Treatment of Epilepsy.—G. Frank Lydston believes santonin quite as efficient, as a palliative, as the bromides, and it may be proven to be quite as curative. He has employed the drug for nearly twenty years and has seen no mention of it in literature. He finds that santonin has a large field of usefulness in convulsive affections of infancy. It is found to act well in cases of epileptics who do not do well under the bromides. It is free from injurious effects. In the adult gr. ii.-v. is the initial dose, and this is increased up to the point of tolerance. Some patients take gr. xx. three times daily for weeks. Characteristic twitchings about the mouth do not occur in the adult. Idiosyncrasies must be looked out for.

The Therapy of Femoral Hernia in the Adult.—T. H. Manley divides treatment into prophylactic, palliative, and radical. An illustrated case is presented and the therapy of femoral strangulation is given, together with the relative mortality and a long table of cases from journal reports. There were 166 cases with 59 deaths (thirty-five per cent.), 150 females with 52 deaths (thirty-four per cent.), 16 males with 7 deaths (forty-three per cent.). In 89 cases of umbilical hernia there were 27 deaths (thirty per cent.); in 83 females, 26 deaths (thirty-one per cent.); and in 6 males, 1 death (sixteen per cent.). A bibliography is added.

A New Surgical Dressing.—T. A. Dewar calls attention to chloretone as a dressing possessing remarkable properties. It is antiseptic, a local anæsthetic, and harmless. In aqueous solution it can be used to prepare wounds, burns, etc., for subsequent treatment. Crystals may be sprinkled over an open surface and chloretone gauze used as a dressing. The writer has amputated fingers on three occasions under the effect of the drug as a local anæsthetic. In operations upon the urethra or the passage of sounds it may also be used.

The Relation between Posterior Urethritis and Prostatic Abscess, and the Treatment of Each.—Ramon Guitéras says prostatic abscess is usually an extension of urethritis along the prostatic ducts. Abscesses usually open into the urethra or the rectum, but at times through the perineum, in the inguinal region, or the ischio-rectal fossa. When surface redness shows, the swelling should be poulticed and opened. The importance of hot rectal douching in the active stages is emphasized, and of combining douches with rectal massage in the later stages.

Treatment of Appendicitis and its Great Mortality.—Mordecai Price believes that a more uniform system of surgical treatment should be adopted in appendicitis. It is rare that there is more than one best way. United experience should point out this way. Mistakes should be more fully reported. Statistics of four hospitals are quoted to corroborate his views regarding the high mortality, and to show that they are not exaggerated. Catarrhal appendicitis he finds four times as prevalent as the genuine appendicitis which it simulates.

Pediatrics, February 15, 1900.

Blood Diseases in Children.—J. M. Taylor gives clinical contributions upon purpura, scurvy, Hodgkin's disease, and arthritis deformans. In a fatal case of hemorrhagic purpura in a girl aged thirteen years, with good history, and nothing to be found in the internal organs, there were hemorrhages from the mucous membranes after spots and ecchymoses had appeared on the skin. There was pain in the head. Coma ensued, followed by death. Calcium chloride, hydrastinine hydrochlorate, ergot, turpentine, and many blood reconstructives were used in vain. In a case of scurvy resembling syphilitic hemiplegia there were complete paralysis of the right arm and leg, and great œdema and severe pain on manipulation. Syphilis was suspected from a flat eruption on the buttocks and a longitudinal ulcer on the raphe of the perineum. Under iodide of potassium recovery took place. A case of Hodgkin's disease in a boy aged seven years was first thought to be one of glandular fever. This, as well as the preceding cases, was very imperfectly studied. Arthritis deformans in a boy aged nine years, seen in Weir Mitchell's clinic, is reported, and the pathogenesis, after Riesman, is reviewed. For a year there were progressive swelling of the joints and diminished power of locomotion. There was no evidence of rickets. Anti-rheumatic remedies made no impression. The case passed from observation.

Fractures.—T. Halsted Myers reports fracture of the neck of the femur in an infant aged six and a half months, with photograph. The tumor suggested separation of the epiphysis or neoplasm. An x-ray picture shows a case of fracture of the tibia and fibula simulating anterior curvature of syphilitic origin, in a child aged eighteen months.

Imperfect Development of the Right Pectoralis Major and Right Scapula.—H. L. Taylor gives with illustrations a case of one-sided flat chest in a girl aged six years. The right scapula was smaller than the left.

Report on the Cause and Prevention of Infantile Mortality.—By Ernest Wende. A continued article.

St. Louis Courier of Medicine, January, 1900.

Sanatoria for Consumptives.—Beverley Robinson believes that for the cure of consumption and prevention of contagion, laws regulating personal and house hygiene would be more effective than the isolation of a few patients in sanatoria.

Results of Eighteen Tests Made for Rendering the Hands Aseptic before Operation.—N. B. Carson has had great success with Weir's method, by which Labarraque's solution is developed by sodium carbonate and calcium chloride in the presence of water.

The Relative Value of Antisepsis and of Improvement in Technique as Regards the Actual Results in Operative Gynæcology. By L. Gustave Richelot. See MEDICAL RECORD, vol. lvi., p. 420.

Torpor of the Retina due to Exposure in the Klondike.—J. Ellis Jennings describes a case of partial snow-blindness, cured by strychnine sulphate, gr. $\frac{1}{50}$ t.i.d., dark glasses, and instillations of atropine.

Typhoid Fever Complicated with Chorea and Diabetes Insipidus.—Carl Orth reports a case of this unusual complication of troubles. The patient made a good recovery.

Functional Derangements of Ocular Muscles.—Edward R. Wright discusses eye strain and its treatment by muscle training, prism wearing, and operation.

Removal of One Hundred and Seven Polypi at One Sitting.—H. W. Loeb accomplished this feat with an electro-cautery snare of his devising.

International Medical Magazine, February, 1900.

The Symptomatology, Complications, and Sequels of Gastric Ulcer.—Boardman Reed says that the three most prominent symptoms of gastric ulcer are pain, hemorrhage, and circumscribed tender spots. Vomiting after taking food is another rather frequent symptom. It is very exceptional in cases of ulcer to find the stomach contents deficient in hydrochloric acid. The appetite is generally good—often excessive. The complexion varies. According to Welch the largest proportion of cases occurs between the ages of twenty and thirty years. Nearly two-thirds of the cases are of women. A tumor can sometimes be felt. The most important complications are: (1) rapid and possibly fatal collapse; (2) partial perforation with patches of local plastic peritonitis; (3) perforation with escape of gastric contents into the peritoneal cavity and resulting peritonitis; (4) subphrenic abscess. The sequels may be a contraction or closure of the cardiac or pyloric orifice; prostration, anæmia, and cachexia, or gastric ulcer may be followed by cancer.

The Diagnosis of Some Ocular Maladies by the General Practitioner.—J. A. Patterson quotes Risley on the location of pain in ocular maladies: "In optic nerve diseases, there is in many cases pain in the front of the head, on top, but it is not a vertex pain. The pain, when associated with eye affections, occurs in the brow, occiput, back of the eyes, and in the temples, in point of frequency in the order named. Simple eye strain, particularly in children, will usually give rise to brow pain. If associated with some abnormality of the ocular balance, there will usually be occipital pain also." The diagnosis of muscular disabilities is as intricate as it is important, and requires very careful testing for the perception of all the minute features. In making pupillary examinations the physician should notice whether the pupil reacts to light stimulus promptly, sluggishly, or not at all. The ophthalmoscope is an invaluable adjunct in the diagnosis of ocular maladies.

Stricture of the Urethra.—J. D. Thomas favors the following method of treatment in this affection: After passing the filiform, pass over this as a guide a small tunnelled divulsor, and, opening this up, divulse to about No. 20 F. After the removal of the divulsor and filiform, a No. 20 F. metallic sound is passed, which enables the patient to urinate freely; the bladder is relieved, and the patient is in good condition for treatment by gradual dilatation.

The Importance of the Early Recognition and Treatment of Gonorrhœa in the Female.—Edward E. Montgomery declares that syphilis is not nearly so baneful in its influence upon the future health of the woman as gonorrhœa. For when the latter affection has once invaded the deeper structures of the genital tract, it is beyond the physician's control and produces changes in structure and relation which can be relieved only by a sacrificial operation.

Importance of Thorough Urinary Examinations. The Needed Preparations, Apparatus, etc.—A. Robin believes that uranalysis is often incomplete. Apparatus should be cleaned as soon as the work is finished. Printed blanks are valuable. A most useful preservative is formalin.

Some Practical Points in Infant Feeding.—Howard S. Kinne emphasizes the importance of regular feeding: the child should remain at the breast for fifteen to twenty minutes, but not longer. Night nursing should be avoided.

Franklinic Electricity and Methods of Application.—By Margaret A. Cleaves. A continued article.

The Century of Surgery.—By W. Wayne Babcock.

Deutsche Aerzte-Zeitung, February 1, 1900.

Treatment of Erysipelas with Antibactericidal Remedies.—Max Heim mentions a variety of drugs—iodoform, alcohol, carbolic acid, turpentine, etc.—which have been used with more or less favorable results. The antistreptococic serum (Marmorek) is useless. In migrating cases, the application of equal parts of ichthyol and vaseline, together with Riedel's method of multiple scarification and washing with bichloride solution (1 : 1,000), often brings the disease to a close. Four successful instances are recorded.

Present Status of Treatment of Hypertrophic Rhinitis.—L. Réthi concludes that in large diffuse hypertrophies energetic treatment with trichloracetic or chromic acid, nitrate of silver, or galvano-cautery is indicated. In polypoid hypertrophies the galvano-cautery, snare, or cutting is indicated. The methods applied are carefully described. Hypertrophies of the septum are best removed with the snare.

Observations on the Use of Heroin.—Jacob Wilsner used the muriate internally and subcutaneously, four hundred and eighty-one times in sixty-five cases, irrespective of age and sex. Only narcotic, analgesic, and sedative effects were tried, with the result that it bids fair to replace morphine and codeine for these purposes. Smaller doses are necessary and the after-effects are less than with morphine.

Observations upon the General Deficiency of Albumen in Nourishment.—Ludwig Hellwig takes issue with Finkler, who says that most people do not take sufficient albumen with their food. Quotations from Finkler and Pflüger are freely discussed.

Giornale Medico del Regio Esercito, December 31, 1899.

The Mosquito-Malaria Theory.—Claudio Sforza takes up the question of the prevention of malaria among soldiers, and, basing his remarks on the theory of the connection between the disease and certain varieties of mosquito, urges that greater care be exercised in the selection of localities for the encampment and drilling of soldiers. The latter are exposed both day and night to the punctures of these insects. He also recommends the wearing of the hoods and gloves recommended by Professor Celli for railway employees, the use of mosquito netting when practicable, and of various substances supposed to be obnoxious to mosquitos.

Aneurism of the Innominate Artery.—Luigi Rugai reports and describes a case. The tumor is of small size, and the pressure symptoms are very slight. Rest, careful dieting, and potassium iodide will be the treatment given, unless more alarming symptoms should call for ligature of the carotid and subclavian arteries.

Archives Générales de Médecine, February, 1900.

The Self-Help of the Organism in Certain Cases of Angina Pectoris.—Joseph Pauniski studies the various compensatory influences in cases of heart disease causing stenocardia, and concludes that hypertrophy is the chief one. Improvement in the general nutrition of the patient favors this hypertrophy, but this does not mean superabundant nutrition which might overtax the myocardium. The greater the amount of hæmoglobin in the blood, the slower is the circulation and the longer the diastole, an essential condition to nutrition of the heart, since it fills only during diastole. Hæmoglobin may be obtained by increasing the albuminates or by diminishing the water in the organism.

Clinical Study of the Contraindications to the High-Altitude Treatment.—L. Murat considers cachexia a contraindication in most cases; laryngeal phthisis is usually aggravated by mountain air; emphysema, erethism, acute phthisis, or acute attacks in the course of chronic phthisis are all contraindications. Hæmoptysis, on the other hand, is usually benefited by high altitude. Kidney disease, rheumatism, and white swelling are rendered more painful, and phthisical patients suffering from these complications should not be sent to an altitude as great as forty-six hundred feet.

Ganglional Tuberculous Cavity Opening into the Aorta, Left Bronchus, and Œsophagus.—L. Brodier and P. Lecène describe this condition in a patient who was not suffering from pulmonary tuberculosis.

Botryomycosis Occurring in Man.—By Antonin Poncet and Louis Dor. A continued article.

Various Forms of Purpura and Visceral Affections.—By C. Oddo and Olmer. A continued article.

Il Policlinico, January 15, 1900.

The Consequences of the Escape of Urine into the Peritoneum.—L. Rizzo, as a result of experimentation on animals, concludes that small amounts of urine in the peritoneum have neither local nor general action; doses up to one-thirteenth of the animal's weight have no local action, but cause a grave uræmic condition. Higher doses cause death. The presence of urine in the peritoneum renders this serous membrane most vulnerable to the infections. The peritonitis which by organization closes wounds of the intraperitoneal tract of the urinary passages is not due to the action of urine, but to the fact that a bloody surface is in contact with the peritoneum.

Bacteriological Researches in Normal and Diseased Fallopian Tubes.—Guiseppe Bellei found that healthy tubes are not free from germs; that the micro-organism most frequently causing purulent salpingitis was the staphylococcus pyogenes albus, but other germs may also cause the process. He at no time found any association of pathogenic microbes in purulent salpingitis, and only rarely found a pathogenic germ with one or more saprophytes. In chronic salpingitis he found no micro-organisms. The saprophytes found in the tubes are either special to this organ, or have assumed special characteristics due to their environment.

The Genesis of Lipoma.—Eriberto Aievoli gives a number of reasons for believing that in the future lipomata will not be included with neoplasms, in the strict meaning of the term, but will be considered as belonging to the class of trophic lesions. As to the reasons for the disturbance of equilibrium in the physiological deposition and removal of fat, the author holds that in the distribution and function of elastic tissues, or their influence upon the distribution of nutritive fluids, will be found the solution of the problem.

Fibrous and Muscular Abnormalities of the Fascia Transversalis.—Guglielmo Romiti describes some peculiar conditions found in the course of autopsies, and upon living subjects.

Deviations and Contractures of the Spinal Column of Neurotic Origin, Especially Hysterical Scoliosis.—Erasmo de Paoli describes several cases of this affection.

Reviews and Notices.

State Board of Massachusetts, Thirtieth Annual Report, 1899. 8vo, pp. 878.

This rather bulky volume contains, among other useful documents on the public health of Massachusetts, an excellent and exhaustive report on the water supply and sewerage of towns.

Lea's Series of Pocket Text-Books. Diseases of Children: A Manual for Students and Practitioners. By George M. Tuttle, M.D. Edited by Bern. B. Galaudet, M.D.

This new manual has just appeared. It describes a series of infants' disorders, and gives the management of the same without going into extensive details. It is well adapted for the purpose of the author. We take exception to the otherwise good monochrome—but ask the author to credit the same to Dr. Flindt, New York Medical Record, October 21, 1899. The book is well written, and has some very good illustrations.

Transactions of the Medical Society of the State of North Carolina. Forty-sixth annual meeting, held at Asheville, N. C.

After the address of the president and the annual oration, this volume is divided into the various branches of practice of medicine, obstetrics, pathology and microscopy, medical jurisprudence, anatomy and surgery, materia medica, and therapeutics. A code of medical ethics, covering fifteen pages, proves a source of great instruction.

The Transactions of the Medical Society of the State of California. Twenty-ninth annual session, Monterey, April, 1899.

Unlike the reports of most society meetings, this volume offers numerous interesting and instructive articles as its main contents, giving only secondary importance to constitution and by-laws, committee reports, member lists, etc.

Transactions of the Vermont State Medical Society, 1898.

This little volume contains the transactions of the eighty-fifth annual meeting held at Brattleboro. It presents a number of interesting papers, with their general discussion, a list of members and past presidents, and the by-laws and constitution.

Mt. Sinai Hospital Reports. Volume I., for 1898. Edited for the Medical Board by Paul F. Mundé, M.D., LL.D.

The hospital and editor are to be congratulated upon the very excellent and practical manner in which this maiden report has been presented. Each department has contributed its share, in a way which carries conviction and instruction with it, so that in all the volume proves a very valuable source of information.

Transactions of the Medical Society of the State of West Virginia. Held at Weston, May 17, 18, and 19, 1899.

This volume, though covering but a hundred pages, contains reading-matter whose value is in inverse proportion to its quantity. The article on the "Present Status of Appendicitis," by Hupp, would repay careful study, as it is clearly and thoroughly presented. The Transactions have many other short and instructive contributions.

The Retrospect of Medicine. A half-yearly journal. Edited by James Braithwaite, M.D., and E. F. Trevelyan, M.D. Vol. 119. July, 1899. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited.

It is largely a matter of choice with medical readers whether they require or desire their scientific pabulum served up weekly, bi-weekly, monthly, quarterly, half-yearly, or in an out-and-out year book. The market supplies medical literature of current nature in all these and many other forms. Recent reviews of the publication before us appearing in journals interested in the success of other and newer ventures would make it appear that "Braithwaite" has outlived its usefulness. It is the same half-yearly journal it was half a century ago, giving abstracts and short articles from medical journals, and showing the most important indications of treatment, published by different writers during the half-year, arranged alphabetically under general headings of practical medicine, surgery, obstetrics, and gynæcology, these being subdivided to cover the field. The "Retrospect" has always been a welcome visitor to the Medical Record's table, and is still; and we could advise no old or recent subscriber to give it up in an attempt to get better food more promptly served for the same outlay.

Practice of Medicine: A Manual for Students and Practitioners. By George E. Malsbary, M.D., Assistant to the Chair of Practice, Medical College of Ohio, University of Cincinnati; Assistant to the Lectureship of Clinical Medicine, Good Samaritan Hospital, Cincinnati. Philadelphia and New York: Lea Brothers & Co.

This is one of the series of pocket text-books issued by this publishing house, and edited by Dr. Gallaudet. While it is true that the manual has the advantage over a deep treatise that it can be published quickly and include the latest fashions in medicine, still there is always the possibility that the work has been too hastily done in these smaller works. A soldier is no better than his feet; a chain is no stronger than its weakest link, and a book is no better than its worst page. The work before us has one weak if not worst page. In defining the pox, the author says: "Two or three months later," (after the primary lesion) "the secondary lesions develop." "The third stage of the disease develops after a period of three or more years, with falling of the hair, etc." Under treatment we read: "Some advise excision of the primary sore, since it is a focus of infection. When this is done, medicinal treatment is begun at once; but usually active treatment is deferred until the second stage." We cannot regard the postponement of active treatment for "two or three months" as the best teaching of the day. Differential diagnosis and treatment, which should be the strongest features of such a book, are noticeably weak.

A Text-Book of Materia Medica, Therapeutics, and Pharmacology. By George Frank Butler, Ph.G., M.D., Professor of Materia Medica and Clinical Medicine in the College of Physicians and Surgeons, Medical Department of the University of Illinois, etc. Third edition, thoroughly revised. Philadelphia: W. B. Saunders. 1899.

Nothing has been omitted by the author which, in his judgment, would add to the completeness of the text, and the student or general reader is given the benefit of latest advices bearing upon the value of drugs and remedies considered. What has seemed detail of no great importance has been excluded to make place for weightier matter. In its new form, this volume of eight hundred and seventy-five pages must be regarded as a thoroughly up-to-date aid in instruction in the branches covered. There is at the end a clinical index, making the matter available in a very practical way.

The Logic of Figures; or, Comparative Results of Homœopathic and Other Treatments. Edited by Thomas Lindsley Bradford, M.D. Philadelphia: Boericke & Tafel. 1900.

Drawn from various sources, statistics are here offered by the writer and compiler to show by the "logic of figures" the superiority of his school of teaching and practice. Though not exhaustive the attempt has been made to include all important statistics for the past fifty years covering death rates in the hospitals, asylums, etc., under the different schools. There is a bibliography of statistical books and articles.

Bee-Line Therapia and Repertory. By Stacy Jones, M.D. Second edition. Philadelphia: Boericke & Tafel. 1899.

The author of this little, soft-covered pocket-book of three hundred and thirty-three pages thinks that "if we can get three legs to the stool of affiliation we will have a pretty sure base for a successful prescription." He therefore advises the physician who uses this work to consult especially sections on "Cause," "Aggravation," and "Amelioration." New features of this edition are chapters on "Person" as distinguishing the peculiar physique of the patient; and on the various kinds and uses of suppositories. The title "Bee-Line" has been chosen because of the specific indications for remedies as set forth.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M.A., M.D., LL.D. Tenth edition, revised and enlarged. New York: D. Appleton and Company. 1899.

To the student of twenty or more years ago who prepared for his examinations from the first edition of "Bartholow," the present volume will indicate the many advances scored in the matter of drug medication. There will also be discovered such changes as increased space, omission of references now deemed unnecessary in order not unduly to increase the number of pages, a brief account of the newest remedies, and a special article on prescription writing. The student or practitioner who now becomes acquainted with this justly popular work for the first time will find within its pages, attractively presented, all that is reasonably required to be known about drugs and their action, in conformity with the only official standard, the United States Pharmacopœia.

Warner's Pocket Medical Dictionary of To-Day, comprising Pronunciation and Definition of Ten Thousand Essential Words and Terms used in Medicine and Associated Sciences, and Tables of Arteries, Nerves, Muscles, etc. Arranged for convenient reference by William R. Warner. Pp. 374. Philadelphia: William R. Warner & Co. 1898.

This is a most handy little volume of the right size as a pocket companion and especially adapted to medical students who are being introduced to many new terms. Many of the very common words have been omitted. This is the second edition and has been revised to date.

The Medical News Visiting List for 1900. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil, and rubber. Philadelphia and New York: Lea Brothers & Co.

This little book is most admirably arranged, and contains many useful tables and references. The printed contents consist of articles on Urine Analysis, Important Incompatibles, Artificial Respiration, Table of Eruptive Fevers, Poison Antidotes, etc. The blanks are arranged for daily record of visits, general memoranda, obstetric engagements, vaccinations, death register, addresses of patients and nurses, and cash account. It should suit excellently the needs of the general practitioner.

Clinical Lectures on Neurasthenia. By Thomas D. Savill, M.D., Physician to the West End Hospital for Diseases of the Nervous System, London, etc.

The English edition of this well-known book was reviewed in our columns on July 15th last. We are in receipt of an American edition of the work, in every way the equal of the original, just published by arrangement with the author by Messrs. William Wood & Company, New York. (Muslin, $1.50 net.)

Clinical Society's Transactions. Vol. XXXII. London: Longmans, Green, & Co. 1899.

It is with deep interest that one reads the last volume of the Transactions of the London Clinical Society, not only because of the intrinsic worth of the papers read and the clinical value of the cases that were presented, but also because the work of this society illustrates how much can be accomplished for clinical medicine when the proper spirit pervades the members of the association. It is indeed no wonder that the meetings of this society are well attended, for each member strives to present briefly and yet minutely the very best clinical material. To review either the papers that were read or the cases that were presented would hardly be possible in the space that can be devoted to this notice of the society's Transactions, and the volume can only be recommended to the entire rank and file of the profession, as containing most interesting and unique material. The book is excellently printed, the illustrations are particularly good, and the contributors, editors, and publishers are all to be heartily congratulated upon the manner in which their work has been accomplished.

Obstipation. By Thomas C. Martin, Ph.D., M.D., of Cleveland, Ohio. Philadelphia: Medical Publishing Company. 1899.

The author styles the book "a practical monograph on the disorders and diseases of the rectal valve," and devotes the first portion to a critical review of the literature bearing upon the existence of this anatomical structure. He then details his method of rectal examination. This he makes a complicated procedure, and for its perfection he has devised a special table and quite an array of instruments; whereas, with a patient in the knee-chest position, a direct ocular inspection of the interior of the rectum, when it is distended with air, is quite simple and easy. The last half of the book deals with the importance of abnormal conditions of the rectal valve in producing obstipation. In infancy the deficient muscular development of the lower segment of the bowel, and the greater length and mobility of the sigmoid flexure, are certainly far more important factors than the rectal valve in causing obstipation; and in adult life, with the exception of those rare cases of congenital membranous septa which obstruct the lumen of the bowel, it is not the rectal valves which cause the obstipation, but the inflammatory processes and new growths, which affect the bowel at the site of these structures, and it is to the pathological condition that our treatment must be directed, and not to the rectal valve.

Bacteria, Especially as They are Related to the Economy of Nature, to Industrial Processes, and to the Public Health. By George Newman, M.D., F.R.S. Edin., D.P.H. Camb., etc.; Demonstrator of Bacteriology in King's College, London. Illustrated. Pp. 348. New York: G. P. Putnam's Sons. London: John Murray. 1899.

This volume is the sixth in the "Science Series" edited by Prof. J. McKeen Cattell and F. E. Beddard, and is fully as interesting and instructive as its predecessors. The author does not claim to put forward the results of his own original work nor to give a complete technical guide to the laboratory. His purpose has been to deal with the subject in a popular way, and in this attempt he has most happily succeeded. There has been a great need for just such an exposition of the life histories of bacteria, and Dr. Newman has taken pains to describe the advantageous uses as well as the disease-producing activities of our friends the enemy. The book is divided into various chapters on the biology of bacteria—bacteria in water, in air, in the soil, in milk, milk products, and other foods, the relation of bacteria to fermentation, the question of immunity, and antitoxins and their relation to disease. The publishers have produced a well-printed volume, well bound, and of neat appearance, while the illustrations are sufficient and to the point.

The Veil as a Cause of Erythema of the Nose and Cheeks.—O. Rosenbach (*Berliner klin. Wochenschrift*, October 1, 1899) calls attention to the frequency with which women who wear veils in winter suffer from redness of the tip of the nose and the cheeks. This is not due to any draught of cold air; on the contrary, the heavier the veil, the worse the condition. He attributes it (*a*) to the roughness of the threads of the veil, and (*b*) to abstraction of warmth by the veil from those parts of the face with which it comes immediately in contact—"acting like a cataplasm." The blood is thus drawn to these parts, and the capillaries become over-distended. On the cheeks the area of redness is limited to the points of separation of the veil from the skin. The condition is naturally increased upon entering a warm room.

Therapeutic Hints.

Treatment of Simple Appendicitis.—D'Arcy Power (*British Medical Journal*, November 25th) writes as follows regarding this subject: Medical treatment may be adopted so long as the patient seems fairly well, his pulse is regular, firm, and not too rapid; if his respiration is full and painless, his belly is but little distended, and if the stools are normal, or there is only slight constipation. It is better not to use opium in any form, because it hides the tenderness and masks the facial changes, which are the only safe indications of the course which the disease is running. As a routine treatment of a straightforward and simple case of appendicitis I have seen the best results follow the method to which Mr. Maylard has recently drawn renewed attention. It consists in the immediate administration of a copious enema of warm soap and water, followed by teaspoonful doses of magnesium sulphate in two wineglassfuls of warm water given hourly, the dose being repeated six or eight times until the bowels begin to act. A hot boric-acid fomentation or an ice-bag is applied to the right iliac region, the choice being determined by the relief which the patient obtains, though the surgeon prefers the ice-bag. The patient must be kept in bed until the swelling and all the tenderness have left the right iliac region, and he must be fed upon food which is easily digested, that neither constipates nor forms massive stools.

Boric-Acid Poisoning.—Dr. Grumpelt (*Sem. Médicale*, No. 15, 1899) reports a case of severe intoxication following the employment as an enema of about a pint of a one-per-cent. solution of boric acid. The toxic manifestations consisted of erythematous, papular, and bullous lesions on the hands, marked dryness of the skin, high fever, nausea, and headache.

The Therapeutics of Acute Pneumonia.—Dr. Thomas G. Mays (*Merck's Archives*, May, 1899) believes that cold is paramount to everything else in the treatment of acute pneumonia. He applies ice in large, flat rubber bags to the head and chest. This measure reduces the fever, lessens the tendency to convulsions in children, and allays the irritability of the nervous system in adults; it limits and checks the extension of the pneumonia process by contracting the pulmonary capillaries; it promotes resolution, and disperses the products of exudation; it acts as a profound sedative to the circulatory and respiratory centres; it supports the function of the heart; it alleviates the difficulty of breathing; it abates pain in the chest, and it gives general rest and comfort to the patient.

Preventive Treatment of Impending Diabetic Coma.—Upon the appearance of the aceto-acetic acid reaction in the urine place the patient on a strict milk diet. Administer internally 30 gm. sodium sulphate and 20 gm. sodium bicarbonate. Give cardiac stimulants, digitalis, caffeine, etc. To combat the ferment action, give ammonium fluoride gr. $\frac{1}{60}$ in water, after each cup of milk. Inject twice daily 1 gm. of a twenty-five-per-cent. solution of sodium glycero-phosphate, and begin oxygen inhalations.—Robin.

The Medical Treatment of Puerperal Infection.—Dr. Howard W. Longyear (*Medical Times*, December) summarizes the treatment as follows: Local Treatment—Early recognition and destruction of pseudo-membrane by topical applications is of great importance. The iodine, carbolic acid, and chloral mixture is a safe and efficient application for this purpose. The intra-uterine douche, frequently applied, is of most value in the forms of infection unattended by the formation of a pseudo-membrane, but is useful also in connection with local applications. Peroxide of hydrogen per vaginam is useful in all forms of infection. Frequent packing of the vagina, previously dried, with iodoform gauze, is especially useful in cases attended with pseudo-membrane. Inspect infected cases daily with the speculum. Some uncomfortable surprises may thus be avoided, and the local treatment will be most intelligently carried out. General Medication—Quinine in large doses twice daily; whiskey and strychnine to support the heart, if indicated; nuclein and protonuclein in all cases; mercurial and saline cathartics at first in all cases, then as indicated. Serum therapy to be applied in all cases when the Klebs-Loeffler bacillus or the streptococcus can be demonstrated by bacteriological examination, and also in all other cases when such examination has not been made, but in which these specific varieties of infection are probably present. Streptococcus antitoxic serum is to be used persistently to prevent pus formation and symptoms of systemic infection, even if local symptoms and high temperature persist.

Asthmatic Attacks.—Subcutaneous injections of atropine in doses of ½–1 mgm. are followed by prompt relief; the earlier the administration during an attack, the better.—Riegel (*Deutsch. med. Wochenschr.*, 1899, No. 41).

Contraindications to Carbonic-Acid Baths in Circulatory Diseases. — Carbonic-acid baths in general cause increase of blood-pressure; occasionally a diminution is noted. Diminution in the heart's dulness or percussion and increase in urine excreted are observable in some cases. The baths are therefore contraindicated when apoplexy is threatening, or when the heart is just compensating and cannot respond to greater demands.

The Effect of Codeine on Coughs.—In epidemic bronchitis codeine is a valuable remedy for the relief of the harassing pain of the cough, and when combined with one of the coal-tar antipyretics the analgesic effects become more pronounced. It is a favorite drug in the cough of phthisis and chronic bronchitis, and its sedative influence is highly satisfactory, clinical data having shown it to be the best succedaneum for opium. Another advantage of codeine over morphine, one of special value in bronchial catarrh, is that the patients not only cough less but also expectorate more easily than after morphine. The cough-dispelling power of codeine is such as to make it indispensable in phthisical patients, and a point of great importance in these cases is that it does not impair the appetite or digestion, and can therefore be used uninterruptedly for months.—George J. Lochboehler, *Journal of the American Medical Association*, December 2d.

The Nutritive Value of Albumose Peptone.—It is impossible to maintain life upon peptone alone, as it is upon all other strictly nitrogenous foods. Upon the addition of a small amount of carbohydrate, the nitrogenous loss from the body, with the same amount of albuminous food, is very much retarded. Peptone must be regarded as not only able to replace native albumin as a means of checking nitrogenous loss, but also as a means of increasing albuminous tissue. For a period of forty-five consecutive days, at least, peptone causes no diarrhœa or disturbance of the stomach.—A. E. Austin, *Boston Medical and Surgical Journal*, November 30, 1899.

Creamy Thrush.—For this frequent form of stomatitis in infancy to arise the saccharomyces albicans must be introduced from without, and must find a peculiar condition of the digestive tube favoring the growth of this fungus. On this are based the rational treatment and care necessary to prevent its spread. Cure the gastro-entritis which has preceded it. Erythematous stomatitis, which also precedes it, as a rule, may be prevented by good hygiene. Wash the mouth several times daily with Vichy water, or five-per-cent. bicarbonate of sodium solution, or apply:

℞ Borax	5
Glycerin	20

Wash out the stomach also with Vichy water. In rebellious cases antiseptics should be used with care and chiefly by the physician himself. Carbolic solutions are not to be used. Internally a teaspoonful of a half or one per cent of resorcin solution should be given every two hours.

℞ Saccharin	1
Spt. vini rect. (60 per cent.)	50

S. A teaspoonful in a glass of water as a mouth wash five times daily.

—Labbé, *La Presse Méd.*, December 13, 1899.

For Coughs.—

℞ Heroin	gr. $\frac{1}{18}$
Ammon. hypophos	gr. iij.
Hyoscyami	gr. i.
Pin. alb. cort	gr. iiiss.
Bals. tolutan	gr. $\frac{1}{4}$
Glycerini puri	ʒ i.

M. S. For dose.

—*Ex.*

Balsamic Pills.—

℞ Terpin	0.05 cgm.
Sodii benzoat	0.10 "
Picis veg	q.s.

M. For one pill. Make forty. S. Take ten daily.

—Delesquelle.

Psoriasis.—

℞ Acidi salicylici,	
Acidi pyrogallici,	
Ammon. sulph. ichthyol	āā gr. xlvi.
Ol. oliv	ʒ iiss.
Adipis lanæ	℥ iv.

M. S. Apply twice daily.

This produces no irritation nor discoloration of the skin.—Unna.

Local Asphyxia of the Extremities.—In a certain number of cases sulphate of quinine has given incontestable results.

℞ Quin. sulphat.,	
Ergotin	āā 0.05 cgm.
Pulv. digitalis fol	0.005 mgm.
Ext. belladonnæ	0.001 "

M. For one pill. S. Give two to four before each meal.

—Plicque, *La Presse Méd.*, No. 92, 1899.

Phthisis.—

℞ Ichthyol.,	
Aquæ	p. æq.

M. S. One to two drops in tablespoonful of water after meals, gradually increased to ten drops t.i.d.

—Wertheimer.

Phtheirius Pubis.—

℞ Hydrargyri bichloridi	0.25 cgm.
Spt. terebinth	30 gm.
Glycerini	40 "
Spt. lavandulæ	175 "

M. S. Apply.

—*Gaz. des Hôp.*

Treatment of Corns.—Dr. E. L. Wood, of Dansville, N. Y., writes: "A radical cure for corns consists in paring the callosity as closely as possible without causing any hemorrhage; then placing in the centre of the corn a very small drop of croton oil, and bandaging for twelve hours. Then remove the bandage and paint the corn with reliable cantharidal collodion; a pustular bleb will result, in the formation of which the entire callosity, nucleus and all, will be raised without very much pain from the tissues beneath and can be easily removed. The process should be conducted under the care of a surgeon to insure prompt sterilization of the part after the callus is removed. Healing has always been rapid, not requiring more than three or four days, with no liability to recurrence unless the foot is afterward abused. I have treated active, working patients without a loss to them of more than a half day of time."

Hepatic Colic.—Avoid the hypodermic use of morphine by giving:

℞ Ext. bellad.,	
Ext. opii	āā 0.20 cgm.
Ol. theobromatis	q.s.

M. For one suppository—make four such. S. One repeat in half an hour, then every hour.

Apply over the liver region a flax-seed poultice made with laudanum. Give internally:

℞ Sodii bicarbon	4 gm.
Aq. destil	100 "
Syr. simp	30 "

M. S. A teaspoonful every half-hour, alternating with:

℞ Ac. citric	4 gm.
Aq. destil	100 "
Syr. limonis	30 "

A teaspoonful on the quarter hour.

—Bacaloghi.

Tender Feet, especially among soldiers. Harden the epidermis and destroy bacteria with salicylic solutions five per cent.; remove offensive odors with formic-aldehyde solutions two per cent., or apply tannoform powder (formaldehyde added to an aqueous solution of tannin and precipitated with hydrochloric acid).

Sperminum is said to act as a ferment in textural respiration, oxidizing the products of regressive metamorphosis. To it is ascribed the property of preserving the system from auto-intoxication. Its use is indicated when it is necessary to raise the tone; when there is diminished intra-organic oxidation, in anæmia, gout, rheumatism, phthisis, neurasthenia, etc. It seems contraindicated in mania and epilepsy.—"Notes on New Remedies," December, 1899.

Carbolic Acid in Tetanus.—Ten minims of a ten-per-cent. carbolic solution were injected hypodermatically, and after fifteen minutes twenty minims in addition, in a boy of twelve with general symptoms of tetanus, dyspnœa, and opisthotonos ten days after injury to the foot. After the third day there was improvement, and he gradually recovered.—Woods, *New York Medical Journal*, September, 1899.

Honey-Bee Therapy.—The source from which the honey is gathered will influence very greatly its value in medicine.—L. O. Howard.

Most of the honey served to guests in Swiss hotels is said to be merely glucose flavored with honey.

Apis mel has been successfully used in dropsy, possessing decided diuretic and diaphoretic properties.—Miller.

Overworked and feeble individuals are saved work for their digestive machinery by eating honey instead of cane sugar.—Professor Cook.

Creosotal.—Two and a half grams four times daily in emulsion of hot milk are said by Cassoute to be tolerated by adults in acute broncho-pulmonary affections, while children up to one year of age can be given from 0.25 cgm. to 1 gm. daily in four doses; children from four to six years of age can take 3 gm. to 4 gm. daily. The dose given in Coblentz's "Newer Remedies" is ♏ iii.-v.

Society Reports.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 10, 1900.

T. Mitchell Prudden, M.D., President.

A Case of Congenital Renal Malposition with Anomalous Arterial Supply.—Dr. Harlow Brooks presented a specimen taken from a negress, twenty-eight years of age, who had been healthy previously, and had borne one child at full term without any uræmic or other complications. About one year later she had again become pregnant. When supposed to be about three months pregnant she had entered the Harlem Hospital complaining of cramp-like pains in the region of the appendix. She had no fever, and palpation at McBurney's point did not give the characteristic tenderness or sensation to be expected in appendicitis. The urine had not been examined until rather late in the case, and then had been found to contain a small quantity of albumin, and some blood corpuscles. There had been at this time still no elevation of temperature. Pelvic examination by the house surgeon had shown the woman to be pregnant, and had revealed the presence on the right side of a mass supposed at the time to be a cystic ovary or a pyosalpinx. The woman had been rather irritable, but had gradually passed into a comatose condition, when a diagnosis of uræmia had been made. The autopsy had revealed a twin pregnancy at about the third month. One umbilical cord was tied in a hard knot. The uterus was in the normal position. The left kidney had been about the normal size, but exhibited an acute hemorrhagic nephritis. The right kidney had been found below the brim of the true pelvis, and the enlarging uterus had jammed it up against the bones of the pelvis. The tissue of this kidney was extremely anæmic. There were two renal arteries on this side, one given off just above the bifurcation of the abdominal aorta into the common iliacs; the other branch had been derived from the sacra media. The enlarging uterus had compressed and rotated the kidney, cutting off the blood supply from the sacra media, and also from the upper renal artery, which was given off slightly above the sacra media. It was this that had caused the anæmia of the kidney and probable loss of function. This sudden increase of function explained the pain and the rather sudden onset of the acute nephritis on the other side. This position of the kidney in the pelvis was not particularly rare, and it was not extremely rare for the sacra media to become the renal artery, but in all such non-functionating cases found in the literature the kidney had been apparently deprived of its function. In none of these other cases, moreover, had any symptoms been produced. In the case just reported the malposition of the kidney had probably caused death. In her first pregnancy the uterus had risen out of the true pelvis before it had been large enough to compress the kidney; in the last pregnancy, however, twins being present, the uterus had enlarged sufficiently to compress the kidney before it rose from the true pelvic cavity. The only other interesting feature of the case was the general smallness of the arteries of the body.

Dr. Hodenpyl asked if the entire blood supply had been cut off from the kidneys.

Dr. Brooks replied that he thought it had been, for the reason that the pelvic blood-vessels had been pretty well filled, and the renal vessels apparently bloodless. The reason that gangrene had not taken place was that the nipping of the kidney had apparently taken place only about three days before death, *i.e.*, at the time she had complained of the cramps.

Some Unusual Cases of Leukæmia, with Demonstration of Stained Specimens of the Blood.—Dr. Theodore Janeway reported five cases of lymphatic leukæmia, four of which had been seen in his father's consulting practice. The fifth had been seen recently in dispensary practice, and he had been able to obtain a partial autopsy. Two of the cases should be classified as acute leukæmia. The first case occurred in a man aged thirty-eight years, who had had severe malaria two years before the onset. There had been a prodromal period of two weeks, during which he had felt tired. The onset had been marked by severe pain in the left side, and during the first week there had been uncontrollable epistaxis. Later on petechial spots had appeared on various parts of the body. There had been some rise of temperature. When seen, four weeks after the commencement, there had been marked pallor; an enlargement of the spleen down to the umbilicus; slight enlargement of the cervical and inguinal lymph nodes, and slight enlargement of the liver. The blood count showed 840,000 red cells and 77,000 white cells. In the stained specimens it was evident that fully ninety per cent. of the white cells were mononuclear cells without granulations. There were a few myelocytes, megaloblasts, and normoblasts. No mast cells had been found. Death had occurred about two weeks afterward, the total duration of illness having been six weeks and a half. The second case was that of a child aged four and a half years, who had been seen in the University clinic. There had been diphtheria and scarlet fever two years before, and these had been followed by suppurative otitis. As the child had been on Long Island it had been treated at first for malaria. Six weeks before death there had been enlargement of the abdomen with considerable tenderness of the left side. Two weeks later there had been a hemorrhage from the nose and bowel. The blood count had not been made. When seen by the speaker there had been marked pallor of the skin and mucous membrane, with a lemon tint to the skin. The temperature was 101° F., and the pulse was very rapid. The spleen was enlarged down to the umbilicus, and extended well around into the flank. The liver was one finger's breadth beneath the free border of the ribs. The cervical and inguinal lymph nodes on the left side had been very slightly enlarged. The ophthalmoscope had shown a pale retina with numerous large, red-blotched hemorrhages. The blood examination showed very many large red cells present, but scarcely any poikilocytosis. The proportion of white cells was about one in twenty. There was a total of ninety-seven per cent. of lymphocytes. There was a little over two per cent. of multinuclear cells. There were also a few myelocytes, megaloblasts, and normoblasts. One week before death there had been persistent vomiting and bleeding from the gums and from the nose. At this time the abdomen diminished markedly in size. The child had died four months from the beginning of the attack, and six weeks after the onset of acute symptoms. The abdominal organs had been removed the day after death. The spleen reached only to the free border of the ribs, and had shrunk more than one-half in the last week of life. Both the liver and the kidneys were extremely pale, and the surface of the latter was covered with numerous hemorrhages. The marrow of the rib was pink. He had been unable to obtain the shaft of one of the long bones. Peyer's patches in the intestine were swollen and ecchymotic. The mesenteric glands were somewhat enlarged. The next case had been that of a man, seventy-two years of age. The first sign had been enlargement of the spleen, and this had steadily increased up to the time of death. Four months after enlargement of the spleen the cervical, submaxillary, and inguinal lymph nodes had enlarged. At the time of coming under observation the spleen had reached two inches below the umbilicus. The liver reached four inches below the free border of the ribs. There had been no fever, and no heart murmurs. Two or three blood counts had been made. The hæmoglobin had been about sixty-five per cent., and the red cells had never been below 4,500,000. There was over nine per cent. of large uninuclear cells. It had been noted that the cells took up Ehrlich's nuclear stain with great difficulty. Death occurred nine months after the first symptoms, from pneumonia. The next case had been that of a man between fifty and sixty years of age, who had gradually emaciated for nearly a year before his death. The spleen had been very markedly enlarged, and the inguinal, abdominal, and axillary lymph nodes had also been enlarged. The blood showed the ratio of at least one white to five red cells, and of the white cells over ninety per cent. were small lymphocytes. There were no mast cells, myelocytes, or eosinophiles. Death had occurred in a little over one year. The fifth case had been that of a man fifty-seven years of age, who had had the grippe three years before, followed by slight enlargement of the cervical and axillary glands. Nineteen months before death the lymph nodes on each side of the neck had begun to increase in size, and at the same time blood clots had been passed in the urine. The latter was explained by an ulcer in the urethra. Several times bacilli resembling tubercle bacilli in appearance had been found in the sediment from the urine, which had not been decolorized by remaining twenty-four hours in alcohol. The enlargement of the neck had been so great that the neck had measured nineteen and one-half inches in circumference. The spleen had reached to three fingers' breadth below the ribs. The liver had been only slightly enlarged. The hæmoglobin was thirty-five per cent.; red cells 2,000,000, and white cells 418,000. The white cells were over ninety per cent., almost all being of the small variety. The duration of the illness was seven months. The speaker said that the most interesting feature of these cases was that the count of the white cells had apparently run parallel with the duration of the disease, the cases having the highest count of white cells having lasted the longest.

Dr. E. Libman said that he had seen five cases of acute leukæmia, and they had been of a very different type from the chronic ones. The term "acute lymphocythæmia" seemed to him a much better one. In the cases that he had seen, the white cells had consisted, for the most part, of uninuclear cells, which ranged from the size of the red corpuscle to twice that size. There was but little protoplasm about the nucleus, and the nucleus stained poorly and was poor in chromatin. The multinuclears were relatively, and sometimes absolutely, diminished in number, and the eosinophiles were very few. Fränkel had described such cases. The first case that he had seen had been that of a child who had been admitted to the Mount Sinai Hospital after an illness of a few weeks. At that time there had been moderate enlargement of all the lymphatic glands, a very large spleen, and hemorrhages all over the body. He had been impressed at that time with the fact that the red cells showed the characteristic picture of pernicious anæmia. Otherwise the picture was that of an acute leukæmia. Many of the white cells appeared to be degenerating. Two days later the white cells had decreased very markedly. Corresponding to this, the spleen and the lymphatic glands had been reduced almost to the normal. Before death, the white cells numbered only 2,200, and the blood-picture was that of a pernicious anæmia. There had been a pneumonia present to which was attributed the regression of the leukæmic symptoms, as it was known that under the influence of acute infectious processes leukæmic changes ware apt to diminish. Another of the cases he had seen had resembled typhoid fever. In a third case, there had been two small abscesses, and, the contents of these consisted almost entirely of uninuclear cells. The fourth case had been that of a woman who had entered Mt. Sinai Hospital suffering from pneumonia. She had the color of pernicious anæmia, and had hemorrhages in the skin and from the gums. The white cells had not been increased greatly, but had been of the type described. It was considered that the patient was suffering from an acute leukæmia which was regressing because of the pneumonia, and an unfavorable prognosis was made. The pneumonia resolved entirely, but the patient died some days later. Dr. Libman said that he had reason to believe that the symptoms and blood changes in an acute leukæmia could regress without the presence of an infectious process, and that such regression would have to be explained theoretically by an exhaustion of the bone marrow, due to the hemorrhages.

Dr. James Ewing said he could accept three of the cases as rather typical, but the eivdence in the first two cases of acute lymphatic leukæmia seemed incomplete. In the first there had been a moderate number of myelocytes and megaloblasts. The anæmia had been severe, and there had been no autopsy. Moreover, the lymphatic enlargement had been very slight. Such evidence seemed to him insufficient to establish the diagnosis. Myelocytes were almost unheard of in lymphatic leukæmia—it was a diagnostic point. The megaloblasts were usually very scarce; from the mild stages of the chronic cases up to the termination of the disease the absence of megaloblasts was quite characteristic. The lymph nodes were usually the chief seat of the lesion, and were very prominent, yet in this case they had been but very slightly affected. While, therefore, he would not say that it was not a case of acute lymphatic leukæmia, there was good ground for hesitating to accept that diagnosis. In the second case, megaloblasts had been present; the spleen had been extremely small, as had also been the intestinal lymph nodes. The absence of any distinct indication of hyperplasia of the lymphatic structures was a strong point against acute lymphatic leukæmia. He understood that there had been a considerable enlargement of the liver during life—even more marked than that of the spleen—while the blood had shown the white cells to be not small lymphocytes, but large uninuclear cells. He would not, therefore, classify the case as one of acute lymphatic leukæmia, but rather as one of von Jaksch's anæmia. He had seen over one hundred thousand leucocytes in a case of diphtheria in a child, over ninety per cent. of which had been small lymphocytes. He would not make a diagnosis of acute lymphatic leukæmia unless the lymphatic structures were very much enlarged, or the blood changes very distinct, or until he had made a microscopical examination of the bone marrow. It was beginning to be recognized that the separate types of leucocytes had nothing to do with one another. In typical cases of lymphatic leukæmia the small lymphocytes were the ones specially increased, yet on examining the slide presented it seemed to him that the small lymphocytes were hardly increased at all.

Dr. Libman said that from the examination of the blood slide from the second case, he thought there could be no doubt that it was a case of acute leukæmia. These cases were entirely different from lymphatic leukæmia. The term "acute leukæmia" was introduced to describe cases in which there existed fever, hemorrhages, enlargement of the spleen and lymphatic glands, involvement of the bone marrow; and Fränkel had shown, in 1895, that the blood changes found were such as appeared in the specimen under the microscope, and that all these changes could disappear to a large extent before death. He had himself seen two cases in which the phenomena had almost entirely disappeared before death, yet the bone marrow presented typical changes at the autopsy. The slide, together with the history, made it clear that the case was one of acute leukæmia, according to the description given by Fränkel.

Dr. Janeway, in closing, said that in the first case the spleen had decreased from one-half to three-fourths during the last few days of life. By comparing the size of the mesenteric lymph nodes as found at autopsy with the clinical record it seemed evident that the lymph nodes had diminished in size in proportion to the diminution in the size of the spleen. It had been recently suggested by Minkowski to make three classes of leukæmia, viz.: (1) Ordinary chronic leukæmia, beginning rather acutely, remaining stationary for some time, and having a considerable duration; (2) acute leukæmia, having the primary lesion in the bone marrow, just as in the first class, but associated with enlargement of the spleen and of the lymph nodes and lymphatic apparatus elsewhere, and running a very rapid course, sometimes only a few days, and associated with fever and hemorrhages; and (3) the chronic lymphæmias—the class specially referred to by Dr. Ewing. The classification of von Jaksch's anæmia had seemed to him specially indefinite. A number of cases had been recorded of transition from von Jaksch's anæmia to acute leukæmia. There was one case on record of transition from pernicious anæmia to acute leukæmia. In his fifth case, which Dr. Ewing did not question, the cells had not all been of the small lymphocyte type. The presence of megaloblasts in the acute cases had been thought to go hand-in-hand with the acute anæmia.

Demonstration of Specimen Showing the Growth of the Tubercle Bacillus on Hesse's Medium.—Dr. Robert J. Wilson said that Hesse's medium was supposed to be peculiarly favorable for the growth of tubercle bacilli, and depended for its efficacy upon a special food-stuff. It was claimed that the tubercle bacilli would grow on this in a few hours, so that their vitality could be proved or disproved very quickly. The medium was also useful in cases in which the growth of the bacilli was not very characteristic. Dr. Wilson said that he had made a series of seventeen plates, and growths had been obtained on nine of these. Trials had been made on blood serum and on ordinary agar-agar, and with the exception of one there had been no growth at the end of forty-eight hours. In the exceptional case there had been a small growth limited to the borders of the cell. He had observed that the growth in the plates seemed to start in some of the material carried on to the plate at the time the culture was made. This led him to think that it was highly probable that the growth always first started in such material, and then, finding the medium favorable, further growth was able to develop on it. The material transferred to this plate was necessary for the starting of the growth, in very much the same way as blood was necessary for starting cultures of the influenza bacillus. Hesse thought it probable that the tubercle bacillus divided in its longitudinal axis, which was, of course, contrary to the general belief, yet a study of these plates which he had prepared afforded some ground for such belief.

Dr. Hiss said that he had had experience in only four cases in the growth of bacilli from sputum on Hesse's medium. In all of these he had obtained a growth which had continued for from twelve to fourteen days, after which the colonies had developed very slowly. One plate had been under observation for two months. He had seen nothing to make him think that longitudinal division occurred. The organisms were pressed out of the advancing line along the line of least resistance. It might be that material carried over had something to do with the starting of the growth. The medium might be of service in the rapid differential diagnosis of organisms presenting the same staining characteristics.

Dr. L. A. Conner asked whether the tubercle bacilli grew very much more rapidly on Hesse's medium than the other bacilli found in the sputum.

Dr. Hiss replied that the contaminating organisms from the sputum did not seem to grow so well on Hesse's medium as did the tubercle bacilli. This was one of the chief advantages of the medium.

Dr. Wilson explained that his work had been done with pure cultures from guinea-pigs, so that he had had no contaminating organisms.

Dr. Hiss said that the specimens that he had had under observation for two months had not been overrun in this way, and in the others the colonies were still discrete. Hesse had taken great pains to secure bacilli from material as free as possible from contamination.

Dr. Harlow Brooks said that he had seen four plates by Dr. Hesse from sputum which contained a good many streptococci and staphylococci. The contaminating organisms had been found comparatively common in the smear, while the tubercle bacilli had not been very numerous. About forty-eight hours afterward the colonies of tubercle bacilli were strikingly evident, while the growth of the contaminating colonies had not been very marked. Two or three days later the contaminating colonies had overrun the tubercle growths.

A Case of Intestinal Tuberculosis in a Child.—Dr. D. Bovaird reported the case of a boy aged three years who had been returned to the New York Foundling Hospital last August in accordance with the rules of that institution. He had then been sent to the home at Spuyten Duyvil and had remained in fair health until October 24th. At this time, during an epidemic of measles, he had developed this disease, and it had run the usual course. For a whole month the temperature had been very irregular, and the symptoms had indicated a severe bronchitis or broncho-pneumonia, although the physical examination failed to show pulmonary consolidation. During this time there had been a severe stomatitis, though this had improved slowly. At the end of November the evening temperature had been 100° to 101° F. After about two weeks more of this irregular fever the child had developed the first enteric symptoms. About December 15th the condition of the mouth had again become worse, and had soon changed into a true cancrum oris. It was in this condition that the child had been returned to the Foundling Hospital. Death had occurred from the exhaustion incident to this. On December 20th the child had died, and the autopsy had been made on the following day. The pharynx, trachea, and bronchi were normal. Both pleural cavities, except anteriorly, had been obliterated by adhesions. The bronchial nodes contained a few minute caseous foci. The lungs themselves were normal. The peritoneal cavity had been obliterated by adhesions, and the intestine and all the other viscera were matted together by adhesions. The peritoneum was thickly studded with miliary tubercles. The peritoneal surface of the liver was covered with miliary tubercles, but only a few were found in the hepatic tissue. The same condition was found in the spleen. The kidneys, suprarenals, pancreas, and stomach were normal. Peyer's patches were swollen and contained numerous ulcers which reached to the peritoneal coat. In the upper part of the large intestine were a few caseous nodules. The solitary follicles were enlarged throughout and somewhat ulcerated. The bladder was normal except for slight congestion. The mesenteric nodes were enlarged, and some of them showed caseous foci. Among the records of the Foundling Hospital were those of two hundred autopsies on cases of tuberculosis in children, yet in only three was there a fair presumption that the intestine had been the primary seat of the infection. For this reason the case just presented was of special interest. Furthermore, when tuberculosis had developed immediately after measles he had usually assumed that it was nothing more than a lighting up of a previously received tuberculous infection, but in the present instance the diffusion of the lesions through the small intestine, taken in conjunction with the history of the case, made it not improbable that the tuberculous infection had developed subsequently to the measles.

Dr. Ewing thought the development of tuberculosis after measles was too common to make it probable that the tuberculous infection always occurred after the measles. Regarding the condition of the Peyer's patches it should be borne in mind that these were really excretory organs, and might possibly, under certain circumstances, suffer from the excretion of tubercle bacilli. He had recently seen for the first time cases of intestinal tuberculosis limited entirely to Peyer's patches. He had formerly supposed that tuberculous ulcers were almost invariably irregular, and that their long axes were in the transverse diameter of the intestine. In some recent cases the ulcers had been confined to Peyer's patches, which had been deeply excavated. It seemed possible that the bacilli might sometimes be deposited here by the blood current or by the lymph current, instead of from the intestinal contents.

Dr. Bovaird said that the child had been fed on milk obtained from an excellent source. Up to the very last the child had had a diarrhœa, yet the stools had never contained blood, only mucus and undigested food.

Dr. Martha Wollstein said that autopsies had been held at the Babies' Hospital on some hundreds of cases. Probably fifteen per cent. had been on tuberculous infants, yet in few of these children during life had bloody stools been present, so that they had come to look upon this as a rare symptom in young infants. At that hospital they had never met with a single case in which it seemed at all clear that the infection had been primary in the intestine, even in infants fed on bad milk. In the case under discussion it seemed impossible to prove that the tuberculosis had not been primary in the bronchial nodes. Its rapid extension along the intestinal tract was possibly due to the condition of that tract (a previous catarrhal condition of the intestine), thus furnishing a line of least resistance, and explaining the localization.

A Case of Acute Tuberculous Broncho-Pneumonia.—Dr. E. Hodenpyl presented specimens from a case of acute tuberculous broncho-pneumonia in which death had occurred on the twelfth day of the disease. The symptoms and physical signs had resembled very closely those of acute lobar pneumonia. The gross lesions of the lung could hardly be distinguished from those of a simple case of broncho-pneumonia. The short duration of the disease was very remarkable. The shortest recorded case of pulmonary tuberculosis of which the speaker was aware was eleven days. The subject was a colored woman, who had been taken sick with pain in the left chest, cough, prostration, and fever. After remaining in bed five days she had been removed to the hospital, and examination had shown apparently an ordinary pneumonia involving the whole lung. The temperature fell rapidly in two or three days from 105° to 96° F., and in a few hours rose again to 105°. At this time evidence of consolidation had been discovered on the opposite side. She died on the twelfth day. At the autopsy, the left lung, which was free from pleurisy, was studded with larger and smaller pneumonic patches arranged about the bronchi. These were so numerous as to cause the lung to appear almost solid. The pneumonic patches except in one or two instances failed to show any cheesy degeneration. The right lung presented the same lesions as the left, though developed to a less degree. Stained smears from the pneumonic exudate showed tubercle bacilli in enormous numbers.

Dr. Prudden asked if there was any clew as to the possible source of the infection.

Dr. Hodenpyl replied that he could find none. Evidently this was a case of aspiration tuberculosis from the bronchi. No old tuberculous focus had been made out.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Stated Meeting, February 12, 1900.

Charles N. Dowd, M.D., Chairman.

False Joint after Old Fracture and Dislocation of the Elbow.—Dr. Forbes Hawkes presented a boy aged thirteen years who, when eight months old, had fallen and injured his left elbow. At that time it had been treated for a time with plaster of Paris, but shortly after the removal of the dressing he had hurt the arm again. This second injury had not been treated. The arm was now strong and useful, but there was a slight deformity over the inner condyle. Examination showed the left upper extremity to be slightly shorter than the right. In the extended position the internal condyle could be felt projecting, and there was a movable bony mass above and attached to the head of the radius. Flexion and extension were possible to practically the normal limits. Apparently a new joint had been formed between the outer fragment and the humerus itself. The case was of interest because of the unusually good functional result, considering the nature of the original injury. The condition of the joint was shown by radiographs. No operation was advised.

Dr. T. H. Manley was inclined to believe that the olecranon was in its proper position in this case, that the protrusion above was due to the enlargement of bone, and that the olecranon moved on the proper articular surface of the humerus. He had seen a number of similar cases in which there had not been really a false joint, and he did not believe that the *x*-rays gave much assistance in such a case.

Dr. Reginald H. Sayre thought if an *x*-ray photograph should be taken in the antero-posterior direction, with the arm in an extended position, it would clear up the point raised by the last speaker.

Dr. Hawkes replied that one of the radiographs had been taken with the arm perfectly extended, and this seemed to him to demonstrate the existence of a false joint. Regarding the interpretation of *x*-ray photographs he would say that he had recently had a case of Colles' fracture with typical deformity, which, after its reduction, had failed to show in an *x*-ray photograph any evidence of fracture.

Round-Celled Sarcoma of the Testicle. — Dr. Pfister presented a man, twenty-five years of age, from whom he had removed a large round-celled sarcoma of the testicle. One testicle had not descended, but in this instance it was the descended testicle that had become malignant.

DR. JOHN B. WALKER said that, of a number of ectopic testicles reported in the literature, a considerable percentage had developed sarcomatous change. This was one of the reasons for urging operation on the undescended testis.

Acute Intestinal Obstruction; its Diagnosis and Treatment.—DR. PARKER SYMS read a paper with this title. He said that there were two main classes of this disorder, (1) in which there was not only an occlusion of the intestinal canal, but a condition of strangulation, and (2) those in which the fecal flow only was arrested. The vast majority of cases of acute intestinal obstruction belonged to the first class, or, in other words, were attended by acute intestinal strangulation. Acute intestinal obstruction and strangulation, as in the case of a strangulated hernia, must be looked upon as absolutely fatal, unless promptly relieved by operation. This condition was due either to intussusception, volvulus, constriction by bands, escape of a loop of intestine through some normal or abnormal aperture, pressure by a tumor or displaced organ, or impaction of some foreign body. Of course, any case of chronic intestinal obstruction might become suddenly one of acute obstruction. For most practical purposes it was proper to assume that the strangulation was associated with acute obstruction of the bowel. Strangulation meant that a great injury had been inflicted upon the nerves of the solar plexus. This gave rise to abdominal shock—a condition which stamped these cases early and most emphatically. This fact should enable the general practitioner to differentiate early between true intestinal obstruction and mere constipation. The more important symptoms were pain, vomiting, constipation, tympanites, scanty urine, and the train of symptoms which went to make up the picture of abdominal shock, *i.e.*, small, rapid pulse, drawn and anxious face, perspiration, and a peculiar mental condition of combined fear and braggadocio. The vomited matter at first would be the contents of the stomach; later, it would be gastric mucus mixed with bile, and still later there would be stercoraceous matter vomited. The constipation would be absolute, and the tympanites would increase. Hiccough might come on at any time. As to treatment, the condition being a mechanical one, it could be removed only by mechanical means. Cathartics should never be employed, because they could not relieve the condition, and might seriously augment the pressure and even cause rupture of the bowel at the weakened point. High enemata might be given, but operation should not be postponed any great length of time. The incision should be in the median line, and the distended intestine should be systematically inspected in the search for the site of the obstruction. This having been found, it must be dealt with according to the conditions found to be present. In some cases the exhausted state of the patient would allow of only a palliative operation, such as the hasty establishment of an artificial anus. When the vomiting was almost constant and projectile in character, there was always danger from using a general anæsthetic. The use of opium in these cases was most dangerous until operation was about to be done, but at that time it was useful, as it was an excellent abdominal stimulant. The author's conclusions were: (1) Acute intestinal obstruction was a fatal condition, if not promptly and properly relieved; (2) acute intestinal obstruction should rarely be fatal if promptly recognized and treated; (3) acute intestinal obstruction was a mechanical condition, and could be relieved only mechanically; (4) the symptoms of acute intestinal obstruction were absolutely characteristic and distinct, and the diagnosis could always be made, unless the clinical picture had been obscured by the administration of opium; (5) an early laparotomy, properly performed, was the only plan of treatment which should be relied upon in this class of cases.

DR. A. A. BERG called attention to one pathological condition coming on after the second or third day in these obstructed cases, viz., an intense and rapidly progressive emaciation. He had at first supposed this to be due to the shock arising from the involvement of the sympathetic plexus, but he was now inclined to think that the intense pathogenicity of the imprisoned micro-organisms was the cause. The question had often occurred to him, whether it was wise to proceed to a resection of the bowel, even granting that the patient's condition was good. Such resection, together with an intestinal anastomosis, would mean that the bowel must be kept at rest for two or three days afterward. This would mean that the organisms in the proximal loop of the intestine would be draining the system constantly. He was of the opinion that our statistics would be far better if, under such circumstances, the artificial anus was made at the time of the first operation, and a large tube was introduced into the proximal and distal loops of the bowel, and the latter washed out with saline solution. A rather early secondary operation could be undertaken for the relief of the artificial anus. This plan seemed to him better than immediate resection and approximation. He had had very good results from infusing the patients every hour with saline solution. He had seen patients pulseless at the time of making an artificial anus kept alive for several days by these repeated infusions, so that it seemed possible that life might be saved by the same treatment.

DR. MANLEY said that he had never seen a case of acute intestinal obstruction in which the patient survived twenty-four hours, if not operated upon. He called attention to the fact that practically the same symptoms would be observed in a case of perforation of the bowel as in one of acute intestinal obstruction. The chief difference would be in the absence of hepatic dulness in cases of perforation, because of the diffusion of gas upward. A case was mentioned in which, though the symptoms had been very acute and had lasted only a few hours, the use of a high enema had resulted in the escape of the fluid through the gangrenous portion of the bowel into the general peritoneal cavity.

DR. H. J. BOLDT narrated the case of a child aged twelve years who had been operated upon for perforative appendicitis and a general peritonitis. The operation had been done last July. The girl had recovered with a fecal fistula, which had healed spontaneously in a few weeks, and had remained so up to a few days ago. When she had been seen on February 5th there had been vomiting and abdominal pain, a pulse of 110, and a temperature of 101 4° F. A high enema had been given at once, but with no relief. On the following day most of the symptoms had abated, and the general condition had been better. It was assumed that the intestinal obstruction was due to a band from the previous peritonitis, and owing to the excellent general condition and the absence of tenderness to the left of the umbilicus and on a level with it, delay had seemed justifiable. On the next day the pulse had been normal, and the temperature nearly so, but there had been a suspicious point of resistance, and a little stercoraceous matter had been vomited. Abdominal section was therefore done promptly, and, to his surprise, considerable peritonitis was already present. The obstruction was found to be due to a band. About eight inches of the bowel had been resected and an anastomosis established. So far, the child had done well. He had operated upon another case early that morning—that of a child aged seven years. The history had been absolutely typical of an acute intestinal intussusception, but on examination he had found a large swelling in the epigastrium, which had led him to doubt the correctness of this diagnosis. Owing to the great urgency of the symptoms he had hastily made an exploratory incision, but had found nothing but a very greatly enlarged liver. That child had died within a few hours, but he had been unable to explain the symptoms of intestinal obstruction. One speaker had referred to the necessity for keeping the bowel quiet for a few days after these intestinal operations, and this led him to say that he had not made it a practice to do so, and had seen no reason to regret having adopted this course.

Dr. A. Ernest Gallant mentioned a case of volvulus in which he had relieved the early bilious vomiting by the use of plain water and nitroglycerin. He had desired to operate, but several consultants had advised against it. Death had finally occurred, and the autopsy had shown the cause to have been a volvulus. According to his experience most patients in cases of acute intestinal obstruction did not die under five or six days. In post-operative cases of intestinal obstruction, relief might often be afforded by massage of the bowel, and when this did not succeed he felt that immediate operation was imperative.

Dr. Willy Meyer said that the gut should always be opened above the seat of obstruction at the time of operation, and the contents of this portion should never be allowed to pass on downward. The evacuation of the matter contained in this portion could be readily effected by making either a transverse or a longitudinal incision into the bowel. This should be the rule with every surgeon before attempting to reduce the intestine into the abdominal cavity.

Dr. Syms said, in closing, that he had endeavored to show in his paper the possibility of making an early diagnosis, and the probability of securing a good result from early operative interference. It was most important, therefore, to throw into the background the exceptional cases, which served chiefly to obscure the diagnosis and encourage fatal hesitancy. He was disposed to follow Dr. Boldt's advice to move the bowel early, even after resection and anastomosis.

The Hockey-Stick Incision—a Typical Mode of Entering the Abdominal Cavity in Certain Complicated Cases of Appendicitis.—Dr. Willy Meyer read a paper with this title. He said that at the present time in interval cases of appendicitis every surgeon tried to get along with as small an incision as possible. The effort should be made to restore the abdominal wall to its former condition. It was different in cases of acute appendicitis, in which very free access to the abdominal cavity was often essential. The incision parallel to the outer side of the rectus muscle was now rarely employed; the majority of surgeons when operating for acute appendicitis preferred to make the incision very near the anterior superior iliac spine, where the abdominal muscles were the thickest. The trouble here was to decide upon the best mode of enlarging such an incision should it become necessary. Many surgeons would abandon the first incision, and make a second one in the median line; others would make a more oblique incision without regard to the direction of the fibres of the external oblique muscle. The speaker said that, in the course of his operative work in appendicitis, he had found a very useful incision—the one described in the title of this paper. He had discovered that an incision in the direction of the fascia of the external oblique should begin exactly midway between McBurney's point and the anterior superior spine, and then continue in a straight line downward to a point at which the femoral artery was found pulsating under Poupart's ligament. In ninety-five per cent. of the cases such an incision would correspond with the direction of the fibres of the fascia of the external oblique. In most cases of acute appendicitis he began the incision half an inch above and midway from McBurney's point and the anterior superior spine of the ilium, and ended it from half to three-fourths of an inch from Poupart's ligament. He first ascertained where the femoral artery was pulsating under Poupart's ligament, and then cut toward this point. His practice was to enter the peritoneal cavity at the lower end, and, with his finger inside as a guide to the position of the epigastric artery, enlarge the incision downward and inward in a curved direction. This gave to the whole incision the shape of a hockey-stick; hence the name. The incision was exceedingly useful in intrapelvic operations. Even the left Fallopian tube and ovary could be palpated by two fingers passed through this incision. The upper or straight portion of the incision might be closed with tier sutures, and the lower portion left for drainage, although sometimes it was desirable to insert one or two sutures in the extreme lower angle of the curved incision.

Dr. John F. Erdmann said that some years ago he had employed an incision having a similar curve, and had found it exceedingly useful for exploring the pelvis. It seemed to him that it should not be necessary to cut through the conjoined tendon; it should be possible to separate this structure.

Dr. Joseph Wiener said that he could not quite agree with Dr. Meyer that most surgeons, in cases of appendicitis, cut through the thickest portion of the abdominal muscles; the majority, he believed, now avoided dividing the muscles as had been done eight or ten years ago, preferring to use Kammerer's incision through the rectus muscle. One point in favor of this incision was that one did not know, even in interval cases, just where the appendix would be found. An incision along the border of the rectus muscle, which could be enlarged upward or downward *ad libitum*, seemed to him the most valuable for the great majority of cases.

Dr. Meyer said that by means of an incision near the anterior superior iliac spine it was possible, in almost every instance, to reach the appendix, no matter where the latter was situated. In cases of acute appendicitis he was particularly opposed to the incision at the border of the rectus, not only because such an incision did not give the freest access to the appendix, but because it involved the division of the nervous supply of the rectus, and therefore caused paresis of this muscle.

Strangulated Omental Tumor.—Dr. C. H. Peck exhibited a tumor made up of the entire omentum. This had been found rolled up in a vertical direction, and filling the right side of the abdomen from the umbilicus down to the pelvis. It projected behind the uterus and to the right, and pressed well into the anterior fornix of the vagina. The woman gave a history of having been in her usual health up to four or five days prior to admission to the French Hospital. She had then been attacked suddenly with abdominal pain and vomiting, associated with a moderate rise of temperature. On admission the temperature had been 100.5° F., and a mass could be made out indistinctly in the abdomen. On performing abdominal section, this solid tumor had been found. About two inches below the transverse colon a very tightly twisted pedicle had been discovered. This had proved to be the entire upper portion of the omentum twisted around the vertical axis. The symptoms had evidently begun when the strangulation of this portion had been produced by the twisting.

"The Journal of the Medico-Chirurgical College" of Philadelphia is the title of a new monthly journal, under the editorial charge of Dr. John A. McKenna.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

MILITARY MEDICAL SERVICES—THE EPIDEMIC—THE REGISTRAR-GENERAL—SALOL IN SMALLPOX—GLAUCOMA CAUSED BY MYDRIATICS—EPIDEMIC DIARRHŒA—MIDWIVES BILL—INCREASE OF PROFESSION—DEATHS OF SIR T. G. STEWART, DR. TURNER, AND MR. ADAMS.

LONDON, February 9, 1900.

THE rude awakening of the public to the inefficiency and criminal blundering of the War Office may perhaps lead to an improvement of the medical department. Already there is some anxiety as to the deficient number of the Royal Army Medical Corps manifest at Aldershot. A correspondent there says it is a very grave question where the details of this corps are to come from for the thirteen thousand men leaving our shores for active service by Monday next. All that are at present left at Aldershot are the details for the eighth division and less than fifty men outside the recruits under training. A reinforcement of the corps by at least one hundred officers is urgently needed to meet the necessities of the service, but the military authorities go on groping in their purblind way of routine. A "competitive" examination has been advertised for thirty vacancies, and only twenty-five candidates are ready to compete! Competition indeed!

On Tuesday the War Office notified that men of the Volunteer Medical Staff Corps and bearer companies of the volunteers who joined the Royal Army Medical Corps would receive the same pay, allowances, and other gratuities or privileges of the R.A.M.C.

The condition of the militia is also causing anxiety. As this force has been neglected in nearly every other department, it is not to be wondered at that the medical has got near the vanishing-point. On the part of the authorities it is asserted that twenty-four medical officers are still serving with the militia. These must be fast nearing the age of retirement, and are those who have survived of the two hundred and fifty attached to this force before the change from the regimental system. Some forty years ago the army medical officers with those of the militia were nearly fourteen hundred in number. Now they do not muster nine hundred. Everything connected with the defence of the country is now occupying public attention, and the indignation expressed as to other negligences is likely to be extended to that concerned with the sick and wounded.

Influenza continues to decline steadily, as seen in the mortality returns. In the last week the number of deaths registered from the epidemic fell to one hundred. It was a contributory cause in fifteen other deaths, but in this class the fall is just as marked. The death rate of London from all causes fell last week to 19.6, and in this total rate the decline has been steady. For the preceding three weeks the figures were 33.3, 26.9, and 22.2. In the thirty-three great towns the rate averaged 21.2, the highest being 35.4 at Sunderland, the lowest 12.6 at Derby. At Nottingham, which I mentioned a month ago as having reached 44.9, it has declined to 18.3.

Speaking of registration reminds me that a new registrar-general has been appointed in place of the retiring one. There were a certain number of people who thought that in the fitness of things the authorities would appoint a medical man to the office. They counted their chickens too soon. What matters that medical knowledge is the proper qualification for appreciating the many questions that arise in the registration of deaths? What matters the lessened scientific importance of the statistics? The berth was too good to be given to a mere doctor, when a hundred greedy hands were stretched out to every one who had any voice in the selection or recommendation of a candidate.

The salicylates at one time were employed, perhaps, on a more extended scale than of late. In all sorts of fevers some of them were tried. Pridaux treated eighty-eight cases of confluent smallpox by salicylates without one death. That was in 1878. Since then I have heard of no such success, though perhaps the treatment is still employed in some places. Dr. Charles Begg last month communicated to one of the Edinburgh medical societies his experience in China, where he treated the disease with salol, acting on inferences he drew from observation in patients taking the drug for other conditions. A patient with cystitis took a drachm daily, and though he had hundreds of mosquito bites they gave him no trouble; there was no swelling, redness, or irritation. Yet before taking the salol the man suffered much from the mosquitos. Dr. Begg inferred an anæsthetic effect on the skin, and proceeded to try salol in smallpox. He admits that there was some mental depression, but not enough to account for the freedom from skin irritation. In smallpox, he says, salol almost always prevented the vesicles from becoming pustules, and when it was used early no pocking occurred. The patients had no desire to scratch the skin, so the danger to the eyes was greatly lessened. The freedom from cutaneous irritation also allowed the patients to sleep and so prevented exhaustion. No ill effects were noticed when doses of a drachm daily were continued for long periods.

Dr. Begg attributes to the drug an anæsthetic effect during elimination by the skin, but we have no evidence that elimination through this channel takes place; it is certainly not the usual course. He says, too, that the foul odor of variolous patients was masked by a fruity odor, which he infers is due to the elimination of the salol by the skin. The observation is interesting, whether the inference be correct or not.

Dr. Norman Walker said his experience with salicin in skin diseases supported Dr. Begg's observations with salol.

Glaucoma may follow a single instillation of homatropine. Mr. Shears reported such a case to the Ophthalmological Society. It occurred to a woman aged fifty-two years, who at the Liverpool Eye and Ear Infirmary had one or two drops of a solution, four grains to the ounce, put into her right eye, and a week later returned with all the signs of acute glaucoma, rendering iridectomy necessary. Mr. Shears said he thought no mydriatic should be used in patients over the age of thirty without very careful consideration. If homatropine were used it would be well to instill eserine before the patient left the hospital; cocaine followed by eserine was usually sufficient for ophthalmoscopic examinations, or euphthalmin, the new dilator, would be satisfactory.

Only a few cases have been reported by specialists, but it is of importance to the general practitioner, who often uses mydriatics, to remember the possibility of this untoward effect.

The Royal College of Physicians has adopted the recommendation of its committee appointed last summer on the certification of deaths from diarrhœa. It appeared that a number of different terms were employed by practitioners to designate epidemic diarrhœa, leading to confusion in the registration returns, and perhaps confirming the public in the notion that diarrhœa is not dangerous. The college, therefore, recommends that the term "epidemic enteritis" should be uniformly employed, to the exclusion of gastroenteritis, muco-enteritis, gastric catarrh, etc.

We are again to be troubled with a midwives bill. It has been put down for the 28th. Happily the miners' eight-hours bill has the first place for that day, so perhaps the midwives may be lost for want of time.

The subscribers to the Medical Directory have received their copies. The issue was delayed by a fire at the printing-office. From the statement of the editors the number of names included is 35,651, being an increase of 534 on last year's numbers; and that is an increase of 6,127 in the last ten years. An overcrowded profession—but the numbers still rising!

You will regret—doctors in all countries will regret—to hear that Sir Thomas Grainger Stewart has succumbed to the illness to which I have more than once referred. He died on Saturday last, February 3d, in his sixty-third year. The end was rather unexpected by many, though it was generally known that it might occur at any time, although he had not long before been able to drive out. In youth he had had rheumatic fever with cardiac complication, and in 1882 he was again attacked, pericarditis being severe. He returned to work, and in 1891 had influenza, which left the weakened heart much worse. Last year a pleuritic attack necessitated paracentesis. The valvular disease proceeded, now better, now worse, as usual, and at length the heart quite failed. It is as a great clinical teacher that Sir Thomas Grainger will be first thought of by his pupils scattered all over the world, for he succeeded Professor Laycock in the chair of Physic of Edinburgh University as long ago as 1873, having previously been connected with the Royal Infirmary and the extra-mural school. He was born and brought up in Edinburgh, but after graduating he spent some time in study on the continent. Soon after returning he became pathologist and assistant physician to the Infirmary. For some time he lectured on pathology at the Royal College of Surgeons, where his remarkable teaching ability had full play. Those who have heard him speak in later years will readily understand that his eloquence, commanding figure, and profound learning, combined with a gift of humor, must have been most attractive to students, who found that he could make the dryest subject interesting. Once a man so gifted begins to teach, his steady rise in the estimation of colleagues and students may be safely predicted, and Edinburgh soon became proud of her professor. Other universities recognized his merits and gave him their degrees, and the College of Physicians made him president. Learned societies in various countries enrolled him in their membership. He was appointed physician to the Queen, and in 1894 was knighted. He was deputy-lieutenant of the city and county of Edinburgh.

Sir Thomas Grainger's chief medical treatise was that on "Bright's Diseases of the Kidney," which at once placed him in the front rank of renal pathologists, and the second edition of which appeared in 1871. In 1884 he published "An Introduction to Diseases of the Nervous System," and he had previously made several contributions to this class of diseases. Somewhat later came two "Clinical Lectures on Important Symptoms," issued separately. No. 1 was on "Giddiness" and No. 2 on "Albuminuria." But a man of Sir Thomas Grainger Stewart's breadth of mind and literary power would not be confined to medical work, and some two years ago he ventured to publish a drama in blank verse, "The Good Regent," and so he is numbered with the doctors who have dallied with the muse.

The death of Dr. Charlewood Turner will come as a surprise to many who looked to him for further contributions to pathology, for he was comparatively young and had certainly not reached the height to which he seemed destined. He graduated at Cambridge in 1874, joined the London College of Physicians the next year, and was elected a fellow in 1881. He was physician to the London Hospital, where for some time he taught pathology. To the International Congress of 1881 he contributed a paper on "Fibroid Degeneration of the Heart." He had previously read important communications at the Pathological and other societies, and at their meetings he was always listened to with the respect due to his extensive knowledge of pathology.

Last week I recorded the death of an aged orthopædic surgeon, Mr. Brodhurst. I have now to announce another still older, Mr. William Adams, who died on Saturday last, the eightieth anniversary of his birth, of bronchitis and pulmonary congestion. He took his diploma of M.R.C.S. in 1842, and the fellowship of the college in 1851. He won the Jacksonian prize in 1864, the subject that year being clubfoot, though his lectures on orthopedic surgery and on subcutaneous surgery were much earlier; in fact he was a frequent contributor to the press and societies from the fifties to the time of his retirement, for you will find an article of his on "Wry-neck" in the Transactions of the American Orthopedic Association for 1896. He was an ex-president of the Medical Society of London.

LETTER FROM NEW ZEALAND.

(From our Special Correspondent.)

AUCKLAND, January 17, 1900.

THERE are only three topics that occupy public attention here at present: First, the war; second, the influenza, and third, the appearance of the bubonic plague in South Australia, the Sandwich Islands, and New Caledonia.

The last is the most recent sensation. "Proximus ardet Ucalegon," and finding the fire so near us and in places with which we have constant communication, we have naturally taken the alarm. The sanitary authorities have ordered the inspection of all premises and the removal of filth. Of course this is rather late in the day, but better late than never. The death rate here is small, about eleven per thousand annually, and the people live well, and for the most part are temperate as to drink. It is probable that there will not be nearly so large a mortality from plague as there has been from influenza.

Influenza has been prevailing in every part of the colony during the last two or three months. The curious thing is that instead of commencing at one centre and spreading gradually to the rest of the colony, it broke out simultaneously in every part. This I cannot but attribute to the occurrence of election meetings. We are not plagued with many elections. We do not elect our judges or magistrates or local officials. We have only the municipal elections, and the general election for the House of Representatives. I don't know who the people are who take any interest in municipal elections. The general election, which takes place once in three years, does arouse some public interest, more, however, on account of the prohibition question than for any other reason. We have local option here to the fullest extent, and the vote is taken at the same time and place as that for the House of Representatives. Our upper house is nominated by the governor.

Very many crowded and enthusiastic meetings were held in every part of the colony during the three or four weeks preceding the election. These meetings were held in halls always badly ventilated, and, if ventilated at all, by open windows. Persons just recovering from influenza were there, poisoning the air. The people came out (it was our summer) bathed in perspiration, exposed themselves to the night air, for these meetings are always held at night, caught cold, and the cold took the form of influenza, with the usual characteristics. There was the sudden attack, the high fever, the complete anorexia, the cough, slight bronchitis, or in some cases gastro-intestinal catarrh, and above all the intense nervous prostration. This is so out of all proportion to the short but severe febrile stage, and lasts so long unless specially treated, that it forms the most important feature of the disease. Practically, in this relaxing and debilitating climate of Auckland, unless people can get away for at least a short time after an attack of influenza, the weakness will last for months. I have known cases in which the patient has complained, a year after the primary attack, of never having felt well since it occurred.

The disease is not fatal under proper treatment, but by careful selection of your doctor you may kill off speedily and without scandal an aged relative from whom you have expectations. I have found a treatment by small doses of liquid extract of cinchona, two to three minims every four hours of liq. strychninæ (P.B.), and whiskey, invariably successful. I have not yet lost a case. The whiskey I find very popular with prohibitionists.

The war absorbs about four-fifths of the public attention. We have already sent one contingent, and before this letter is posted a second one will have left. Our men have already undergone the baptism of fire, and three have been killed. We could send thousands, if they were not so mighty particular about the medical examination. It is very absurd to be so strict, as the men are engaged for only a year, and are mounted infantry. Now any man in fair health with a good constitution, and accustomed to an outdoor life mostly on horseback, may be taken as good for a twelvemonth, to do the same as he has been doing before. If he is a good rider and a fair shot, he is certainly good enough for the Boers to make a target of. I remember in the Crimean campaign having a lad aged eighteen years under my care, who had been only three months in the service, and who was wounded in four places before he had ever fired off his own rifle. And this grieved him. So he died.

It will give you some idea of the spirit that is animating our people to mention that it is more than hinted that political influence is brought to bear on the examining doctors, to induce them to reject some and admit others. I believe half our young men would go, for the mere love of a fight, if they could get the chance.

LETTER FROM SYRIA.

(From our Special Correspondent.)

Beyrout, Syria, January, 1900.

In speaking of our climate, we cannot say a word against the time that came between our summer and our winter. The months passed on the even tenor of their way. It was never cold, and—except, perhaps, of a sultry evening—only moderately hot. The famous mosquito came, carrying with him, no doubt, as everybody knows, his more famous parasite. But the weather did its duty, and the too-familiar insect took itself off before a storm, carrying its sucklings with it—and thus malarial types of fevers have been in abeyance.

These autumnal days of ours, too, they did the best of all; besides their action on the pests we mentioned, they cleared with a whirligig of purifying tempest—albeit, they nearly cleared us, too, off this promontory of ours—they cleared and cleaned the dens and lanes of filth and rubbish in many forms, and flushed the drains, and did such wonders with the rains from heaven that old men tell us here that never in their memory has this town been so empty, swept and garnished. It may have been the thunder and the lightning and the rain that did it. At any rate there was not a speck of mud nor the least small cloud of dust for at least three days.

So we woke up one morning to find our streets clean. And then for a time again there was nothing but dust and sunlight with mellow nights between, and with a drizzle or two old winter came on at last, letting the hardier ones of us off from the necessity of lighting fires in our houses to warm ourselves. From October till now, inside our homes the temperature has ranged from 64° to 62° F., with a minimum temperature of 52° F. outside. One night, however, we must admit the thermometer did drop to 56° F. in the house. The next morning there was a general complaint against the bleakness of the season, and many caught colds. It was a good thing for the profession here, as Beyrout had been previously presuming (as I heard it put by some one) to be so healthy that it might be necessary for medical men to raise their fees.

Be that as it may, this Eastern race, though subtle in instinct, is of a cool and calculating judgment, and they tell me that there is no need for either the Peculiar People or the Christian Scientists (so called) to come among them. These abnormalities would have small shrift in this Eastern town of ours, so the doctors are not likely to suffer from their invasion.

Healthy and all as we are here, there are two diseases abroad among us, and "we cannot wash them out": tuberculosis and typhoid. Strange that the former should exist in a land of sunlight and fresh air! We have the sunlight; but the fresh air is kept back from us. We speak only of the town. The mountains and the villages thereon, though not looked after well, are so situated as to be able to look after themselves in a manner.

But there is always the *mauvais cercle*—the constant current—ranging round some fixed point, or flowing onward. We miss them sometimes, but they find them (these two) at home among the snow, having climbed the mountains, and then they wander, maybe hand-in-hand (it seems so), down the valleys, and they are in our midst again.

They go as men go, these little, vicious rods made to scourge us, and they come again with the men that carry them to scourge us once more. Let them—they and all that are their bearers—abide each in his own place. We do not presume to say that segregation is a necessity; merely do we suggest that judicious supervision is in all cases advisable should we all be placed in a position to render each other's lives long and spent to best advantage.

Whether drawing their inferences from the instructions of physicians, or from book lore, or from what not, the people among whom we dwell have arrived at a sound judgment of the disease which it is best to avoid—with one exception. A wife is not driven from her husband on account of his suffering from typhoid fever. His friends and relations are sure to get under cover or get out of range; once the disease is diagnosed the word goes forth. Once the dread word "sill" (the meaning whereof is tuberculosis) is whispered, good-by to family and friends and wife together; and there are nursing and tending by strangers.

And then comes what one would look upon as the irony of it all! Diagnose a case of the disease that made Jenner justly famous, and you are as unto the man that used to make the silver shrines for Diana of the Ephesians—your craft is gone. They know that people have been, or ought to have been, vaccinated (the Turk adopted the method long before the European), and having a firm belief in the efficacy of the method as proved so many times among them, they wait and trust, and good-by to the medical attendant.

Prevention can hardly be taught to people like this. It seems it cannot be to people who, as the world goes, are more enlightened. In France, in one year, they say, nearly a quarter of a million fall from what we call preventable diseases. In London, a month's outbreak of influenza raised the average death rate to what might be called fabulous figures. It is a stale phrase, maybe, but the words are good—prevention is better than cure.

There is a great war raging in the Transvaal just now, and though the Boers and their allies have been trying their game of "fool's mate" against the English, the latter seem, at any rate, to have been playing a steady game against the intrigues of disease among their soldiers—disease is more destructive than war in the killing of men.

A MODEL DAIRY FARM.

To the Editor of the Medical Record.

Sir: I was very sorry not to have been able to be at the New York County Medical Society at its last meeting, for I very much wanted to hear and to take part in the discussion of the milk question. Having read the paper and the remarks of those who spoke on the subject I cannot refrain from supplementing them by giving a little of my observation regarding the handling of milk.

The reader of the paper is correct in assuming that the proper way to have clean milk is by care at the dairy farm.

It was once my pleasure and very great privilege to visit a properly conducted milk farm. The stable itself was situated on a hill. The building was well lighted and ventilated. One set of men, who had nothing else to do, kept the stable in a state of perfect and perpetual cleanliness. They wore a clean uniform of brown, and themselves were clean and healthy.

The udders of the cows were washed immediately before milking, each time, by a set of men who bore the same general description, save that they wore a uniform of blue. The cows were milked by a set of men who were if possible more cleanly than the others, and who wore uniforms of the purest white. Pails used for milking were provided by a man who did not go near the cows. These pails had been sterilized in a steam sterilizer for two hours before being used and then were locked, the milk entering through a strainer as it left the cow. Once in the pail it could not be taken out until the lid was unlocked. This duty was attended to by the man who cared for the pails at the entrance to the stable. He received the full pails from the milkers, unlocked them, put the milk in a forty-quart can that had also been sterilized, and when this can was full sent it off by an elevated wire to the milk-house, a quarter of a mile away—where it was received by a man in attendance, who himself was clean, and who put the milk into a large copper hopper, which had been within the last half-hour released from its steam bath, but was now surrounded by cold water in a sealed vat.

From this tank or hopper the milk ran down over a copper cooler, one side of which was in contact with iced water, and which had recently been steamed. From this cooler the milk flowed into another vat for bottling, which was accomplished without handling.

This last vat, like all the receptacles into which the milk goes, is regularly sterilized by steam, as are the bottles into which it finally goes. These bottles receive the most careful washing with a soda solution and then are steamed while upside down for two and one-half hours, and without handling of any kind receive the milk and then are sealed by hands that are aseptic.

There was nothing I could think of that was likely to contaminate the milk in any way, and it was thoroughly aerated and was cooled in a very few moments after leaving the cow, and put on ice.

This milk will keep for a very long time if on ice. It has been sent to Europe and back remaining perfectly sweet and good. How long it will keep when thus treated no one knows; but I think I had some once two months old, perfectly sweet and good. Just as much care is used in the care, feeding, and selection of cows as in the handling of the milk.

Four physicians and two veterinarians are employed to examine the cows, and look after and certify regularly to the healthfulness of both the cows and the milk.

Surely this is near the ideal condition; and since it has been very profitable to this man it undoubtedly would be so to others; and I wish this description of a successful and thoroughly satisfactory milk farm could have gone with the discussion of the subject at the County Medical Society.

Wickes Washburn, M.D.

February 10, 1900.

ODOR RECORDS.

To the Editor of the Medical Record.

Sir: In your London Letter of December 29, 1899, there is a remark concerning which I have thought much. It says: "But in most zymotic diseases we are still searching for clear, easily applied diagnostic tests." A short time ago I had a case of obscure rubeola accompanied with typhoid symptoms. The eruption did not indicate the disease and was very slight. Now the thought occurred, if one could have a sensitive plate which would record a photograph of either the odor or emanation of the various eruptive fevers it would be of great value in either an early or difficult diagnosis. Say, to have the patient breathe upon the plate and to be able to make a photograph of various emanations from different fevers. For those who have the time the above suggestions might lead to interesting and useful experimentation. Our knowledge of odors is quite limited, and I would like to offer the above as a possible way to increase such knowledge.

W. G. Cotton, M.D.

East Bethlehem, Pa.

THE MEDICAL ASPECTS OF THE WAR IN SOUTH AFRICA.

(From our Special Correspondent.)

The Numbers of the British Troops.—The beginning of the third week in February brings no successes to British arms, and the story of each battle, whether a genuine engagement or only a "reconnoissance in force," is the same. The Boers, having taken ample advantage of the opportunities given them while numbers were on their side, and having used well their knowledge of the country and their peculiar aptitude for a certain class of warfare, have taken up impregnable situations between the British forces and the towns to be relieved. Numbers, overwhelming numbers, of soldiers will have to be employed by the British in the attacks, so that, like a sea, they may flow round the Boer positions; otherwise success is hardly to be expected for them. This is now realized by the British government. Only a month ago I gave you the exact figures of the British troops as 70,000 all told, the medical officers numbering 160. By the beginning of February the total of British troops in South Africa amounted to 179,000, made up as follows: Regular army, 128,000; navy, 1,000; militia, 9,000; yeomanry, 5,000; volunteers, 10,000; and colonials, 26,000. Of the colonial troops, 20,000 were raised in South Africa, and 6,000 have been sent from Canada, Australia, and other dependencies. The medical staff has been augmented in proportion, and there are now in South Africa, or there will be in the course of a few days, 368 officers of the Royal Army Medical Corps and 133 civil surgeons. The proportion of medical officers to the total number of troops is worth noting. As the war has been characterized by heavy fighting, and as the British medical arrangements have been on all sides considered adequate, it may be held that this proportion is as high as is necessary.

The Attempts to Relieve Ladysmith have so far been unfortunate. The second attempt, which resulted in the capture and subsequent abandonment of Spion Kop, was attended by considerable loss of life, but the third, which was rather a reconnoissance than a deliberate forward movement, brought no casualties in its train. The capture of Spion Kop cost the British 34 killed and 61 wounded officers, 217 killed and 1,115 wounded men, making 1,744 in all. (I include in these figures the casualties attending the accompanying or preceding movements at Venterspruit and Potgieter's Drift.) It will be seen that the death rate among the officers was very high, testifying to the good marksmanship of the Boers. If ten per cent. of the total of 1,176 wounded die—which is rather above than below the average at present shown by medical statistics of the war—the total deaths will amount to 368, so that the advance was a costly one. Two-thirds of the wounded will, however, probably be fit to serve again in three weeks' time. This, again, is based upon medical statistics. From which figures it will be seen that while modern warfare calls for many men because of the heavy slaughter that may occur at one point, it also allows the same men to be used many times, because the wounds from the Lee-Metford and Mauser rifles tend to heal so rapidly. The third attempt to relieve Ladysmith was attended by no fighting. Its failure places the beleaguered city in a sad plight, but the garrison is not only in good spirits, but in far better health than it was, the attacks of typhoid fever being much less numerous.

The St. John Ambulance Association, which is entrusted by the Central British Red Cross Committee with the reception and forwarding of material for the sick and wounded to the seat of war, has sent to South Africa 5,855 suits of pajamas, 9,293 shirts, 23,603 handkerchiefs, 2,319 pillows, 6,409 pairs of socks and stockings, 6,210 pairs of slippers and shoes, 1,471 knitted caps, 1,080 knitted jackets or cardigan vests, 4,735 knitted mufflers, and 694 cushions—not to exhaust the list. These things have been sent at the instance of medical officers and other competent judges at the front—Colonel Young, the secretary of the Red Cross committee, for example—and the choice of articles shows well where the kit of the English soldier, which I have already detailed to you, is deficient. Light, warm, durable things will be the costume of the future soldier all over the world, and smart regimentals will become as obsolete as the greaves, visors, and breastplates of the Crusaders. The opposing forces on the veldts are fortunate in the weather which they are experiencing, but the drenching showers and heavy dews, no less than the hot sunshine of midday during what is the South African summer, taken together mean that the clothing of the soldiers must be woollen. As proving the great variations of temperature in the summer months in Cape Colony, the most recently published observations of the government meteorologist show that in January, 1898, the maximum temperature at Graaf Reinet was 108° F. and the minimum for the same month was 40° F. At Kenilworth, just outside Kimberley, where the next British advance in force will be made, the maximum black bulb in the sun was 159.8° F., the highest shade temperature being 94.7° F.; the minimum black bulb on the grass was 39.1° F., the lowest shade temperature being 44° F. For such a country wool is the only wear.

Military Medical Attaches.—Two German military attachés, Stabsarzt Dr. Krumacher and Stabsarzt Dr. Schmidt, have been up to the front at Modder River, and on their return to Cape Town expressed their satisfaction with all that they saw. As the casualties with Lord Methuen's column were extraordinarily heavy at Magersfontein, the fact that critics of another nation were complimentary has been received by the Royal Army Medical Corps with particular pleasure, for it proves that the corps is as good in an emergency as it is with lots of time before it and lots of money to spend. These attachés from the German army are the only foreign military medical men who have yet made their appearance at the seat of war. Sir William MacCormac, who has seen other campaigns in a volunteer capacity, considers that the move is a very wise one on the part of Germany. The care of the sick and wounded is becoming much better understood among civilized nations, and if accredited representatives of military surgery from other countries fall generally into the way of accompanying belligerent forces the result can only be an increase of knowledge that will be of the highest service to humanity.

The Hospital Ship "Maine."—This hospital ship, the splendid gift of American ladies to the British government, had in the second week in February one hundred and forty patients on board her, half of whom were wounded during the attack on Spion Kop, the other seventy including sixteen cases of dysentery, fourteen of rheumatism, four of ague, and three of typhoid fever. The *Maine* lies at Durban.

The Utility of Hospital Ships has been called in question by some of the medical men serving in South Africa, but it is not their employment at Durban or Capetown to which exception is taken, but their use as transports. There are many large transports available from Capetown to Southampton, and those in charge of the base hospitals say that the accommodations offered by them to the sick and wounded is ample, inasmuch as no one is sent back until his plight has ceased to be urgent. This being so, the necessity of using to take the sick and wounded to England slow, small ships, expensively equipped with operating-theatres and *x*-ray chambers, is certainly not very obvious. But to bring the sick and wounded, while still suffering acutely, from Durban round to the base hospitals near Wynberg these ships are of the most splendid utility. They have saved the lives of many, and have eased the pains incident upon travelling of thousands of poor fellows. In addition to these hospital ships which I have already mentioned to you, a new one, the *Nubia*, has just been equipped. Like the *Lismore Castle*, she has been transformed from the ordinary passenger steamer of the Peninsular and Oriental Steam Navigation Company to a hospital ship by the rapid work of the plumbers, carpenters, and painters of Durban. She makes the sixth hospital ship.

A Scottish Hospital in South Africa.—Scotland, in emulation of Ireland, is sending out a hospital to the seat of war, but, like Lord Iveagh's Irish Hospital, there will be no national or regimental distinctions made in the selection of patients to be relieved.

The American Field Hospital.—Mr. Van Alen, an American gentleman, has presented the English government with a complete hospital of twenty-five beds. This is one of the most princely contributions yet received by the government. Dr. E. G. Powell is to be medical officer, and the secretary-superintendent is Mr. Murray Guthrie, the newly elected member of Parliament for an East London constituency.

STATIC INDUCED CURRENT AND DR. MORTON.

To the Editor of the Medical Record.

Sir: The witticisms and personalities indulged in by Dr. Morton in his reply, not to my "gratuitous attacks," but to my just accusations, have nothing to do with the case in hand; nor do they alter the facts. He says that he is still waiting to hear from me, and that "practically no one disputes his humble claims." Has he so soon forgotten Professor Pupin's vigorous handling of some of his extraordinary claims? Let me refer him and any others interested to his own article and Professor Pupin's reply in *Electricity*, February 19, 1896.

And now, in the first place, although not specially germane to the central idea of the subject of discussion, let me call Dr. Morton's attention to the fact that Reiss' singing telephone was also a microphone with two platinum points in contact by gravity. There was no adjustment screw and none was needed. Therefore the turn of one-millionth of an inch in order to transform it into a speaking telephone is a dream of his own. If Reiss had had carbon instead of platinum, he would have had the telephone of the present day.

The accompanying illustration and description from Tibbett's "Handbook of Medical Electricity" (London, 1873) shows clearly enough with what accuracy Dr. Morton has reproduced the ideas of others as his own. The author of the work ends his description of the machine by saying: "The two exciters *K* and *J*, representing the charge of the outer and inner coating of the jar, can discharge it through any muscle. The intensity of the charge is regulated by the distance apart of the balls *E′*, *J*."

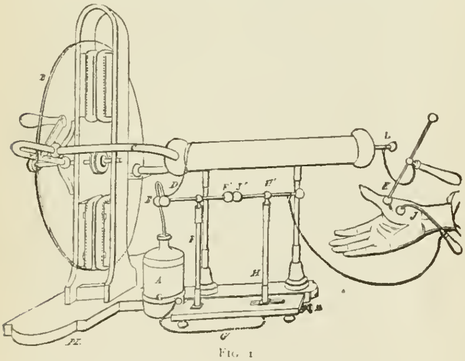

Fig. 1

Dr. Morton has simply copied in its essential details this illustration, or some similar one, from the earlier French or English issues—Mauduyt, Imison, Adams, or Cavallo—and given to the current that these old fellows knew of and used the name "static induced." That long before his time this current not only "could be," but was utilized, is evidenced by the second illustration.

Fig. 2, taken from Mauduyt, 1784, represents an application to a very sensitive part by what they called shocks (they called almost everything shocks), but shocks regulated by so fine a graduation of the spark gap as to merge them into a veritable current. These men of a former time had everything but the name.

Dr. Morton says truly, that the old writers describe their administration and discoveries with the minutest detail, and no one knows better than he how often allusions can be found to the electric manifestation called the static induced current. I quote from one of them, "Cavallo on Electricity," vol. ii., page 123 (London, 1786). After describing an arrangement substantially the same as the one above given, he says: "Thus any number of shocks precisely of the same strength may be given without altering any part of the apparatus . . . and when the strength of the shock is required to be diminished or increased, it is only necessary to diminish or augment the distance between the balls *B*, *C*." These balls correspond to the balls *E′*, *J*, of our first illustration. In a work on electricity by Adams, published in London, 1792, page 514, he describes his seventh method of application thus: "By a sensation between a shock and the spark which does not communicate that disagreeable feeling attending the common shock. . . . The effect of this species of shock, *if it may be called one*, [italics mine] is to produce a great vibration in the muscular fibre without inducing the pungent sensation which the shock effects." These are nothing more nor less, could be nothing more nor less, than what Dr. Morton claims as his wonderful discovery of the static induced current and physiological tetanus. In Cavallo, again, page 157, we find the statement that small shocks, *i.e.*, one-twentieth of an inch, may be sent through the pelvis. With this slight separation the result could be nothing else than the static induced current, and it is useless for Dr. Morton to flippantly say they "could but they didn't." But why multiply examples which are so readily verified by reference to the original sources that I have mentioned?

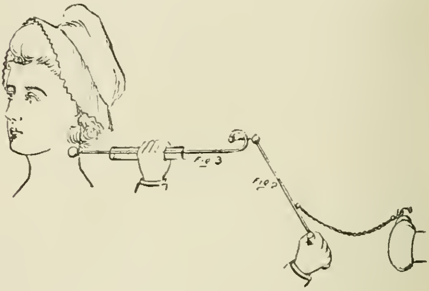

Fig. 2

As for Dr. Morton's article on "Electrostatic Currents and the Cure of Locomotor Ataxia," etc., it seems to me that the title alone is enough to condemn it.

Speaking from an experience quite equal to his own, possibly, in the treatment of gross organic diseases by the very same as well as by other electrical methods, I know well enough how unsubstantial are the claims he makes and evidently wishes to be inferred. So far as I am concerned, this discussion is closed. Each one who has been sufficiently interested to read what has been written, and will consult these old works, will form his own opinion as to the measure of Dr. Morton's originality and the value of his therapeutic claims. I began the discussion not because I do not thoroughly believe in the value of electricity as a therapeutic agent, but because I believe in it so much that I regret to see it discredited in the minds of the conservative, thoughtful members of the profession, by asking of it so much more than it is capable of doing.

A. D. Rockwell, M.D.

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PROGRESS AND DRIFT IN PATHOLOGY.[1]

BY T. MITCHELL PRUDDEN, M.D., LL.D.,

NEW YORK.

THE closing years of the century have inspired so many summaries of progress and such a diligent casting of horoscopes that one should not lightly indulge in another inventory or invite to new outlooks in medicine. But there are, it seems to me, some border-lands between the purlieus of the practitioner and of the pathologist which we may profitably survey. I have in mind not so much a summary of facts as a glance at tendencies, an estimate or realization of the point of view to which we have more or less purposefully won our way, or toward which we mayhap have only drifted, during the past two decades.

It is, I think, unfortunate that the practitioner often forgets that he is still a pathologist; that the clinical studies which largely command his time and mental resources are studies in pathological physiology. That which we are wont to call pathology is really those phases of the etiology and morphology of disease which can be more easily, and often more completely, studied at the autopsy table and in the laboratory than at the bedside. Using the word in this sense, the pathology of twenty-five years or so ago was in this country pursued almost exclusively by practitioners of medicine, and it was avowedly an adjunct of medical and surgical practice. The most distinctive function of the physician-pathologist was the making of autopsies and the naming of tumors. These things he did, either to increase his knowledge, or for the skill and experience which were useful stepping-stones to practice; or because he wished the material for demonstration to students; or because this work held out the promise of interesting themes for study and a paper.

Finally there appeared upon the horizon in this country a few anomalous individuals who cherished the notion that the science of disease, even in its etiological and morphological aspects alone, was broad and deep enough to command the exclusive attention of its devotees.

Twenty years ago, the most obvious aim of the special pathologist, apart from his material service to the practitioner along the old lines, was to discover some new lesion or to give greater precision to the morphology of an old one; to gather statistics; to exploit organs of exaggerated size; and in general to celebrate the monstrous and the strange. Nomenclature and classification were his cherished fetiches. His battles royal raged about the origin of pus, the nature of cell stimulation, the relative importance of the various phenomena of inflammation, and the possibility of the successful transplantation of tumors. The experimental method was in vogue, the doctrines of the cellular pathology were dominant, and there was year by year a steady gain in facts.

It was the facts, in truth, which were troublesome from their rapid and prodigious accumulation. For the correlation of the facts was at that time difficult or in many cases impossible. So description and cataloguing, not explanation, was the business of the hour. The blind devotion to minute objective description of lesions in man of which no one knew the origin, the significance, or the relationship, was as praiseworthy as it was pathetic.

I would not underrate the achievements of those years in the seventies, nor the sound scientific spirit which underlay them. But it was in truth e'en standing water between the cellular pathology of Virchow and his early followers, and the cellular pathology which was to be reincarnate by correlation with and illumination by other phases of science, from which medicine had long held aloof; and by a fresh stimulus to research through new light on the infectious diseases.

The conception of the cell was no longer as at first that of a membranous bag containing active substance, but of a lump of protoplasm. The intimate structure of the cell had no particular significance, except that one had learned to recognize a granular appearance in the body, a stainable object in the interior called the nucleus, which in its turn often revealed one or more darker spots within. The cell did wonderful things indeed, and, as the doctrine of the conservation of force became current, was looked upon by those who had enjoyed some training in physics and chemistry as a centre of physical and chemical activities in which occurred those transformations of energy required in the dynamics of life. So prominent in those days were the chemical aspects of the cell, that the manifestations of life, assimilation, growth, and reproduction were looked upon, and justly too, with the knowledge then at command, as properties of the not very complex chemical organic compound, protoplasm. And speculations involving a chemical theory of life seemed not so very unreasonable. The cell studies in pathology of those days, a quarter of a century ago, were largely limited to changes in the shape, size, and position of the cell; to its degenerations, and to the cruder destructive processes to which it is subject.

But the studies of the past few years, especially upon the lower and simpler cell forms, have wrought a complete revolution in our conception of these elementary organisms. The cell is no longer a lump of living matter of rather simple chemical composition which transforms energy, and whose intimate structure we need not worry about. It is a most complex machine whose varied structural features are of the utmost significance. The nucleus harbors the special structures closely involved in reproduction and heredity, and is deeply concerned in the processes of cell nutrition. The chemical substances of which the cell is composed are numerous, and the physical comparison of protoplasm with a lump of jelly is no longer adequate. Already, while we as yet are only upon the threshold of this new cytology, cell structure demands an extended nomenclature of its own, and whole treatises are written upon the performances of its varied mechanisms. Into this field pathology has barely entered, halting still behind the students of normal and lowly cells.

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[1] Read before the Practitioners' Society of New York, February 2, 1900.

Moreover, we are admonished by these brilliant discoveries that the secrets of cell structure and cell function are hardly to be won by the study of higher forms alone. In our extremely differentiated and intimately co-ordinated cells, many features fundamentally simple are veiled or modified; so that we can understand them only when we interpret them in the light of less advanced forms.

Thus it has come to pass that while the pathologist of a couple of decades ago found his morphological studies of the cell ended when he had made a few crude observations on its size and shape and texture, the pathologist of to-day counts all these as but glimpses on the threshold of a domain in which his problems demand the most accurate technique; the most minute observation; a recognition of the dominion in his own fields of universal physical and chemical laws, of the doctrine of organic evolution, and of the potency in single cells and in cell communities of hereditary traits and tendencies. We can, it is true, with the cruder superficial observations on the form and grouping and texture of cells, still make the morphological observations which the exigencies of practical diagnosis require, but this is done in the consciousness always that clews to unknown phases of disease are eluding our grasp, and that it is not thus that the more subtle maladies are to be comprehended.

Curiously enough, it is in the nervous system, which so long occupied a mysterious little pathological bailiwick of its own, that the new phases of cell study in pathology have been most diligently pursued. Not yet, it is true, in such fashion and to such extent as to have secured unanimity of interpretation, but sufficiently to suggest high promise, here and elsewhere, for the future.

Let us now turn to another phase of progress in pathology and briefly consider its promise, its drift, and its disappointments. We can all recall the vague conception of the causes and nature of the infectious diseases with which most of us entered upon our active careers in medicine. The lesions which we found after death were often indefinite and unsatisfactory, and preventive measures, dealing as they did with the unknown, were for the most part halting and futile. We had grown weary of the personification of disease, of the conception, and the treatment too, of morbid processes as if they were things, and of the persistence, in nomenclature at least, of ideas about the causes of disease which belonged in the era of barbarism, superstition, and personal devils. While we knew that disease was really a process and not a thing, we got, or thought we did, some help by calling certain of the infectious diseases "specific." But this comfort was meagre and short-lived.

The word "specific," as we all have frequent occasion to deplore, is used in varied senses and often with no sense at all. To some, it is that which pertains to a species, as of animals or plants. To others, it connotes a disreputable trio of venereal diseases. As applied to cells and other structures of the body, it signifies something typical and characteristic in the structure, the metabolism, or the performance—as a specific secretion of a gland. It is applied to the action of poisons, which vary among themselves in their effects upon the same structure, and which vary as individuals in their action upon different structures. On the other hand, the term "specific" came to be applied long ago to certain infectious diseases which were so peculiar, so characteristic in their clinical manifestations that an enumeration of their symptoms served for their identification, as species were identified among plants and animals. Thus the infectious diseases became personified, became species, things, entities, and their specificity was expressed in the description of symptoms. But after a while it was more clearly seen that disease as a process involved the action of the living body cells on the one hand and some then unknown inciting factor on the other. Then it dawned upon the medical world that, after all, the actually characteristic thing, the really "specific," was not to be sought in the symptomatic manifestation of disease, but in the underlying agencies which determined its occurrence. And so the light failed in which we had tried to find comfort, and we realized that to call the infectious diseases specific didn't really make them any more comprehensible.

All at once the mystery seemed to be swept away. In the place of vague speculation on the causes of the infectious diseases, we had definite, tangible, visible, living things to deal with, in some cases certainly and by fair inference in all. The term "specific infectious disease" promised at least to mean something precise, and the most "specific," characteristic, essential, determinative thing about it appeared to be the particular germ species which, as it seemed, alone and always caused it.

It is of great significance that while the most striking contribution of Koch to the science of that day was the formulation of a very simple technical procedure in bacterial culture and study, he went beyond that and threw the whole weight of a strong and convincing personality and the commanding power of an excellent teacher into the enforcement of so positive and detailed a conception of the nature of the infectious diseases, of the characters of the things which, as he assumed, "caused" them, and the practical measures necessary for their control, that he fairly forced upon the medical world a new school of thought and practice.

Everything conspired in these days to fix the attention of the medical world so sharply upon the microbe that the man side of the matter was largely ignored, and Virchow, with the cell lore which he had gathered or inspired, sat glowering and protesting in the shadow as the procession swept jauntily past. No young pathologist was so ill provided with utensils and none so busy that he did not hasten to lay some new microbe at the newly risen shrine. The older pathologists were for the most part too dazed and confused by the new shibboleths and the clamor to join either in protest or acclaim, but held aloof babbling softly of cells and stimuli and tumors and heredities. The average practitioner was mildly interested, judiciously incredulous, took it all apparently as a part of the passing show, and went on doing good and earning his living.

The poor old fellows struggling along in the dark before the eighties spent many nights in vigil and many days in toil in the vain task of deciding whether phthisis was always tuberculous. The pitiful morphologists had struggled through many a claim and many a renunciation without clear light upon the relationship of the different pneumonias. Diphtheria or croup had stimulated many a hot encounter. But now that you could put your finger upon the "specific cause" so easily and so surely, the road seemed plain. If the tubercle bacillus were there, the disease was tuberculosis. It needed no jury if the pneumococcus were lurking in the lungs. Diphtheria or angina?—send a swab to the laboratory.

But let us see what the words "cause" and "disease" really mean which in these days under cover of the microbe we had begun to juggle with so blithely.

The devotees to medicine are so largely absorbed in the practical aims which are at once their glory and their undoing, that no one seemed to realize at first that in using the word "cause" to express the relationship between these newly exploited germs and the diseases with which they had been found to be so closely associated, they were plunging headlong into a mistiness of conception in which the human mind had long floundered. For it was not until the physicists had taken the matter in hand that clearness of expression about causes was secured in dealing with forms of energy. Now it seems to me that without risking an excursion among the pitfalls of metaphysics, we might secure a practical advantage if we were to cease to speak of microbes—at least without a mental reservation—as the cause of disease. For to do so is fundamentally or in a dynamic sense as inexact as to speak of the spark which starts the train of chemical decomposition in gunpowder as the cause of the explosion. The microbes may be, indeed they are, absolutely essential factors in certain diseases without having that quantitative relationship to the effect which, in the physical sense, true causes must always bear.

Hueppe has rendered a great service to medical science by calling attention again and again to this erroneous conception, and by reminding us that in the end we must recognize the doctrines which the physicists have laid down in studying the forms of energy, which in all their subtleties and intricacies apply just as absolutely to the manifestations of energy in the human body as in the domain of inorganic nature.

The fire which burns in my grate is not caused, I think, by the lighted match, but by the molecular potencies in coal and air which the match has set astir. Nor is the play of forces which it has evoked a thing. The coal, the air, the ashes—these are things, these are entities; but the molecular activities, the transformations of potential into actual energy, the burning—these are not things; they are processes. And so it is with disease; it is a process, not a thing. Indigestion is no more a thing than is digestion; both are processes; both are, at bottom, transformations of energy. Their differences are due to differences in the conditions under which the forces are brought into play.

The normal processes are what they are because of the conditions under which the cells have been slowly evolved and are at the moment placed. The abnormal processes involve no new forces, but are what they are because the manifestations of energy of the normal state are modified by new conditions. This transformation of energy occurs, indeed, in both cases through a definite mechanism, and this mechanism may suffer modification under changed conditions so that we may have lesions of disease. But the lesion is no more the disease than the ash or the coal or the air is the burning of the fire.

The cause of physiological performances is the potential energy, the capacity for doing work which the organism possesses, drawn from the universal storehouse whose total stock never wanes. The true causes of disease are the same dynamic forces acting under modified conditions. Under these modified conditions, the potential energy of the living organism may be set free in a variety of ways. But diverse as these ways may be, they involve only the liberation and not in any marked degree the supply of energy. They belong among what the physicists are wont to call "liberating impulses," or sometimes "secondary causes," and are the analogues of the spark which with a minimal amount of impulse makes possible the transformation of potential into kinetic or actual energy. I think, therefore, that it would be wise if we were to cherish the conception of the microbes which are regularly involved in the infectious diseases, not as causes, but as inciting factors.

That which the physicist calls a secondary cause is designated by the physiologist as a stimulus. Similarly, we might perhaps wisely call these liberating impulses the stimuli or excitants of disease.

Of course the word "cause" is commonly and not improperly used in a less limited sense than that here urged, and this ordinarily does no harm. But in this case the unrestricted use of the word does, as it seems to me, do harm, because it constantly diverts our attention from a fundamental to a subsidiary though not unimportant thing.

The manifestations of the infectious diseases are expressions of processes of the body cells and not of the micro-organisms, which only afford one of the necessary conditions. Of course you cannot have tuberculosis, for example, without the tubercle bacillus. Nor, on the other hand, will the tubercle bacillus incite tuberculosis in an oak plank. If the tubercle itself were essentially a heap of tubercle bacilli; if the various and significant subsidiary phases of tuberculosis, the fever, the malnutrition, etc., were expressions of perverted life processes of the bacillus and not of the man, then I grant that one might be justified in considering the tubercle bacillus as the cause of tuberculosis, and man simply as an indispensable condition.

The requirements of sanitary science and preventive medicine may perhaps be more easily met by the use of the word "cause" in treating of the microbes as inciting factors in infectious diseases. But our own conceptions must be clear as to what are real and what only apparent causes, if we are to avoid in the future the pitfalls which have marked the advance of the medical and other sciences.

Such considerations as these are, as it seems to me, not unimportant. The science of medicine has suffered greatly in the past, and still suffers, from the tendency, almost universal among its devotees, to consider the human body as a thing by itself; an object which can be studied and treated without regard to the close relationship in every cell and fibre with forms of life which are its prototypes; and without regard to the identity of the forces which sway alike the molecules of the cell and the molecules of the air, the drop, or the crystal. It may be that in such considerations we gain no hint which will reveal a clearer symptom, a safer method, or a better pill. And if the horizon be for any limited, by necessity or by choice, to these outlooks, then he may slumber while we prate of causes and entities and dynamics. But if we are going to talk of causes, let us know, if we can, what the word signifies. If we mean processes, let us not say things.

The trouble with the point of view which was so early formulated and so successfully urged by Koch was that what he conceived to be the causes of the infectious diseases are really only the inciting factors. The result was that the lines of study led away from the body to the germ. The beautiful simplicity, the precision of conception, the technical ease, with which discoveries were made were all due to the fact that we were ignoring the real complexities of the situation, entering with an easy enthusiasm upon new fields which of right belonged to the botanist. So long as the study was one of cultivation, description, and species-making, the pursuit of bacteriology seemed a succession of simple tasks. But complexities soon began to reveal themselves.

Koch was especially insistent upon the definiteness and permanence of specific forms, as indeed it was necessary to be, if the so-called causative relationship was to be maintained between specific bacteria and specific diseases. But the matter has proven not to be so simple after all. For although there is, so far as I know, no evidence that one well-defined species ever changes into another, there is a certain lability, especially in the physiological characters of many bacteria under variations in environment, which renders species-making and classification in these organisms a parlous job.

When the establishment of bacterial species was fairly under way, it became evident that although we had the advantage of other species-makers in higher plants and animals, in that our subjects went through their life cycles very rapidly, so that we could gather the available facts in a few days, or at most weeks, we were yet seriously embarrassed because we had to depend for specific characteristics largely upon physiological data, the available morphological differences being very few and limited in scope.

Let me illustrate what I mean by lability in the physiological characters upon which species determination among the bacteria largely depends. At an early day the bacteria were divided into three great classes: the zymogenic or fermentation-inciting, the chromogenic or pigment-forming, and the pathogenic or disease-producing. These characters were believed to be sufficiently precise to justify this great group division. But it soon appeared that each of these activities is variable. Chromogenes can grow without their color. Zymogenes may be swayed by artificial means up and down the scale of activities. Pathogenes may be rendered innocuous. But more than this, it was presently discovered that chromogenes and zymogenes might be pathogenic; that zymogenes might produce color and chromogenes cause fermentation. Form, too, is subject to considerable change, and spore producers may be made asporogenous. Those germs which naturally require oxygen for growth may be made to do without it, while anaerobics may have an aerobic existence forced upon them.

As the stability of these characters grew unsatisfactory as a basis of classification, it became more clear that the alterations in capacity of these organisms were due to changes in the conditions of life, such as temperature, light, food supply, the presence of deleterious substance at the seat of growth, etc. Thus the development of qualities and capacities which at first were deemed specific to the germ were found to depend quite as much upon external as upon internal conditions. This was an old story in science, but it was new in bacteriology. We have, in fact, owing to the wide range of variation which some bacteria display under different conditions in their environment, been finally compelled to establish certain groups which seem to belong to what we are pleased to call the same genus, but which are so variable in form and physiological manifestation that we are unwilling longer to incur the peril which belongs to the attachment of a specific name. When one hears nowadays, therefore, of the coli group, or the diphtheria group, or the tubercle-bacillus group of bacteria, he should realize that this indicates just a refuge by the way in which bacteriologists have sought shelter and safety from the fury and risk of species-making, until new light dawns.

These complexities in bacteriology when applied to the conception of the relationship of micro-organisms to disease were further deepened by the realization that not all animals are affected alike by the so-called pathogenic germs; a fact which now needs no illustration.

The notion of bacteria as disease entities was further shaken by the revelation that the same germ may incite more than one disease. Suppuration may be induced by the typhoid bacillus, the tubercle bacillus, the pneumococcus, and the anthrax bacillus, as well as by those germs which were at first called *par excellence* pyogenic. The pneumococcus is the inciting factor in only one phase of pneumonia, and it may be responsible for meningitis, endocarditis, and so on. In a word, it soon became clear that the action of a given germ in the living body depends only in part upon its intrinsic capacities—which in themselves are very variable—but also and in marked degree upon the capacities, also variable, which exist at the moment in the body cells among which the lot of the germ is cast.

Thus the conception of bacteria as the "specific entities" of disease lost much of its keenness; the body cells came quickly to the front, and Virchow smiled again.

We now realize that disease is, as Hueppe has happily expressed it, like an endless chain, from which if any link be missing the closing of the chain is impossible and the disease cannot occur.

When once attention was turned from the microbe aspect to the cell aspect of infectious disease, facts of the utmost importance began to accumulate about natural or artificial predisposition, immunity, acquired tolerance to poisons, etc., to which the scope of this paper permits me only briefly to refer.

The tendency to a one-sided interpretation of facts, which, as I have tried to show, characterized our earlier knowledge of bacteria as inciters of disease, was again manifested when attention was directed to the effects of poisons, bacterial and other, in the body. And here, too, a group of investigators came presently to think that it was the toxic agents, in which the "specific essence," the "primary cause," of most of the infectious and many other diseases was to be found. And it really seemed at one time, as Martius has pointed out, as if, apart from traumatic and certain strictly mechanical disturbances, pathology were in a fair way of becoming merged in toxicology. Auto-intoxication loomed big upon the horizon, not simply as a most significant factor in pathogenesis, as it unquestionably is, but as the very essence of disease. All organic diseases which depend upon destruction of the parenchyma, most proven or alleged microbic diseases, and many less readily characterized diseases such as leukæmia, were to be considered as fundamentally auto-intoxications. And these diseases were to be classified on toxicological principles. The considerations which I have urged against partial views in speaking of the bacteria are pertinent here also, and have already fostered wiser and saner conceptions.

I have touched in a somewhat critical vein upon some early phases of drift in bacteriology, because since we are yet only upon the threshold of knowledge in this domain it is of great importance to have a clear vision of our aims, and because a good deal of unnecessary complexity in problems of the hour is still due to narrow views of the relationship of micro-organisms to disease.

I wish that it were practicable for me to devote a few moments to a survey of our drift and progress in fields which concern immunity. For I think that this subject has been unnecessarily cumbered with conjecture and hypothesis not based upon a clear conception of the actual relationship between variable inciting factors on the one hand, and the variable mechanisms on the other, through which the dynamics of life are manifested. So much has been written about immunity, and such multitudes of half-apprehended and wholly inco-ordinated facts are lugged into the discussion, that, in reading on this theme, one is reminded of a saying of Montaigne, that "there is more ado to interpret interpretations than to interpret the things themselves."

We are apt to forget, in our thought of immunity and tolerance and health and disease, that the life of the cells of the body, like the life of the microbes, is a continuous adjustment between the properties of the organism and those of its environment; that the nice balance which we name health may be swayed now this way and now that by a thousand subtle agencies from within the body and from without; that the body cells as well as the bacteria are organisms capable of considerable variation both in form and function when the conditions of their existence change.

When we talk of immunity and antitoxins, we are apt to forget that natural or acquired cell tolerance to poisons may be, and in many cases certainly is, a matter of cell education. So that, as Hueppe has pointed out, we do not need to assume, in the presence of an acquired tolerance to alcohol or morphine or arsenic, the presence in the body of a "specific" anti-alcoholin or anti-morphine or anti-arsenicin. There is no doubt a condition, capable of being artificially induced, which we may properly call, if we utter some *sotto voce* exorcism as we name the words, "specific immunity." But the balance of cell metabolism is so subtle, and the introduction of new substances into the body can modify in such marked degree the responses of the cells to various poisons, bacterial or other, that the phrase "specific immunity" should not be lightly conjured with. The pathologist has never realized so keenly as he does to-day how dependent he is upon the ministrations of the chemist not only for his conceptions of the ways in which the life energies are stored and poised, but also as he faces those protean aspects of disturbed metabolism which lie at the heart of so many of his problems.

The substantial gains in all these years of research into the nature and mode of diagnosis and treatment of the infectious diseases—I could easily contrive a wearisome hour of inventory—it is not my purpose to review. But I cannot leave this phase of my subject without a protest against a too hasty inference of doubt or of failure because the new interpretation of facts in these rapidly growing fields of science may seem for a moment, now and then, to denote a backward drift.

The technical difficulties which we have encountered and the really only superficial changes in bacterial nomenclature which the hour demands may well be puzzling and discouraging to the harried practitioner who is forced to read as he runs. Bacillus coli communis may not slip so trippingly as at first from the tongue. The bacteriologist may not enter so jauntily as was his wont upon the capture of a stray typhoid germ in the water of a suspected well. The swab from the throat may not always unlock, so surely as was hoped, the secrets of diphtheria. We may, as seems likely at the moment, even be compelled to call the tubercle germ not a bacillus but a fungus. But these changes to which I have referred do not, in fact, involve the relinquishment of one jot of the solid practical vantage-ground which the earlier studies won.

In the light of our new knowledge of tuberculosis, attention was at first directed almost wholly to the tubercle bacillus, while the body aspects were largely ignored. There had been substantial agreement that in the prevention of this disease the destruction of the sputum and an intelligent cleanliness were of supreme importance. Now that we are looking to the man side and realize that predisposition is also of great importance, we are beginning to hear deprecation of serious efforts to destroy the infectious agent, and are counselled to lay the greatest stress upon improving the health and thus, as it is assumed, strengthening the resistance capacities of the individual. This it is entirely proper and wise to do. But we should not forget that we do not as yet know at all definitely what the factors are which make one predisposed to tuberculosis and another not. So that we are compelled to fall back upon rather vague suggestions. On the other hand, those measures which have approved themselves, in the care of the sputum, and the sequestration, when it is practicable, of the sick, are positive and proven and should not be lightly relinquished.

I believe that the conclusion to which the surgeons have come, in regard to the relative or even absolute harmlessness of aerial micro-organisms which may enter fresh wounds at operations, are sustained both by practice and by the knowledge of the varying virulence of germs which has been gained since surgery emerged from the illuminating incubus of Listerism. But I think that the conclusion affords no justification for a lack of attention on the part of practising physicians to the risks which their patients who are seriously ill are subject from secondary infection, due to the inspiration of dusty air. For the sick man who is breathing germ-laden air is largely deprived of those natural safeguards against infection which at the portal of entry in the surgical case are usually in full activity. The exposure of the sick man is not momentary, but continuous. The nasal filter is often thrown out of function by mouth breathing; the buccal secretions are scanty or altered; the cilia of the air passage share in the disabilities of the body at large, so that access is relatively easy to the recesses of the lungs; while finally the internal protective agencies are often feeble or ineffective. I have not time to pursue this subject, but I think that the methods of cleaning in hospital wards and in sick-rooms might well claim a more careful consideration than is common from practitioners of medicine.

I now turn, in illustration of new outlooks, to the subject of inflammation. When most of us were serving our novitiate in pathology, the study of inflammation was largely limited to a bare description of visible phenomena and a cataloguing and classification of lesions. Like other diseases, inflammation was regarded with more or less complacency as an entity, a thing. We were engaged in studying the ways in which the blood cells, especially the leucocytes, got out of the blood-vessels in the exudative phases of inflammation; and the more inquisitive among us were much exercised to find out whether it was the emigrated leucocytes or the fixed connective-tissue cells which were most concerned in the formation of new tissues. So earnest were the advocates of each of these views that the social amenities sometimes suffered. Thus it was my hap to be banished from Stricker's laboratory in Vienna when it became known to that champion of the connective-tissue cell that I had been under the baleful influence of Cohnheim and Arnold.

This question of the origin of new connective tissue, the minute alterations in the walls of the blood-vessels which permitted emigration and diapedesis, and whether the leucocytes crawled out or were squeezed out, bounded in this field our extremest horizon. I do not remember that it ever occurred to us to inquire what, if anything, inflammation meant. It was enough for us to fight the battles of the hour; to remember if we could the phenomena and the lesions; and to keep the classifications from getting mixed.

But the formulation of the new bacteriological technique and the deeper study of the infectious diseases in which inflammation is frequently a prominent feature, brought new light and fresh impulse into the study just then drifting rather aimlessly in the eddies. I think, too, that we shall not readily overrate the importance as a stimulus, here as elsewhere in pathology, of the practical awakening of the medical world at this time to the fact that, superior as in some ways he is, and occasionally enjoying a bank account, the man physical is pretty closely linked from the cradle to the grave with lower life forms in ways which could not longer be ignored. And the hospitalities which we were forced to accord to the bacteria and to protozoa in our scientific housekeeping did much, I think, to foster the wider outlooks and the more intelligent and practical recognition of fundamental laws which chemistry and physics had long since formulated, and the study of organic evolution had revealed, when these were at last seen to bear not remotely but directly upon the more subtle problems with which we now stood face to face.

There is an interesting story in the drift of events at this period which I have not time to tell. But the fresh point of view led away for the moment from our descriptions and our catalogues of inflammation as it occurs in man, down to the study of analogous phenomena in lower and simpler forms of living things.

That trusty old pal of the physiologist, Amœba, was lured from his seclusion and injured in a variety of ways which resemble the injuries known to initiate most often the inflammatory processes in man. He was prodded, bruised, cut—actually vivisected, I shudder to say. He was supplied with strange, barbarous diet; microbes were set upon his trail. And when Amœba didn't succumb, the ways in which he held his own and the processes by which he responded to injuries were carefully noted. In the word injuries I include those toxic injuries which micro-organisms can inflict, and which are on the whole more frequent and important than the cruder physical injuries to which man and his lowly brother are alike subject.

Then other simple forms of living things were brought upon the stage and the conditions which determine amœboid movement were investigated. It was found that while the range of stimuli is limited in response to which under normal conditions amœboid movements occur, in abnormal conditions a similar response is elicited by the most varied agencies which for better or worse can lure or repel the elementary organism. So chemotaxis began to figure in our books along with phagocytosis and emigration.

It thus had not been necessary to extend this new line of study beyond a few elementary living organisms, which had been submitted to chemical and physical injuries, before we had a suggestive clew to the explanation of one of the most significant phenomena of exudative inflammation. This clew, if formulated, would be something like this. The physiological capacities of simple cells acting as independent organisms are capable under abnormal conditions of responding in an altered or exaggerated manner to unusual stimuli in ways which protect the organism against diverse forms of injury. Thus amœba, for example, by means of its digestive processes can protect itself against pathogenic microbes. In this protective response to an actual or impending injury, amœba no more makes use of newly acquired capabilities than does a man who kicks a predatory dog indulging or threatening some sinister raid upon his shins.

Then the study turned upward, and bits of old lore, which had been gleaned and catalogued and stored away and forgotten, because at the moment their meaning was not clear, were dug up again and patched into the new mosaic. To be brief about it, I may say that it was found that as we rise in the scale of being, from those organisms which consist of a single cell to multicellular forms and then on up through the series in which the structural differentiation of cells and organs keeps pace with the physiological division of labor, until we reach the very highest, we find that there still remain—and here is the heart of the matter from our present standpoint—there still remain some cells which have shared but little in the changes involved in the physiological division of labor. These have retained such simple and varied capacities as belong to lower independent organisms. Such cells, as you know, are the connective-tissue cells, including endothelium and especially the leucocytes. It was not long before it had been shown that under similar conditions these undifferentiated cells of the higher beings respond to injuries physical and chemical very much as cells do which are wholly independent organisms. Now assuming that the success of these lowly cells in the body in resisting injury and in destroying injurious material—for such, in common with amœba, appears to be one of their capacities—tends to foster the welfare of the body at large; we seem to have won at last a reasonable basis for an hypothesis around which to group facts at least, if not to explain the phenomena of suppurative inflammation.

I cannot permit myself to go further in this direction, nor to suggest ways in which other elements of the exudate than the leucocytes may contribute in their new forms and situations to the welfare of the individual. Nor is there time even to enter upon those phases of inflammation which directly contribute to permanent and extensive repair.

I am not quite certain that we know enough yet to define inflammation concisely; there are so many phases of it and of the life of the body at large which may modify its manifestations and about which we are almost wholly ignorant. But I think that we shall gain some definiteness of conception, some clearness as to most urgent lines of research, possibly—although I have not for the moment that much at heart—some immediately practical hints, if we fall in with Adami's suggestion, and characterize inflammation as "the series of changes constituting the local manifestation of the attempt at repair of injury," or briefly "the local attempt at repair of injury."

This far-reaching conception of inflammation as a conservative process in which the body cells adapt their physiological capacities to changed conditions, does not at all supersede, but does co-ordinate, the old catalogues and classes of phenomena and lesions. We may keep our exudative, hemorrhagic, necrotic, croupous inflammation, if we like. We can even drag out the dear old *tumor*, *rubor*, *calor*, and *dolor* and reverently dust them off if we be so inclined. These things may be still of practical as well as academic value. But the clew which we have won to the meaning of it all is that which, as it seems to me, particularly marks the drift and purpose of pathology in this field to-day.

Of course, it may not strike the surgeon as a happy conception that one of the phases of disease of which he stands most in dread, and the suppression of which in these later days it is one of his greatest triumphs to have achieved, should be at bottom conservative in its nature. Nor will the physician perhaps find it easy to think of tubercle as in truth a triumph of conservatism. But after all we must not forget that this new conception of inflammatory processes and lesions does not imply the belief that the body always, or even ever, succeeds in obtaining the best conceivable results in these conservative responses to injury. But when we reflect that its achievements in this direction are only the result of emergency measures, in which the body adapts as best it can machineries and powers maintained for other uses; if we remember that excessive stimuli may incite excessive response; that especially unfavorable conditions may turn its powers and mechanisms awry—we shall, I think, find it possible to admit that we cannot justly count the failures as legitimate ground for total dissent from the point of view to which I have directed your attention. There are many other phases, which I have not time to consider, of this which Welch has happily called adaptation in pathological processes.

If I am not making too large a claim upon your time and patience, I should like to call attention to one other theme, namely, the inciting factors in tumors.

It would certainly seem at first glance that in considering tumors we shall not need to be warned against the traditional error into which medical men as well as others have so often fallen, that of conceiving of disease as a thing. For surely our fundamental notions of tumors and even our very definitions imply that they are things, circumscribed tangible structures; objects which we can cut away. But here again the tumor is not the disease; it is only one of the results of the disease, just as pus is not inflammation but only one of its typical products. Disease is here, as always, a process, and although in this case the morbid process which leads to the formation of the tumor is masked by the tangible result, it must not be ignored in such a point of view as we are now striving to attain. And thus it is that when we speak of the alleged causes of tumors we do not really mean causes at all, but the inciting factors of the processes from which the tumor results.

This distinction, fine and possibly finical as it may seem, is not unimportant, because, as it appears to me, there is no field in pathology in which the alleged causes of disease, which are solemnly arrayed in treatises and lectures under the heading of etiology, fall so wide of the mark as just here among the tumors. From bumble-bee stings to clay pipes; from aberrant cells to postulated parasites, we lay these motley things and circumstances in a row before our pupils with a complacent smile; as who should say the veriest dunce cannot fail to see that since tumors occasionally, or frequently, follow these local visitants, here be veritable causes.

One may have a more or he might have a less profitable employment than speculating upon the reason why the cells of the human body do not go on growing indefinitely in size, instead of stopping as they always do when they have reached certain moderate dimensions. And if one had for a moment no better business than this inquiry, he might learn that others also had been engaged at various times in the same occupation. He might learn, further, that a clew to the answer had been reached. That clew is to this effect: cells being supplied with nutriment from without by absorption through their surfaces, a certain proportion must be maintained between the bulk of the material to be nourished and the absorbing surfaces. But as bodies increase in size the superficial area does not keep pace with the mass, so that in the case of cells the nutritive balance is disturbed and growth ceases. Of course, this may occur sooner in some cells than in others, but it occurs so early in all the body cells that these rarely get beyond the microscopic limit. And that appears to be one reason at least why cells don't grow as big as grapes or pumpkins.

If, on the other hand, we consider a more complex organism as a whole, one made up of many and of diverse cells and cell groups, we fail to find in this simple nutritive factor any reason why a mouse, for example, should not grow to be as big as a man, or a man as big as an elephant; since we cannot give any reason, so far as I know, why the kidney, for example, could not have a hundred times as many cells as it has. If asked to account for this, we naturally and properly fall back upon the inherited capacities and limitations of the species, and either dismiss the inquiry so, or, like the learned judge in "Nathan the Wise," summon our interlocutors to appear again in a thousand thousand years, when there will be more likelihood of an answer.

But—and now mark well how familiarity breedeth contempt—when all of a sudden some part of the body, with its inherited limitations like all the rest, begins to grow and keeps piling cell on cell until the new production, a tumor, is sometimes so massive in proportion to the tissue from which it sprang that an elephantine man would be but a petty wonder in comparison—well, under these conditions we come at the solution of the identical problem which we had so dexterously shirked or so ruthlessly handed to posterity with a club or a sting, with an ulcerated tooth or the butt of a clay pipe.

When we prate of hereditary predisposition as the cause of tumors, we simply beg the question. When we urge local excesses in cell nutrition we are reckoning without the host.

In truth, without pursuing this quarry to cover, we are not, I think, likely to apprehend the real cause of tumors until we approach the subject from the standpoint of the cell itself—until we know much more than we do to-day of the subtle influences which determine the vigor or the feebleness of its nutrition and its growth; the inexorable sway of its heredities; the factors which control its proliferations and its degenerations; and, perhaps more than all, that interdependence of closely or remotely related cells which makes the living body an organism and not a simple congeries of autonomous units.

The cell capacities, complex and varied as they are, have been very firmly fixed by untold generations of environmental influences, and are extremely tenacious of their birthrights. They are doubtless to-day, as they have always been, and as all other living things are, subject to sway and variational drift. But these influences become evident only after long periods. How then can we conceive of a fundamental alteration in cell capabilities as the result of a momentary trauma?

Of course what we mean when we cite our hodgepodge of traumatic agencies as causes of tumors is, that a long-continued slight local injury or a more acute or positive damage may in some way alter the local conditions of cell life and growth so that the proliferative capacities of the cells can come into play, in a fashion determined by their antecedents.

The new cell lore has, indeed, widened our outlooks in the possibility of profitable study of the minute morphology and physiology of tumor cells, though we can hardly surmise to-day whither it will lead. But until we gain clearer vision in the normal fields, which are hardly yet opened, we cannot, I think, reasonably expect to fathom the subtleties of the abnormal. So I hold one offer open to all comers: If any one will tell me by what arrangement of cell mechanism, by what disposition of cell impulse, under what direction of heredity or environment, the various cells of the normal body go on growing, multiplying, taking on new forms and functions, framing new tissues, from the time the original cell ceases to be an egg and becomes an individual, until full maturity of the body is attained—if any one will tell me this, I say, and then tell me why at maturity this tissue growth ceases, why these new adventures in organ-forming stop, and from maturity until the worn-out body is ready for the grave only those growths and replacements occur which are demanded by the exigencies of nutrition or by accidental emergencies, I will agree to hand him back his lore as a fair clew to, if not an exhaustive exposition of; the origin of tumors.

I cannot think of tumors as a superior sort of inflammation. I cannot understand to-day cell and tissue formation in response to the presence of microbes, except as a protective effort against an injury. And so, finally, I fail to conceive how the development of a complex and elaborate structure, almost organoid in character, such as we have in adenoma and carcinoma, for example, should be required, if protection against a microbic injury be the outcome of the process. Certainly I recall no analogy for this conception in the varied responses to such injury with which we are already familiar.

It is possible that in some inflammatory growths now grouped among the sarcomata microbes may be found which are capable of setting the cell impulses astir. This has not yet been done. Nor are there, in my opinion, any sufficient or even promising data at hand for the belief that microbes of any kind are the inciting factors in any honest tumor. I do not say this cannot be; but only that we have to-day no proof. I look upon this notion as one of the numerous chalk eggs whose shaping an uncritical estimate of the bacteriological era has encouraged, and on which the spirit of discovery will, I fear, brood for a long time without quickening.

It was the uneasy consciousness of the futility of the commonly urged so-called causes of tumors which led to Cohnheim's hypothesis of aberrant embryonal cells or cell masses. But it soon became clear to the critical that this did not help the matter much, if at all, because, admitting his postulated cell strays, you are no nearer to the reasons for their sudden growth after various periods of dormancy.

Virchow always, if you will permit the crudeness of the implication, had a choice assortment of conceivable cell stimuli up his sleeve, nutritive, functional, and formative. So that it was not very difficult for him, when he came up against pathological new formations, to mix, in theory, a judicious quantity of nutritive and formative stimulus with the body, to which the cells would, in theory, dutifully respond. This did well enough for simple tissue growths. But when he came to account for such complex affairs as cancers, he was forced either to brew a particularly choice thing in stimuli, which he was fain to call "specific" in consonance with the specific growth which it was to determine; or to assume specific qualities in the tissues themselves, which he called "predisposition." He concluded—clever Virchow!—that for his part he felt safer to keep a string on both possibilities.

In later times, Hanseman has based a rather ingenious hypothesis of the origin of tumors on alleged irregularities in mitosis—a standpoint difficult to share for those who keep in mind the ancestral traits which hold every living cell of the human body in most rigorous restraint.

The most common attitude to assume—and perhaps this is at once the most imposing and the easiest—is to say that the reason why tumors occur is because the proliferative capacities of the cells are increased; and then refrain from further fruitless prying.

More subtle conceptions of the origin of tumors are, however, much in evidence in the thought of the day in pathology. Ribbert, of Zurich, has perhaps more definitely than any other framed a working hypothesis which is clever and suggestive; though, like any hypothesis which essays to bridge abysmal ignorance, it is likely to lead to Omar's plaint that we "evermore come out by the same door wherein we went." Ribbert lays great stress, in his conception of the origin of tumors, upon the intimate associations of the cells as parts of an organism, and believes that their varied capacities are normally held in some fashion under mutual restraint in subservience to their common welfare. This mutual relationship however once destroyed, for example by the separation of cells or cell groups from their organic associations, their physiological capacities are no longer held in leash, and if the nutritive and other conditions be favorable may express themselves in exaggerated fashion without the actual acquirement of new capacities for the transformation of energy. This restrained state of the cells under ordinary conditions Ribbert calls tissue-tension ("Gewebsspannung"). As I understand it, the state of affairs is in Ribbert's conception something like that of a lot of active, healthy boys in a schoolroom who have a great deal more energy than can for the welfare of the whole school be safely released. Turn some of them out of doors, and they do not develop any more capabilities for roaring, shrieking, fighting, and making themselves generally offensive than they had before; only these now find expression. What Ribbert would call the schoolroom tension is relaxed. In neither the cells nor the boys do we need to assume new or exaggerated capabilities to account for the result of organic disassociation.

Ribbert goes further than this, and explains in a rather convincing fashion the way in which he conceives the process of cell disassociation and release from restraint to occur. Since he does not admit an increase in the inherent proliferative capabilities of the cells, he cannot assume, as is commonly done, that the process is initiated, in carcinoma for example, by the epithelial cells. He assumes and adduces very striking evidence for his assumption that the process starts in the connective tissue, which, as we know, is very liable to increase in amount in response to a variety of influences, notably those which involve trauma, or simple inflammation, or replacement hyperplasia. In the starting of carcinoma of the stomach or intestine, for example, Ribbert shows that, in many cases at least, the new-formed connective tissue cuts off cells or cell groups from their organic connections, and claims that in this way alone we may account for the required release from the restraints of his "tissue-tension."

Numerous objections have been urged to these conceptions of Ribbert. But they are highly suggestive at least, and I call your attention to them here because they illustrate the tendency in modern pathology to seek for explanations of abnormal phenomena in more subtle agencies than we have hitherto been wont to recognize. In our efforts to comprehend such obscure abnormalities as lie at the bottom of the origin of tumors, as of other diseases, I think that it would be wise if we were at least to hold in mind the possibility that a vague group of physiological factors which we dimly conceive of through the so-called internal secretions may be of significant influence even in local manifestations of disease.

Notwithstanding these new outlooks to which I have called your attention as illustrations of the general drift, pathology in its immediately practical phases still moves on in the beaten paths. Many of the most significant diseases still await competent study along the old objective lines and do not as yet admit of adequate hypotheses. We have caught glimpses here and there of important physiological capacities which we as yet hardly venture to name, much less understand. The inciting factors in many of the most dreaded and serious infectious diseases are wholly unknown. So the pathologist will continue his search for pathogenic micro-organisms; he will go on making autopsies for the practitioner, and simple diagnosis will mostly be his not altogether inspiring aim. He still will veil as best he can his grief when the inexorable exposures of the autopsy fail to confirm the convictions of the bedside. He will still strive to evince a subdued if not enthralling interest in tacking names to tumors removed from persons whose past or present he knows not, and whose future he will never learn. This he will do, not so much because there is any scientific interest to him, as a rule, in his performance, as because so only can he gain material for study or for academic purposes.

One great practical result of this busy quarter of a century in pathology is the getting together into useful form of a series of tests and methods by which the practitioner can secure greater accuracy in diagnosis and greater precision in treatment than was possible in the earlier days. These new methods in diagnosis, requiring considerable technical facility and some experience, now form a compact discipline which has been called "clinical microscopy." "Clinical pathology" would, I think, be a better term. Although strictly a practical adjunct to the work of the practitioner, clinical pathology still largely remains in the hands of the pathologist. This condition of affairs may be wise, and certainly must be convenient—for the practitioner. But it involves the pathologist in a series of the least interesting and most time-consuming tasks, diverting him from lines of work along which lie his most cherished outlooks. To ask the professional pathologist to continue the practical administration of these diagnostic tests is, to borrow an example, somewhat as if one who should seek for advice about his diet from his physician were then to request the doctor to digest his food.

I think that this matter is of the utmost importance in hospitals which have an officer called a pathologist, who is, however, at present usually almost wholly occupied in assisting the practitioner in diagnosis. This is useful work, indeed, but the pathologist is in consequence almost wholly debarred from pursuing those lines of research which it is the privilege and duty of hospitals to encourage and maintain. It seems to me that physicians, who constitute the medical boards of hospitals, might wisely urge the creation of an office which may be called an interneship in clinical pathology, whose incumbent could, under the direction of the pathologist perhaps, be responsible for much of the routine work in laboratory diagnosis.

If I have succeeded in my purpose in these glimpses here and there in pathology, you will realize, as indeed you may all have done long ago, for I have not aimed to present new things to you, that pathology has set for itself in these later days problems which involve far more subtle conceptions of the cause and meaning of disease than were possible when we entered upon its study a couple of decades or so ago.

We have seen that the cell is not a mere lump of jelly with curious chemical proclivities, but a most complex machine. The microbe has set the door ajar to a vast arena of beneficent study. But it no longer claims an exclusive rôle in the drama of infectious disease. It is indeed often the sinister and necessary villain on whose capacities and deeds the plot hinges, but it is by no means the star performer and is as certainly not the play.

Bacteriology, the foster child of medicine, has grown so lusty and exacting that we are eagerly acquiescent in its partition among those who love it for its own sake, those who cherish it for the light which it casts into other fields of science, and those who prize its economic aspects; reserving for ourselves only those relatively limited, though highly important, phases which bear upon the metabolism of the body and the incitement of disease.

We have begun to realize in a practical way that molecular constitution, the laws of osmosis and the diffusion of gases, gravitation, elasticity, and pressure are all physical factors in the structure and work of the body which we must reckon with in disease as well as in health. We have learned to perceive in inflammation something more than a vexatious episode in the life of man or an exhaustless stimulus to descriptions and catalogues. We find ourselves forced to look for light on the etiology of tumors past the crude incitements with which the academic juggler has been wont to toy, to those deeper phases of cell life and impulse which it remains for future workers to unveil.

We realize clearly to-day that the man with whom we deal does not stand for himself alone, but is the outcome of ages of adaptation to changing environment, whose record we may spell out not only in his normal state, but in the stress of disease, when capacities and vulnerabilities, which do but rehearse the story of his slow evolvement, stand out now with sinister and again with beneficent import.

Pathology is now passing out of the stage in the development of a science which is marked by the simple accumulation of facts. We are "grouping whole series of phenomena as diverse manifestations of identical forces due to diverse conditions of environment." We are even gaining courage with Schleich to describe disease as "a form of the struggle for existence against those injurious influences to which man is not yet adapted."

If one were asked to summarize the most important change in outlook and purpose which has woven itself into pathology during the past half-century, I think that he might wisely say of disease as Conn has recently said of animals and plants, namely, that fifty years ago they were objects to be classified; to the student of to-day they are objects to be explained. Of course, medicine has had explanations a plenty which for exhaustiveness and finality left little to be desired; ranging as they have from black-bile to Beelzebub. But there is just one fundamental difference in our attitude to-day which lends assurance to the hope that we are in the right way at last. That is, that we are no longer trying to conduct alone our search for light, but have called in our sister sciences. We have at last linked our conceptions of the forces which sustain and sway the human organism with forces which are universal. And when we get conceptions which fit in with the laws of the conservation and transformation of energy, with the doctrines of organic evolution, and the formulas of molecular physics, it is, I think, a good deal more than an even chance that we are on the right trail.

When I recall the severely objective and intensely practical character of the meetings of this society in which it has been my privilege to share, I am more than a little dubious as to the pertinency of my theme. So I shall not think it strange if you regard this essay as less an exercise in scientific exposition than an indulgence in the gentle art of babbling.

CYSTITIS DUE TO THE TYPHOID BACILLUS INTRODUCED BY CATHETER IN A PATIENT NOT HAVING TYPHOID FEVER.

By THOMAS R. BROWN, M.D.,

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From the discovery of the bacillus typhosus by Eberth [1] up to within a comparatively recent period, a rather limited rôle has been assigned to this micro-organism by the great majority of medical men. Nevertheless isolated observations made from time to time presaged our modern views of this bacillus, and now we know that it plays a much larger part and has a much wider significance in bacteriological investigations than was formerly supposed. Many cases of a true general infection with this bacillus have been described, while numerous observations have been made of its presence in the spleen, in the rose spots of the typhoid eruption, in the lymph glands, in abscesses and periosteal swellings, and in many hitherto unexpected locations.

Among the most interesting and, from the hygienic point of view, most important places in which it has been found is the urine. Even shortly after Eberth's discovery of the bacillus a few cases of the finding of the micro-organism in the urine were reported. Bouchard [2] in twenty-one of sixty-six cases of typhoid fever examined found albumin associated with bacteria, which he assumed to be typhoid bacilli; Hueppe [3] in one of eighteen cases; Seltz [4] in two of seven cases, in both of these associated with albumin and in one also with casts; Konjajeff [5] in three of twenty cases, calling especial attention to the fact that they appeared during the later stages of the fever and were always in large numbers, if present at all, and regarding the presence of

[1] Virchow's Archiv, vol. lxxxi., 1880, and vol. lxxxiii., 1881.

[2] Rev. de Méd., 1881, t. 671.

[3] Fortschr. der Med., 1886, iv., 448.

[4] "Bakter. Studien zur Typhus-Aetiologie," Munich, 1886.

[5] Ref. in Cent. f. Bakt., 1889, vi., 672.

the bacilli in the urine as evidence of typhoid lymphomata in the kidney.

Karlinski[1] in forty-four cases of typhoid found the bacilli present in the urine of twenty-one, always associated with albumin and always in pure culture; Neumann[2] in forty-eight cases found the bacilli eleven times, and was the first to call attention to the danger of the urine in the spread of the disease, especially as the bacilli remained in the urine in many cases for a long period of time after the cessation of the fever, and that they could be present in a urine otherwise normal, *i.e.*, without casts or albumin.

Melchior[3] reports a case (Case IX., 1892) which developed all the typical symptoms of cystitis fourteen days after the cessation of typhoid fever, from the urine of which he cultivated the typhoid bacilli in pure culture; in this case the condition cleared up entirely in twenty-two days without treatment. He also reports a case of post-typhoid cystitis due to the bacillus coli communis and one of typhoid with associated nephritis, in which Eberth's bacillus was found in the urine.

Borges[4] found the bacilli in three of ten cases, but in three others found albumin, thus showing that the finding of the latter was no evidence of the presence of the former; Blumer[5] found the typhoid bacillus in only two of sixty cases examined, while Baart de la Faille[6] found the bacillus four times each in twenty-seven cases examined, Blumer suggesting that the bacilli might possibly reach the bladder from the intestinal tract by penetrating the recto-vesical wall. Krogius[7] found the bacillus in a case of post-typhoid cystitis; Wright[8] in six of seven cases, and Besson[9] in six of thirty-three cases, in five of which albumin was present in considerable amount.

Rovsing[10] reports a case (Case LV. of his series) of cystitis with swollen and reddened vesical mucosa, following nephrolithiasis and typhoid fever, double suppurative nephritis, and right pyonephrosis, in which Eberth's bacillus was found in pure culture; the case had never been catheterized. All the above cases were reported previous to the time of the Widal reaction, and as this reaction seems to be the only absolutely certain means of determining whether or not a micro-organism is the typhoid bacillus, in many of the earlier cases the micro-organism present and regarded as the typhoid bacillus was probably the colon bacillus, although this chance of error is much less in the cases reported between 1895 and 1898, due to the use of the differential media of Elsner, Capaldi, Hiss, and others. In the cases reported since 1898 differentiation has been rendered comparatively easy by the application of the Widal reaction, and it is largely from these cases that we must derive our views concerning the prevalence of typhoid bacilli in the urine.

Richardson[11] studied the urine of thirty-eight typhoid patients with extreme care and for a considerable period of time; of these, nine cases showed the typhoid bacillus in pure culture, while in eight of the remaining twenty-nine other micro-organisms (in six the colon bacillus) were found; in all the nine cases in which the typhoid bacilli were found there was slight albuminuria, but this also occurred in fifteen of the remaining twenty-nine cases; thus showing that the presence of albuminuria is in no wise indicative of the presence of the typhoid bacillus; its absence, however, usually pointing to the absence of this micro-organism. The bacilli usually appeared quite late in the disease and generally persisted for a long while unless appropriate treatment was carried out; this treatment Richardson[1] considers to be the administration of urotropin, which he thinks is almost a specific in this condition.

Petruschky[2] found the micro-organism in three of fifty cases examined, and Horton-Smith[3] in three of seven cases, the latter calling especial attention to the fact that the fæces were particulaly dangerous as a disseminator of the disease in the early, the urine in the later stages—often, in fact, long after the entire subsidence of fever.

Gwyn[4] reports seven cases in which the typhoid bacilli were present in the urine, usually associated with pyuria and signs of bladder irritation, while Schichbold[5] found the bacilli in five of seventeen cases examined, the latter observer concluding from the findings of the two of these five cases that came to autopsy that the presence of Eberth's bacillus in the urine is evidence that the case is one of nephro-typhus.

Two cases of especial interest are those of Young (personally communicated) and Houston,[6] both cases of chronic cystitis due to the bacillus typhosus, the case of the former being the first one of this nature of which I have any knowledge. In Young's case (to be reported in full subsequently), one of a chronic cystitis of five years' duration immediately following an attack of typhoid fever, typhoid bacilli were found in large quantities in the urine in pure culture, the micro-organisms not only showing all the characteristic cultural peculiarities, but agglutinating positively with typhoid serum; while, on the other hand, the patient's serum gave a positive reaction with the laboratory cultures of the typhoid bacillus. The patient was not cured at the time, and now, two years later, has reappeared, still showing large numbers of typhoid bacilli in the urine. The patient had never been catheterized. In Houston's case, the cystitis was of three years' duration and directly followed an attack of what was probably typhoid fever. A bacillus was obtained in pure culture from the urine, which culturally resembled the typhoid bacillus in every respect and also agglutinated with the patient's own serum in dilution of 1 : 100, while the same serum agglutinated the stock typhoid bacilli, but not colon bacilli. At the time when the case was reported, Houston had been unable to cure the condition.

The case I wish to report is a unique one in many ways; in fact, as far as its etiology is concerned, I have been unable to find one like it in the literature. The patient, Mrs. S——, entered the service of Dr. H. A. Keely, who kindly permitted me to study the case bacteriologically; she was operated upon for a large myomatous uterus on January 20, 1899. The only thing of interest to us in her past history was the fact that thirty-five years previously she had had an attack of typhoid fever; since that time, however, there had been no illness in the least suggesting a reinfection with typhoid, nor had there been any manifestations of the presence of the micro-organisms in bone lesions, periosteal swellings, or osteo-myelitic abscesses; there had never been at any time painful or difficult micturition. The operation, performed on January 20, 1899, was a difficult one, and there was considerable inevitable handling of the bladder and possibly some slight trauma of that organ. The urine, examined on the day of operation, was absolutely normal, of acid reaction, of specific gravity 1.021, with no trace of albumin or sugar, and showing under the microscope only a number of bladder epithelial cells, but no pus cells, casts, or bacteria. For eight days after the operation the temperature was practically normal, and the convalescence uneventful; on the ninth day, January 28th, the temperature rose to 100.4° F., and for the ten days following showed a daily rise to about 100° F., gradually declining after that time. On the day preceding the rise of temperature, the patient had complained of intense pain in the bladder, and the urine showed a dense sediment consisting of almost pure pus, with considerable albumin; the reaction was distinctly acid, and the specimen was of course obtained by catheter. Two days before this the urine had been examined, and had been found to contain a trace of albumin, with a few pus cells and a large amount of amorphous urates in the sediment. A cystoscopic examination made a few days later showed a universally congested vesical mucous membrane with no areas of ulceration.

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[1] Prag. med. Woch., 1890, xv., 437, 452.
[2] Berlin. klin. Woch., 1890, xxvii., 121.
[3] "Cystitis und Urininfektion," Berlin, 1897.
[4] Inaug. Diss., Würzburg, 1894.
[5] Johns Hopkins Hospital Bulletin, 1895, v., 327.
[6] Inaug. Diss., Utrecht, 1895.
[7] Annales Génito-urin., 1894, May, 370.
[8] Lancet, 1895, ii., 196.
[9] Rev. de Méd., 1897, xvii., 405.
[10] "Infektiöse Krankheiten der Harnorgane," Berlin, 1898.
[11] Journal of Experimental Medicine, 1898, iii., 349.

[1] Journal of Experimental Medicine, 1899, iv., 19.
[3] Cent. f. Bakt., 1898, No. 28.
[3] Lancet, 1899, i., 1346.
[4] Johns Hopkins Hospital Bulletin, 1899, x., June.
[5] Deutsch. Arch. f. klin. Med., lxiv.
[6] British Medical Journal, 1899, i., p. 78.

The usual symptoms of acute cystitis, tenesmus, frequent and painful micturition, vesical pain, etc., were present in a marked degree for the first ten days after the development of the cystitis, after which most of the symptoms abated markedly except the frequency of urination, which continued up to the time when the condition was cured. The urine showed large quantities of pus, however, for a period of twenty-eight days, after which it disappeared quite rapidly, as will be described shortly.

On January 27th a specimen of urine was obtained under strict aseptic precautions, the method used being as follows: the external urethral orifice being carefully cleansed with bichloride-of-mercury solution, followed by sterile water, a sterilized glass catheter whose external end was covered by a sterile rubber cuff extending several centimetres beyond the end of the catheter was introduced, the fingers of the operator being allowed to touch only the distal end of the rubber cuff; the urine was allowed to flow for a short space of time, when the rubber cuff was pulled off by traction on its distal end and a small amount of urine was collected in a sterile test-tube, the cotton plug of which was of course immediately reinserted after the urine had been collected. A large series of control experiments with normal urines has shown that this method is absolutely reliable. An examination of the specimen thus obtained showed that, besides large numbers of pus cells, a few red blood cells, and many bladder epithelial cells, it contained large numbers of an actively motile, rather short, rod-shaped bacillus. Plate cultures on agar were then made, when it was found that the micro-organism was present in pure culture. Transplantations were then made on the various media, gelatin, potato, glucose-agar, litmus, milk, peptone, and bouillon. On gelatin the growth was white and fine, both along the line of stab and on the surface, while there was no liquefaction of the medium; there was no gas production in glucose-agar; milk was neither coagulated nor acidified; in peptone there was clouding but no indol production; on potato a very faint, whitish, almost invisible growth was to be made out, while the study of the bouillon culture, which was much clouded, showed that the micro-organism was markedly motile after forty-eight and even after seventy-two hours. A second culture made from a specimen of urine, obtained on February 16th in the same way as before, demonstrated the presence of the same bacillus in pure culture with identically the same cultural peculiarities, but in smaller quantity.

As the micro-organism so definitely resembled the typhoid bacillus in all its properties, the final test was made, *i.e.*, to see whether or not it would agglutinate with typhoid serum. The person from whom the serum was obtained was a patient at the Johns Hopkins Hospital who had an absolutely typical case of typhoid fever, with palpable spleen, typical roseola, characteristic temperature, etc., and her serum gave an unquestionably positive reaction with the stock laboratory cultures of the bacillus typhosus. Both cultures in my case, that of January 27th and that of February 16th, reacted with this serum in the most typical manner; in dilutions of 1 : 20 clumping was marked in five minutes and complete in twenty minutes, while in dilutions of 1 : 80 clumping was noted in ten minutes, positive in thirty minutes, and complete in sixty minutes.

The patient was treated at first by bladder irrigations of borax and sodium bicarbonate solution, but although showing improvement under this treatment as evidenced by the decrease in the amount of pus, the quantity of albumin, and the number of micro-organisms, this improvement was so slow that urotropin, gr. v. by mouth three times a day, was given, and under this treatment the urine rapidly cleared up. Seven days after the inauguration of this last treatment, on March 4th, the urine, obtained in the same way as before, was found to be sterile, although there were still some pus cells present, and even a few on the day of the patient's discharge, four days later. The urine was acid throughout the whole course of the disease and was markedly turbid during the height of the infection.

As to the mode of infection in this case there are two possibilities: first, that the bacilli had lain dormant somewhere in the system since the attack of typhoid fever thirty-five years before; and second, that the bacilli had been freshly introduced.

Many reports have been made to show the great periods of time in which the bacillus may remain in various parts of the body in a latent condition, yet capable of starting up a reinfection if the circumstances are favorable. Flexner[1] has demonstrated living typhoid bacilli in an abscess between six and seven years after the occurrence of the original infection; Orlon[2] found the typhoid bacilli in an osteomyelitic swelling six and one-half months after the fever; while in periosteal abscesses the living bacilli were found by Melchior[3] ten and one-half months, by Chantemesse[4] fifteen months; by Buschka[5] seven years; and by Hübener[6] four and one-half years after all the symptoms of the disease had disappeared. Miller[7] has reported a case in which the living bacilli were found in the gall bladder seven years after the original infection.

Notwithstanding these examples of the marked ability of this micro-organism to remain latent for a long time, it is highly improbable, in fact almost impossible, to explain the present case on the supposition that the micro-organisms had lain dormant somewhere since the original infection. In the first place, the attack of typhoid fever had occurred thirty-five years before, and there had been no illness suggesting in the least a recurrence of the disease in the interim; in the second place, there were absolutely no evidences of any nidus in the body in which the micro-organisms could have remained latent; in the third place, there had never been any evidences of cystitis at any time previous to the present attack; and in the fourth place, the urine, carefully examined previous to the operation, was found to be absolutely normal. It is, therefore, highly probable that the bacillus was introduced into the bladder from outside, presumably by catheterization, the inevitable vesical trauma in such a difficult pelvic operation undoubtedly rendering the dangers of infection much greater. As far as I could learn, none of the nurses that came in contact with the case had recently been nursing typhoid patients. Nevertheless, when we consider the number of cases of cystitis produced by catheterization, relatively a small percentage perhaps, but absolutely quite a large number, and the variety of micro-organisms found as the provocative cause, it is not at all improbable that very occasionally Eberth's bacillus may be this cause, since it is a micro-organism of quite wide distribution and of undoubted pyogenic properties, and I have no doubt that with a complete bacteriological examination of all cases of cystitis, a few of this nature would be found. Perhaps, in this case, the fact that the patient had already had typhoid fever and was presumably more resistant to the infection, perhaps a diminished virulence on the part of the micro-organism, caused the infection to be so localized and prevented its spreading.

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[1] Journal of Path. and Bact., iii., 202.

[2] Baumgarten's Jahresbericht, 1887, 197.

[3] "Der Typhusbacillus als Eitererreger," Copenhagen, 1892.

[4] Sem. méd., 1891, p. 415.

[5] Fort. der Med., 1894, Nos. 15 and 16.

[6] "Mittheil. a. d. Grenzgeb. d. Med. u. Chir.," ii., part 5

[7] Johns Hopkins Hospital Bulletin, May, 1899.

This case—a unique one so far as I know—adds but another to the ever-increasing list of pathological conditions which may be produced by the bacillus typhosus, and once more calls attention to the necessity of applying modern bacteriological, chemical, and microscopical methods to the study of conditions whose etiology has hither been unrecognized, for it must be mainly through these channels that light will be thrown upon many of the "dark continents" still remaining in clinical pathology.

A MEANS OF ACCOUNTING FOR GAUZE LAPAROTOMY PADS.

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The final responsibility for instruments, sponges, gauze-pads, and dressings used in or about the body cavities legally rests with the operator. Although nothing will compensate for a very careful search of the field just before the wound is closed, any simple procedure which will secure their more reliable accounting must be valuable. Perhaps the article most frequently overlooked is the laparotomy sponge, or its substitute, the gauze-pad. The following means and method have very recently been devised by the writer, and used in the New York Hospital sufficiently to demonstrate that they are capable of furnishing accurate verification of the number of pads used in or about a laparotomy wound.

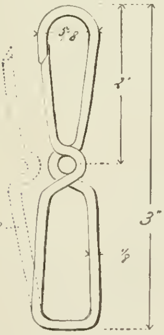

Fig. 1 A

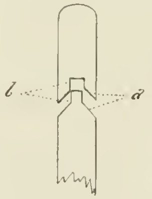

Fig. 1 C

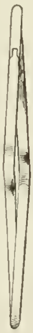

Fig. 1 B

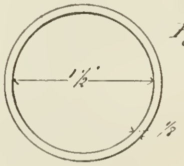

Fig. 2.

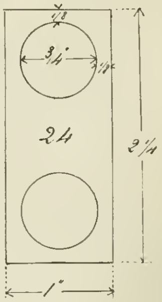

Fig. 3.

I. Of the means: *a*, The usual gauze laparotomy pads, with a tape from twelve to fourteen inches long securely sewed to a corner or an edge; *b*, "tally snaps," or their substitutes, namely, "tally rings," "tally checks," or artery clamps; *c*, "keepers," of either continuous or divided ring, continuous or divided oval, or fenestrated bar form.

II. Of the "tally": Fig. 1 gives the details and the dimensions of the "tally snap"; side view, A; edge view of the jaw side, B; interlocking of jaws, C. They are made of one-eighth inch diameter bright spring-steel wire, nickelled and burnished, bent as shown to avoid all joints, and can be very readily and thoroughly cleaned. The snap open for cleaning is shown in the dotted line, Fig. 1, A, *a*. Rigidity against opening laterally is gained by the overlapping elbow in each jaw (Fig. 1, C, *a*), and by the specially firm interlock of the jaws, Fig. 1, C. The bevelled edges, *a*, of the male and female parts aid rapid locking, while the straight sides, *b*, of the tongue and socket hinder lateral displacement. Fig. 2 shows the measurements of the "tally ring." Fig. 3 suggests a form of "tally check," which is like a trunk check, burnished nickel finish, with a hole in each end. One hole receives the tape and the other the keeper.

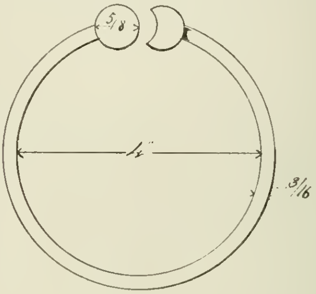

Fig. 4

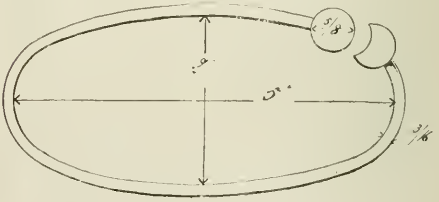

Fig. 5

If desired, any form of tally may be stamped with a number as shown on the check above. The objection to this is that it is almost impracticable to hand anything in series during an operation.

III. Of the "keeper": Fig. 4 shows the features of the divided ring "keeper," Fig. 5 those of the divided oval "keeper," Fig. 6 those of the bar-form "keeper." The continuous ring and the continuous oval "keeper" are of the same size as those divided. Otherwise no description of them is needed. The material is nickelled and burnished bright spring-steel wire, three-sixteenths or a quarter of an inch in diameter. The clasp of the divided keepers may consist of two spheres, five-eighths of an inch in diameter, one countersunk deeply to seat the other. A better lock is illustrated in Fig. 7. An olive-form button drilled through its long diameter is screwed for half its length on one end (1) of the wire. A slot is then cut from one side into the remainder of the central hole and its edges are bevelled to facilitate rapid seating. Into this slot the other end (2) of the wire is received. This form of lock can be managed with one hand by compressing the end 2 away from 1 as indicated by 3, and then letting it spring back. The two-sphere type of lock usually needs both hands for rapid working. Fig. 6 states full particulars as to the fenestrated bar-form "keeper." It has the advantage of maintaining the tapes separate and spread out, not massed as occurs with the rings and the ovals.

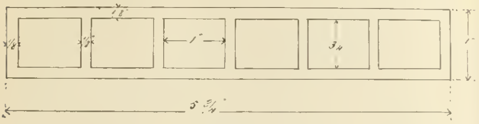

Fig. 6.

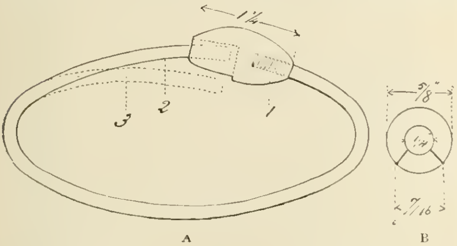

Fig. 7.—Trough Lock. A, Side view; B, end view (section).

The divided ring and the divided oval "keepers" are suitable for the tally rings, the tally checks, or the artery clamps. It may here be stated that the clamps are put upon the keepers by either of their handle finger-loops. The tally snaps may be used with any form of keeper.

IV. Of the method: 1. The number of pads and of tally snaps are known and recorded before the operation. 2. Two keepers are needed, one for each margin of the wound. 3. Each pad is handed to the operator with the tally snap securely tied to its tape. 4. While the operator is packing the pad away the assistant catches the tally on the keeper. If the bar-form keeper is used the first and second snaps must be put at its opposite ends to keep it horizontal. The subsequent tally snaps may be hooked into any convenient fenestra. Tapes twelve to fourteen inches long permit the keepers to hang well out of the operator's reach on the sides of the patient. 5. When a pad is removed from the field the tape is cut close to the tally snap. 6. The tally snap remains on the keeper till after the operation. 7. At this time the soiled pads and the tallies on the keepers are counted. The number of each should agree with that of the other. This identity in the number of snaps and pads is the first verification. 8. The second verification is the one usually made. The pads still clean are counted and their number is added to that of the soiled ones to obtain the total before the operation; so likewise with the tally snaps.

For instance: pads and snaps before operation 36 each; after operation, soiled pads 25, tally snaps on one keeper 10, on the other keeper 15, total 25. Hence all pads used in or about the operation are correctly accounted for—or the first verification is had. Clean pads 11; unused snaps 11; added to 25 each used, makes 36 each, the total of each before

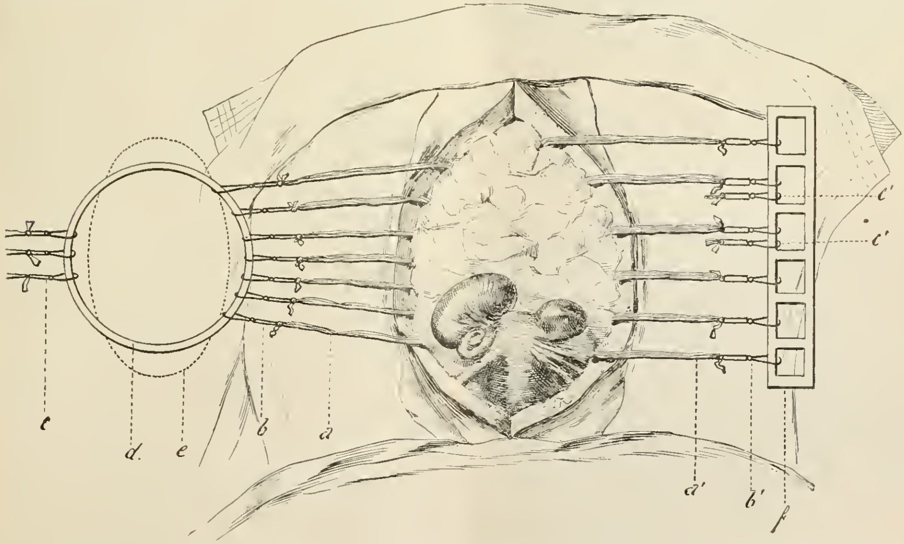

Fig. 8.—*a*, *a′*, Tapes, attached to pads and leading to snaps; *b*, *b′*, tally snaps, each securely tied to a tape; *c*, *c′*, tally snaps, with cut tape-ends attached, belonging to pads removed from the field, hence left on the keepers: *d*, continuous-ring keeper (drawn a little too large); *e*, continuous-oval keeper (drawn a little too large); *f*, bar-form fenestrated keeper. (The snaps on the ring-keeper should have been drawn massed close together, which is one objection to this type of keeper, as compared with the separation of them on the fenestrated bar.)

the operation. Hence the second verification is had. A careful negative search of the field will now make closing of the wound safe.

Fig. 8 and its explanatory notes will make plain an operation field with pads, tapes, snaps, and keepers.

No system is perfect. No means will make a final examination of the cavity unnecessary before closing it. The above plan is not perfect; but in actual practice it has been shown to furnish an accurate check on the number of pads used in or about the wound. It puts upon the operator's assistant the responsibility of attaching each snap to the keeper. This is easier than watching many tapes without keepers and with only artery clamps attached to prevent the tapes from being dragged into the wound, which clamps may themselves be used in error to clamp vessels. The keeper makes it impossible for pad tape and snap to get into the wound as has occasionally happened with loose artery forceps. The plan does not add any time to that of the operation, because the assistant can snap the tally on the keeper or cut the tape more rapidly than the operator can pack or extricate the pad, as the case may be. The great essentials are, first, that after a body cavity is open no pads be within the operator's reach except such as have tapes and snaps attached, and second, that each snap be promptly affixed to its keeper.

It is advisable to adopt a distinctive tally, something which can be used for nothing else, as can the artery clamp for hæmostasis in a hurry. The advantage of the tally ring and tally check over the tally snaps is that only the lock on each keeper needs attention as compared with the lock on each snap.

The general plan can be carried out fully by adopting any one of the above designs. It is hoped that service and security will be realized as fully as possible by it.

New York Hospital, December 1 1892.

Author's Note: Any one desirous of trying this method with very little outlay can buy several dozen large horse-blanket safety pins to use as tally snaps and make for himself any pattern of keeper he likes. Strips of galvanized, square mesh, railroad wire-fencing with meshes one by one inch will make excellent bar-form keepers. Ordinary large-sized safety pins are almost too small for safe use as tally snaps.

HISTORICAL NOTES ON THE SANATORIUM TREATMENT OF ALCOHOLISM.

By CHARLES J. DOUGLAS, M.D.,

BOSTON, MASS.

Apparently there is a notion prevailing in some quarters that the medical treatment of drug addictions—particularly alcoholism—is an idea that was originated within a decade or two by quacks and venders of secret nostrums. This supposition is far from correct. It is true, however, that during the last ten or fifteen years these exploiters of commercialism, with their secret and infallible "cures" for drunkenness, have made more noise than all the regular practitioners combined. Similarly, it may be said that Lydia Pinkham's face is more familiar to the general public than are the faces of the most learned and skilful specialists in diseases of women. But we are not justified in concluding from this fact that gynæcology is a specialty that originated with quacks, and that they only are now engaged in it.

While the recognition of alcoholism as a disease requiring sanatorium treatment by medical means is a modern idea, yet it long antedates the secret "cures." The honor of being the pioneer in this movement belongs to J. Edward Turner, M.D. His brain conceived and his zeal and industry established the first sanatorium in the world for the treatment and cure of alcoholism. His position was well stated by his lifelong friend and disciple, Dr. Valentine Mott, who in 1847 said: "In my professional life of over forty years I have accumulated facts enough to prove beyond all doubt that inebriety is a disease, affecting every membrane, tissue, and nerve of the human mechanism, producing in its victim a compound fracture from the crown of his head to the sole of his foot, as well as a mental and moral dislocation." As a result of the discussion aroused in the medical profession by the earnest and self-sacrificing labors of Dr. Turner, a petition was sent to the New York legislature in 1857 for the establishment of a State institution in accordance with his plans for the treatment of alcoholism. This petition was signed by over one thousand physicians. In it they said: "Without such an institution the physician has been compelled to turn from his patient, discouraged, disheartened, and defeated; and the victims of this painful malady—be they rich or poor, high or low, educated or uneducated—alike must find a drunkard's death and a drunkard's grave. With this institution we can save hundreds who are now crowding our insane asylums, inundating our courts, and perishing in our streets."

In the same year the Onondaga Medical Society addressed a memorial to the New York legislature on this subject, in which they said: "From a long experience in the duties of that profession which has brought us in daily contact with the victims of a diseased appetite, we have been forced to the conclusion that an institution in which the patient could be medically and morally treated would prove to be of greater benefit socially, politically, and charitably than any other institution of its nature in our land."

Up to that time there had never been in this country, or in any other, an institution for the medical treatment of alcoholism. In September, 1858, at Binghamton, N. Y., the corner-stone was laid of the first building ever used for this purpose. The ceremonies were conducted by a group of brilliant and famous men, and letters were received from the President of the United States and members of his Cabinet, as well as from many other distinguished officials. Edward Everett, then at the zenith of his fame, delivered an eloquent address on this occasion, in the course of which he predicted that the work begun by Dr. Turner would be taken up in other States and countries, until the principles here established would be utilized as a blessing to all mankind. His closing words were: "And believe me, many years will not pass away before it will appear that what you have just done for your own community, you have done for the civilized world."

This institution was operated with success for about three years, when it fell into the hands of the political Philistines, was wrested from Dr. Turner's management, and soon diverted to other uses. Nevertheless, the prediction of Edward Everett has proven true, that the medical treatment of alcoholism so ably and zealously advocated by Dr. Turner would prove a worldwide blessing. The pathological nature of inebriety is now universally recognized, and the profession is to-day giving more attention to its treatment than it did ever before in the history of medicine.

Like all pioneers who have blessed the world by forcing a new idea upon its attention, Dr. Turner's whole life was dominated by this one great object. No man has ever yet left a lasting impress on human history without exemplifying in his life the motto of the apostle to the Gentiles: "This one thing I do." Dr. Turner was animated by this apostolic spirit. From early manhood to the close of life all that he had or was or hoped to be—all his powers of mind and body—were laid, willingly and gladly, upon the altar of this one noble purpose. To teach mankind that alcoholism is a disease, and a curable one, was the object of his life. For this cause came he into the world; for this he lived, and for this he prematurely died. To-day he sleeps in an unmarked and forgotten grave, but the sons who build sepulchres to the prophets whom their fathers have killed will yet do him justice, and the day is coming when the world will crown him as one of the benefactors of the race.

The effect of Dr. Turner's work was immediately felt in many ways. Governor Andrew, in his annual address to the Massachusetts legislature in 1863, said: "Drunkenness is a disease as well as a sin. We have long since legislated for its punishment; let us no longer neglect to legislate for its cure. By every motive of humanity and reason, by every law of duty, it challenges our consideration."

In 1868, the Massachusetts legislature appointed a joint special committee, consisting of five members from the Senate and nine from the House, "to consider the matter of inebriety as a disease." These gentlemen brought in a long and able report, in the course of which they said:

"The position taken by those who have given this subject a special investigation in the light of all the facts which bear upon it, is that the continued use of alcoholic drinks produces a disease peculiar and distinct from all other diseases; having a distinct pathology, and presenting post-mortem appearances unlike those of any other disease, being as characteristic as those of typhoid fever or pneumonia. . . . The fact that inebriation is a disease, a mania, and that it is both acquired and hereditary, being conceded, the next practical question is, Have such cases heretofore been properly treated, and if not, what is the correct treatment? We know they cannot be successfully treated at home; they ought not to be associated with criminals nor with the insane; neither should they be neglected."

In 1870, Dr. N. S. Davis, one of our most distinguished medical men, who has since been called to preside over the International Congress of Physicians, said in a published address:

"If the inebriate is the victim of a positive disease induced by the action of an alluring and deceptive physical agent, alcohol, will any number of moral lessons addressed to his intellect, or any amount of denunciation hurled at his degradation and his vices, cure or reform him? Or will his arrest, arraignment in a police court, and extortion of the few dollars he has left, as a fine, eradicate the disease that is preying upon the most delicate parts of his organization? Abundant experience throughout the civilized world answers these questions in the negative. The treatment demanded by the nature of inebriation and the interests of humanity is the same in kind as that awarded to the sick and insane."

The many private sanatoria for the treatment of alcoholism now found throughout the country testify that the seed sown by Dr. Turner has taken root and is now bearing a beneficent harvest. I, of course, do not here refer to those widely advertised institutions where secret nostrums are used in a routine way, and where usually the attending doctor does not know the composition of the remedies he is employing—these having been sent to him from "headquarters," where they are secretly prepared. No self-respecting practitioner can countenance such a concern. But I have reference to those ethically conducted sanatoria where alcoholism is carefully treated by specialists in this disease, and where the physicians are concentrating their thought and study upon the best methods that scientific research can devise for its cure. To such a place a physician may take his alcoholics and be cordially welcomed as a consultant, and get any information he desires regarding the remedies employed in the treatment of his patients.

The secret "cures" referred to above are, however, rapidly disappearing. The most widely known of these had, a few years ago, three or four establishments in Massachusetts, each one doing an immense business. Now all of them are closed, with one melancholy exception, and that has but a small fraction of the patients it formerly treated. So far as I know, all similar concerns that were organized to exploit secret nostrums are either dead or dying.

On the other hand, it is gratifying to note that the professional and scientific sanatoria devoted to this specialty have greatly increased, both in number and efficiency, during the last few years. More patients suffering from alcoholism and other drug addictions are being thus ethically treated and cured than ever before. There are few chronic diseases more prevalent than these, and few that are more curable, and I predict that their treatment will soon be rated among the most important specialties in the medical profession.

Clinical Department.

AN INTERESTING CASE OF LABOR COMPLICATED BY UTERO-ABDOMINAL FIXATION.

By JOSEPH M. RECTOR, M.D.,

ATTENDING PHYSICIAN TO EMERGENCY HOSPITAL IN JERSEY CITY; GYNÆCOLOGIST, OUT-PATIENT DEPARTMENT, JERSEY CITY HOSPITAL.

E. A——, forty years of age, was the mother of six children, the first five of whom were born into the world after a normal labor, while the birth of the last was instrumental. The menstrual history was good. There were no indications of pelvic trouble or uterine disease either past or present, except as hereafter stated.

In January, 1897, the patient first came under my observation complaining of the usual indefinite train of pelvic and vaginal symptoms. I made an examination and found a lacerated and everted cervix, with complete procidentia of the uterus, relaxed vagina, and lacerated perineum. I advised operation as being the means of affording the speediest relief, but the request was refused, whereupon I replaced the uterus and inserted a large inflated rubber-ring pessary, supplementing it with the usual office treatment. The patient improved somewhat, and after a short time ceased visiting my office. I had no further trace of her until after the lapse of about six months, when she again called to see me, in the mean while having subjected herself to the operation as I before had advised.

In March of the present year she became pregnant. In April I was first called to see her, and found her suffering from continuous vomiting and at times severe abdominal pains of an intermittent, contractile type. Creosote and opium mitigated her sufferings, but she was compelled to use the same until the sixth month of her pregnancy. She was averse to being examined, and thus I was ignorant of her exact condition as regards what operation or operations had been performed, until the time of her labor, which occurred on Thursday, December 14, 1899. The contractions of the uterus began in the morning about eight o'clock and continued throughout the day. The expulsive efforts followed each other in rapid succession, and at six o'clock in the evening of the same day I was called in attendance.

Examination of the abdomen showed the scar of a median abdominal incision midway between the symphysis pubis and the umbilicus, while stretching downward from the upper extremity of the scar was a broad, tense band of tissue which could be easily felt beneath the skin, marking the adhesion between the fundus of the uterus and the abdominal wall. During the contractions of the uterus, the over-developed posterior wall could be recognized, while the normal fundus and anterior wall below the adhesion were poorly developed and flabby, making no attempts at contraction or expulsion, but on the contrary forming a pouch into which a portion of the fœtus was forced and which rested upon and lay in front of the symphysis pubis. Vaginal examination was unsatisfactory until an anæsthetic was given. Nothing could be felt with the first and second fingers in the vagina. Upon insertion of the entire hand, an opening was felt at the vault marking the orifice of the cervical canal, the entire vaginal portion of the cervix had evidently been amputated. The opening in the canal with difficulty admitted the index finger, although pains had been continuous for the past ten hours. The internal os uteri was drawn upward with the vagina, resting about two inches above the sacral promontory and pointing directly backward. The occiput was presenting in the fourth position, and between the right parietal bone and the symphysis pubis could be felt the feet of the child. Passing the hand upward along the legs I found them flexed at the knees and resting upon the symphysis, while the thighs and pelvis were contained within the pouch above described and resting in front of the symphysis.

The anæsthesia was pushed to the full surgical degree. Complete dilatation of the remaining cervical canal was accomplished with the hand, and the membranes were ruptured. I deemed it inexpedient to deliver the child by the presenting part because of its failure to have already engaged the inlet, the existing complications, and the dangers to the child of a high instrumental delivery with an unmoulded head; therefore, after pushing the head upward and the lower trunk from within the pouch, I performed podalic version, and a living child was brought into the world. Confining my attention to the mother, I gave the partially asphyxiated child to Dr. Immanuel Pyle for resuscitation.

The hemorrhage following the delivery of the placenta was enormous. The uterus contracted but feebly; that portion above the adhesion contracted slowly, while the lower anterior portion did not contract at all. Hot diluted acetic acid was thrown into the uterus, while continuous manipulation was made from without; the upper posterior portion responded, but the lower anterior did not. Ice was then passed up into the pouch, and it at once contracted, thus causing the hemorrhage to cease.

After half an hour's continuous efforts Dr. Pyle succeeded in resuscitating the child. My attention was called by Dr. Pyle to the peculiar cry of the baby, and an examination revealed to us a deep depression in the skull over the right frontal region and a corresponding condition in the left occipito-parietal region. These depressions marked the points of compression in nature's attempt at natural delivery.

It has seemed best to me to report this interesting case, thus adding another proof in evidence of the disturbances which may arise from the formation of adhesions between the uterus and abdominal wall in child-bearing women. Such patients' suffering from symptoms referable to retroflexed, retroverted, or prolapsed uteri certainly call for some means of cure or relief, but when to accomplish that end we are obliged to jeopardize and endanger their future lives, and that of their unborn children, it becomes our duty to consider carefully before we act. The operations of Goff, Alexander, Mann, Edebohls, Wylie, Dudley, Kelly, and many others are far preferable, and in the end may save many lives for some more useful purpose.

A REMARKABLE CASE OF CHLORAL POISONING.

By PHILIP F. ROGERS, M.D.,
MILWAUKEE, WIS.

I was called a short time ago to the bedside of a middle-aged man, and found him suffering from the effects of prolonged worry and pretty hard drinking. He was restless and sleepless, and in a mental state bordering on melancholia, having repeatedly threatened suicide. He begged me to give him sleep, and along with gradual withdrawal of whiskey and substitution therefor of strychnine and tincture of capsicum I prescribed a two-ounce mixture containing chloral hydrate gr. x. and potassium bromide gr. xv. to the drachm, instructing the attendants to give him a teaspoonful every three hours with a double dose at bedtime if he was still restless, but no more. This was on Thursday. I was not sent for again till the following Monday, when the man's peculiar actions alarmed his friends. I found the patient curled up in bed with knees and chin approximated; his extremities were cold, and he was jerking and rolling fitfully about now and then to assume a new position. Breathing was slow and stertorous with frequent prolonged, loud, grunting expirations; the pulse was slow and soft, but full; the face was ashen gray with parched mouth and lips and swollen tongue, and there was almost complete stupor. On inquiry I found that since I had last seen him he had had the bottle of sedative mixture refilled four times, and had been drinking the stuff by the half whiskey-glassful. He had slept and been wakeful by turns, but was withal in a happy mood and invited those about him to drink with him, saying it was "great stuff." Sunday night he had been in a state of happy delirium nearly all night, jumping out of bed and wandering unsteadily from room to room, but toward morning he lapsed into the stupid condition in which I found him. During all this time he had eaten heartily, but had taken little or no alcohol and scarcely any of the strychnine mixture.

On Sunday his hand had been so unsteady that he spilled considerable of the medicine on attempting to take it, and the amount so lost was about one bottleful (two ounces). During the three days, then, Friday, Saturday and Sunday, he had taken no less than eight ounces of the mixture, or six hundred and forty grains of chloral and nine hundred and sixty grains of potassium bromide! The treatment consisted in the application of heat and a hypodermic injection of strychnine gr. $\frac{1}{15}$. In a few hours the man was sitting up and chatting pleasantly, saying he did not know when he had had such a good time, although he could remember distinctly nothing of what had happened. Being upbraided for disobeying orders, he said I did not understand his constitution; that he required large doses to obtain any effect from medicines, and that what I had ordered was entirely inadequate. He praised my medicine highly and thanked me warmly for what I had done for him; but the next day and for several days thereafter he had for his companions "devils" of a deeper indigo hue than he had ever known before.

In view of the enormous quantity of the drug taken I regard his escape from death as little short of miraculous, and attribute it to the fact that he had taken food freely and had frequent movements of the bowels.

Medical Record:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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New York, March 10, 1900.

BOARD OF CHARITIES OF THE STATE OF NEW YORK.

The thirty-third annual report of the board of charities contains much interesting matter. Never before has such activity in charitable legislation been witnessed in this State. No less than one hundred bills were introduced during the four months of the legislative session. The legislation recommended by the board to the legislature of 1900 is as follows: 1. The extension of the territory from which the New York Institution for the Blind shall receive State pupils; 2. An amendment to Section 698 of the Penal Code to prevent the sending of short-term offenders to the houses of refuge and reformatories for women. Much of the report is devoted to a history of the board's legal proceedings against the New York Society for the Prevention of Cruelty to Children.

The board reports the number and classification of beneficiaries in institutions subject to its supervision, October 1, 1899, to be as follows: Aged and friendless persons, 7,392; almshouse institution inmates, 11,251; blind in almshouses, 341; blind in other institutions, 414; deaf in almshouses, 94; deaf in other institutions, 1,548; dependent children, 31,218; disabled soldiers and sailors, 1,611; epileptics in almshouses, 316; epileptics in Craig Colony, 378; hospital patients, 8,223; idiotic and feeble-minded in almshouses, 1,153; idiotic and feeble-minded in State institutions, 1,303; juvenile offenders, 3,501; reformatory inmates (women and girls), 1,868; making a total of 70,611. The board calls attention to the urgent need of further provision for the feeble-minded and idiotic. The removal of the House of Refuge at Randall's Island from its present situation to one in the country is earnestly recommended by the board.

With regard to the Craig Colony for epileptics the report says: "The experience of the past three years is sufficient to encourage the belief that this greatest custodial effort of the State of New York will meet the anticipations of its founders. Time for gradual and carefully studied development is necessary, and it cannot consistently be expected that the complete organization and establishment of so extended an experiment can readily be effected. For success in this as in all similar enterprises a scrupulous attention to details of development and painstaking economy are essential. The number of dependent epileptics in the State reported to the board at the time the recent census was taken is 785, and the Colony expects to be able to receive 270 of this number within a comparatively short time."

The other institutions inspected were, on the whole, in a highly satisfactory condition, and it is gratifying to note that by removing children from Randall's Island and placing them at board in families the mortality has been reduced to a point far below that of the previous years.

ADULTERATION OF FOOD.

This is a matter which has within the past few years assumed a somewhat alarming phase. While granting that in many instances the dangers arising from this cause have been greatly exaggerated, and that for the most part the chemicals used in the adulteration have little harmful effect, yet at the same time this line of reasoning does not in any way justify the practice. No sane person will be found to assert that the so-called preservatives are beneficial to health; on the contrary it is certain that they are all harmful in a greater or less degree. The truth undoubtedly is that foreign substances are added for the purpose of gaining a larger profit than would be possible if the article offered for sale were what it is labelled. An individual has a right when he buys a food commodity to obtain exactly that which he requires, and this right should be protected by law. It is said, and there would seem to be no cause to doubt the truth of the statement, that the adulteration of food is carried on to a greater extent in the United States than in any country in the world. The various States are unable by their own police regulations effectually to protect their citizens from such practice. Therefore the only course to be pursued is, in the words of the memorial from the National Pure Food and Drug Congress, held in March, 1898, "to secure suitable legislation of a national character to prevent the adulteration of food, drinks, and drugs, and to secure the enforcement of such laws."

AN INQUIRY INTO THE LOCAL GOVERNMENT OF THE CITY OF NEW YORK.

A bill has been introduced into the Assembly for the purpose of authorizing the appointment of a commission to inquire into the local government of the city of New York and the charter thereof, and to suggest legislation thereon. The proposed commission, consisting of fifteen persons, is to be appointed by the governor thirty days after the bill takes effect. The powers to be placed in the hands of the commissioners will be considerable, and the result of their investigations should be for the public weal. Nothing is mentioned in the provisions of the bill as to the constitution of the commission, but the suggestion has been made that at least one physician should be included among its members. A consideration of the charter must necessarily embrace many matters connected with the public health, and it would therefore appear fitting that the medical profession should be adequately represented. There would be no necessity to make this a provision of the bill, but in the event of its becoming law the governor should be urged to appoint one or more members of the commission from among the physicians of this city. We are of the opinion that this suggestion should be acted upon both in the interests of the population of New York City at large and of the medical profession.

THE SOLUTION OF AN ECONOMIC PROBLEM.

We live in an age of fragmentary knowledge. Everybody is developing some independent line of thought, discovery, or action, but as a people we do not know what our contemporaries are doing for us until the fact-fragments are collected and digested.

One of the first books of the year will doubtless be one of the most useful and practical in the coming century, for the reason that it is the summing up of methods and theories, with a practical solution of a medico-social problem. "The Care and Treatment of Epileptics," by William Pryor Letchworth, LL.D., is a unique work. It contains a critical summary of the various methods that have been adopted for the support and the amelioration of this class of dependents.

Mr. Letchworth traces the first charitable attempts made over a century ago to relieve epileptics, down to the more efficacious and modern methods adopted in France and Germany. The Bethel colony near Bielefeld in Westphalia he describes as the most far-reaching and beneficent in its results. The colonization system for epileptics, as put into working practice there, has become the accepted model for philanthropic work among them to-day. And it was this system, as examined by Dr. Peterson, and worked up by such able men on the State Charity Commission as the late Oscar Craig and Mr. William Letchworth himself, that brought about, in New York State, the establishment of Craig Colony.

It is not the extolling of a philanthropic scheme that makes this book valuable; it is the practical discussion of site, labor, buildings, restrictions, diet, training, supervision, economics, nursing, and treatment of epileptics that illustrates what has been done in this beautiful Genesee village, with its farm lands and orchards, to make the epileptic a useful, happy member of the community, in spite of his fits. He contrasts the greater benefits of the village life as against the institution life, such as is very ably carried out in the Ohio Hospital for Epileptics at Gallipolis. He shows the practical proof of the statement so often made by Dr. Spratling, medical superintendent of Craig Colony, that "out-door work is the keystone in the arch of treatment of epilepsy." He shows how this very out-door work provides the vegetables and dairy produce which are recognized as the best diet for such patients, and how the tonic of fresh air, combined with the soporific effect of tired muscles, induces sleep and renders the long-established bromides unnecessary.

Five States in the Union, including Massachusetts, New Jersey, and Texas, have made some provision for this dependent class of unfortunates, the provisions of which Mr. Letchworth has discussde in detail. There are also many private institutions, but none seems to give such help to the individual nor renders him capable of as much self-support as the methods adopted by Craig Colony.

The chief value of Mr. Letchworth's historical sketches and descriptions of methods of work is that it is now possible for every State in the Union to establish just such a colony without the labor of breaking the ground of new ideas and untried philanthropy, and of slowly bringing public opinion and charity commissions to the sticking-point.

THE SIEGE OF LADYSMITH.

The siege of Ladysmith adds yet another page to the already long list in the history of beleaguered towns. The condition of the garrison and inhabitants of the place when relief came affords further evidence of the capacity of the human body to withstand the attacks of famine and disease, if buoyed up and stimulated by a sense of duty. In brief, here is one more instance of the influence of mind over matter.

The state of the survivors in Ladysmith is said to have been pitiable; they were reduced to eating horse and mule flesh, and the water of the Klip River, whence they derived their supply, was so contaminated by the Boers as to be almost undrinkable. The putrid water was undoubtedly the cause of the greater part of the sickness, and the question is being asked whether the shut-in force was sufficiently supplied with filters, or, if so, whether their use was strictly enforced. The contention has been put forward by many experts that water, however much it may be infected, if passed through a reliable filter will have no injurious effect upon the consumer. This is a point that up to the present has not been made altogether clear, and requires additional proof before being accepted as an undeniable fact. The campaign in South Africa should go far toward solving the problem. Probably the efficacy of even the best of filters has been overestimated, or it may be that under the "stress and storm" of siege, and owing to the well-known carelessness of soldiers, it was found impossible to insist upon the general use of this method of purifying water. At any rate irrefutable figures show that during the enforced occupation of Ladysmith by British troops, eight thousand, or more than two-thirds of the total number, passed through hospital, a goodly proportion of which we may take it were suffering from the consumption of polluted water.

The war in South Africa viewed from a medical standpoint has taught and will teach many useful lessons, not the least of which is the need of keeping up the army medical service to its proper strength. The task of making "bricks from straw" is extremely difficult, and this country as well as Great Britain has recently learned the absolute folly of a policy of unpreparedness.

News of the Week.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending March 2, 1900. February 26th.—Passed Assistant Surgeon F. W. Olcott detached from the naval recruiting rendezvous, Detroit, Mich., and ordered home and to wait orders. Assistant Surgeon J. A. Murphy ordered to the Pensacola navy yard. February 27th.—Passed Assistant Surgeon W. F. Arnold detached from the Pensacola navy yard and ordered to the naval hospital, Norfolk, Va., for treatment. Assistant Surgeon D. H. Morgan ordered home from the Asiatic station and to wait orders.

Vital Statistics of Havana.—We have received from Major John G. Davis, surgeon U.S.V., and chief sanitary officer of Havana, some interesting statistics in regard to births, marriages, and deaths in that city during the ten years ended December 31, 1899. In that period there were 40,509 births, 9,596 marriages, and 101,932 deaths, an apparent excess of 61,423 deaths over births. The death rate was heaviest during 1898, 1897, and 1896 in the order named. Of the total number of deaths during the decade 5,413 were from yellow fever, and 96,519 from other causes. Of the 40,509 births during the ten years covered by the report, 34,498 were whites, 2,248 negroes, and 3,763 mulattoes. Of the births 26,489 were legitimate and 14,020 were illegitimate. Of the marriages during the same period 9,068 were whites, 394 mulattoes, and 134 negroes.

Dr. Andrew J. McCosh, who has been suffering from septic poisoning resulting from a cut on the arm while performing an operation, is now happily convalescent.

A Leper Refused Admittance.—A young man from Barbados was recently detained by the immigration office and ordered to be returned to Bridgetown. He was the son of an official there, and himself had held a clerkship in one of the colonial government offices. A few months ago he became afflicted with a malady which several physicians who examined and treated him said required cool weather for its cure. He intended going from here to Canada.

To Abolish the Office of Coroner.—Dr. Henry has introduced in the Assembly a bill to obtain more accurate determination of the causes of death in cases of those who have died suddenly or under conditions which warrant the suspicion of crime. The bill will confer on boards of health certain duties and powers in the investigation of such deaths, and abolishes the office of coroner.

Surgeons in South Africa.—It was announced recently in Parliament that three hundred and sixty-eight regular army surgeons and one hundred and thirty-three civilian surgeons were now with the British army in South Africa, and that twenty-eight more civilians were under orders to go to the Cape. Of the other regular surgeons, three hundred and seventy-seven were at colonial stations and one hundred and eleven at home stations, in addition to one hundred and twelve retired officers who were temporarily employed on home duty. The organization of the medical staff in this war has been praised by every one competent to speak or cognizant of the facts. Even such a fuzzy old fossil as the Duke of Cambridge, who did all in his power when commander-in-chief of the army to degrade and humiliate the medical officers, has been forced to the confession that one of the few bright things of the war has been the magnificent work done by the army medical department under Surgeon-General Jameson.

Smallpox among Students.—According to a press despatch nine students of the Detroit College of Medicine are confined in the pest hospital with smallpox, and two others are at their homes in the country with what is believed to be the same disease. About two weeks ago the students dissected a negro's cadaver, shipped from the South, and among those present were the eleven now ill. The cases are all mild, as all those affected had been vaccinated in infancy. A freshman at the Sheffield Scientific School at Yale University was recently attacked with smallpox. All his associates who had been in his company recently have been revaccinated and isolated.

A New Public Hospital for Crippled Children.—The Ways and Means Committee of the Assembly has reported favorably the bill appropriating $10,000 for the establishment in New York City of the "New York State Hospital for the Care of Crippled and Deformed Children." There is to be a board of five managers, appointed by the governor.

Casualties at Ladysmith.—The following were the total casualties among the British troops during the siege of Ladysmith: Killed or died of wounds, 24 officers and 236 men; died of disease, 6 officers and 340 men; wounded, 70 officers and 520 men, exclusive of white civilians and natives.

Disinfection of the Urine in Typhoid Fever.—The New York City board of health has issued a bulletin calling attention to the fact of the frequent presence of typhoid bacilli in the urine of persons suffering from this disease, and urging upon practitioners and those in attendance upon the sick the importance of the disinfection of the urine in such cases. The best disinfectant for this purpose is carbolic acid, it is effectual, cheap, and easily obtained. Urine to which has been added one-third of its volume of a 1:20 solution of carbolic acid is thoroughly disinfected in a few minutes. The best method is to keep the urinal or bedpan partly filled with the disinfecting solution at all times. In this way any germs present in the urine are almost instantly destroyed. It is believed that careful disinfection of the urine and fæces in typhoid fever would eventually produce a sensible diminution in the number of cases of this disease occurring in New York City, and a corresponding reduction in the death rate from it.

To Shorten the Medical Course.—In response to an appeal by college presidents to admit to the second year of the medical course graduates qualified in the branches taught in the first year of the course, the Pennsylvania State Medical Council adopted the following resolution:

"*Resolved*, That in the judgment of the council, when the medical course of a literary college, as proven by the examination of the student by the medical college, covers the entire work of the first year of actual medical study, such course may be accredited by the medical college as the first year of medical study required by law."

The Plague is not yet entirely stamped out in Honolulu, three fatal cases having occurred there on February 19th. The victims were Chinese, two men and one woman.—It is reported from Texas that there have been several cases of bubonic plague on the island of Cozumel, off the coast of Yucatan.

Pennsylvania State Medical Examinations.—The next examinations by the Pennsylvania State board of medical examiners will be held from June 26th to 29th for graduates of regular medical colleges at Pittsburg and Philadelphia, for graduates of homœopathic colleges at Philadelphia, and for graduates of the Eclectic College at Harrisburg.

Fraud in Medical Examinations.—In a report presented by a committee of the Pennsylvania State medical examining-board, appointed for the purpose of investigating charges that graduates of medical colleges had obtained in advance the lists of questions used in recent examinations for the license to practise medicine, it is admitted that the questions were in the possession of some of the candidates prior to the examination in June, 1899, and the office of the public printer is suggested as the point of leakage. It is added that the percentage of candidates having prior possession of the questions was comparatively small, and that of those having the questions almost all would have passed the State examination.

The Hahnemann Monument.—A joint resolution introduced by Representative Dalzell, granting permission for the erection of a monument in honor of Samuel Hahnemann, the founder of homœopathy, has passed both houses of Congress and has been signed by the President. The committee on the library, to which this bill was referred, reported it back to the House favorably, and recommended that the chief of engineers, United States army, the chairman of the joint committee on the library, and the chairman of the monument committee select a site to build the foundation. The monument will be of gray granite with statue and bas-reliefs of bronze. It will be an elliptical exedra with a sitting statue of Hahnemann on a pedestal in the centre. It is expected that the corner-stone will be laid on April 11th, the one hundred and forty-fifth anniversary of Hahnemann's birth.

Tenement-House Reform.—A joint bill has been introduced into the New York Senate and Assembly to effect a reform in the laws governing tenement houses. The bill authorizes the governor to appoint a commission to inquire into the New York City tenement question, and to report to the next legislature a code of tenement-house laws.

Philadelphia County Medical Society.—At a stated meeting held on February 28th, Dr. Andrew J. Downes read a paper entitled "Siphonage of the Partitioned Bladder," with the demonstration of a new instrument designated "the separate urine siphon." Dr. J. Madison Taylor presented the report of the committee to secure a pay hospital for contagious diseases, and a resolution was adopted favoring the establishment of such an institution. Dr. George C. Stout read a paper on "Some Diseases in Children."

A New French Hospital.—The board of managers of the French Benevolent Society has decided to erect a new hospital building. The present hospital of the society was established in 1881. It contains seventy beds and twelve private rooms. The capacity of the building which it is proposed to erect will be one hundred and fifty beds and twenty-five private rooms, besides sun parlors for convalescents and the inevitable and unneeded dispensary.

The New Orleans Polyclinic.—A report being in circulation that this school has been closed on account of the prevalence of smallpox in New Orleans, Dr. Isadore Dyer writes that the smallpox situation in the city has at no time justified the apprehensions of any intending visitors. He says that the Polyclinic will not close until the end of the regular term in May.

Hospital Corps of the National Guard of the State of New York.—Assemblyman Cotton has introduced a bill into the legislature amending the military code by providing that there shall be attached to each regiment in the National Guard a pharmacist who is to rank as first lieutenant; two hospital stewards instead of one, and three if the regiment consists of more than ten companies. The bill also increases the number of members of a regimental hospital corps from thirteen to twenty-five.

Obituary Notes.—Dr. Christopher Prince died on March 4th, at his home in Irvington-on-Hudson, from pneumonia. He was born in Brooklyn in 1823. He studied medicine under Dr. Willard Parker, and was graduated from the College of Physicians and Surgeons in this city in the class of 1845. For some years he lived at Fort Hamilton. He subsequently moved to New York, where in 1872 he was appointed police surgeon, which place he resigned to accept the surgeonship of the fire department. A few years later he moved to Irvington. He was a member of the Academy of Medicine, the County Medical Society, and the Pathological Society, and was for some years chairman of the obstetrical section of the Academy.

Dr. Clarence Edwin Beebe, a well-known homœopathic practitioner of this city, died March 1st. He was a graduate in arts of Yale and in medicine of the medical department of the New York University in the class of 1873. He was assistant surgeon of the Seventh Regiment Veteran Corps.

Progress of Medical Science.

Medical News, March 3, 1900.

A New and Improved Method of Entering the Abdominal Cavity in the Ileocæcal Region, with Special Reference to the Removal of the Vermiform Appendix.—George R. Fowler states that the incision in all cases of appendicitis should be so planned as to include removal of the appendix; thus there must be free access to the base of that organ. Attempts to fix arbitrarily the exact location of the base of the appendix in its relation to the anterior abdominal wall have proved futile on account of the varying anatomical relations in different individuals. Fowler's favorite incision is so planned that its centre strikes a point corresponding to the intersection of a line extending from one anterior superior spinous process of the ilium to the other, with a vertical line drawn half-way between the median line and the right anterior superior spine. He then describes his method of procedure in detail, summing up its advantages as follows: Ready access to the ileocæcal region and ample room for manipulation; weakening of the abdominal wall and liability to surgical hernia are reduced to a minimum by (*a*) incising the necessary structures so that an immediate, firm, and permanent union is secured, and (*b*) avoiding injury to the vessels and nerves of the involved parts.

Notes on Plague.—H. E. Deane draws the following lessons from Indian experience of the plague: The fact is emphasized that compulsory measures have failed to have the desired repressive effect on the disease, because the populace have been dead against them and the authorities. The people distrust the possible stringencies that might be imposed on them in an epidemic of more formidable proportions. Occidentals dislike to have their sick removed to hospitals and their homes disturbed. They suppress information concerning the disease as far as possible. Even the medical practitioners afford little or no help in this way, for fear of losing practice. The whole question is a medico-political one in which medicine has to be subservient to policy. Deane believes that hygienic precautionary measures will do more to stamp out the plague than all the bayonets of the British army.

Status of Medical Practice in Puerto Rico.—George G. Groff gives the essential points in the order regulating the practice of medicine, pharmacy, and dentistry in Puerto Rico. An examining committee of three physicians, two pharmacists, and one dentist is appointed to conduct examinations under rules made by the superior board of health. The members of this committee must all be of ten years' standing and recognized professional ability, and must speak English. The superior board of health appoints the president and secretary of this committee. The examinations are all written and the papers submitted to the board of health, by whom licenses are issued to the successful candidates. Examination fees are: For physicians and surgeons, $25; pharmacists, $25; dentists, $25; practicantes, $15; professional nurses, $10; midwives, $5. Persons who violate the order may be punished by both fine and imprisonment.

The Xiphopages, Rosalina and Maria.—Alvaro Ramos describes his operation which he undertook to separate these wonderful twins. All possible precautions were taken in order that if the desired result could not be attained there should be no disastrous effect. Unfortunately the parenchyma of the two livers was continuous, and further steps in the separation were abandoned. The twins made a good recovery.

A Case of Salivary Calculus from the Submaxillary Gland.—S. H. Dessau reports this case in which the condition suggested some slight suspicion of Ludwig's angina. Suppuration and spontaneous rupture occurred, followed by recovery. The calculus was passed from Wharton's duct and measured eleven-sixteenths by twelve-sixteenths of an inch.

Again the Question of Cancer.—By Roswell Park. See MEDICAL RECORD, vol. lvii., p. 212.

Journal of the Amer. Med. Association, March 3, 1900.

Chancre of the Lip in a Child Seven Months Old.—L. Duncan Bulkley says that while extragenital chancres innocently acquired are not so very rare, instances of their occurrence at the early age of seven months are seldom seen, this being the youngest subject in whom he has seen it among nearly two hundred cases of extragenital chancre coming under his observation. Careful questioning of the mother failed to reveal any source of the infection. The parents. however, were from Finland, where syphilis is very common, and the child was bottle-fed. It is more than probable, therefore, the writer thinks, that some friend while caring for the child infected the nipple of the bottle when testing the food. This is a trick common among nurses, who then place the nipple in the child's mouth without washing it.

Legislative Problems in the Regulation of Marriages.—C. W. Parker considers the obstacles in the way of legislation regulating marriage. He then suggests as a partial remedy, until education shall have blazed a path for more stringent measures, a bill which, while calling for the examination of men, shall exempt women, thus doing away with what he calls "the sentimental objection," which bill shall also be drawn so as only to include those with tuberculosis when actually developed, dipsomania when positively proved, and syphilis in all its stages, together with actual imbecility.

Can the State Suppress Genito-Urinary Diseases?—Ferd. C. Valentine answers this question by the following summary: (1) Illegitimate relations between sexes have always existed; (2) moralists, theological or lay, could never induce the suppression of vice; (3) physicians know that men who have suffered most intensely from genito-urinary disease will expose themselves to new infection even long before they are cured. The writer sees the only remedy in the proper enlightenment of humanity, especially the frank education of the young in these matters.

Restriction of Marriage for the Prevention of Communicable Diseases.—Albert H. Burr instances the Creed bill, passed by the senate of South Dakota, as being a step in the right direction. He says that similar bills have been presented or are ready for presentation in several other States, and he confidently expects to see State after State follow this lead, as the public become sufficiently educated to realize its importance.

Restrictive Marriage Legislation from the Standpoint of the Wife, Mother, and Home.—Mrs. Alice Lee Moqué asks: "May it not be that surgical science shall be the means of giving humanity the panacea for the crime committed against progeny by the criminal and degenerate classes? The writer refers to a method for effecting the sterilization of women as practised by Professor Spenelli, of Turin.

The Legal Restriction of Marriage for the Prevention of Pauperism, Crime, and Mental Diseases.—Albert H. Burr thinks that the time is not yet ripe for legislation in this matter, and will not be until the laity have been educated by the medical profession up to the point of demanding for themselves the necessary enactments.

Simple Device for Rapid Hypodermoclysis in Combating Shock.—Evan O'Neill Kane says the objection to hypodermoclysis has been that it is too slow in action. To obviate this he has devised an apparatus with which four or more needles may furnish fluid to the tissues at the same time, from a single receptacle.

Two Practical Points in the Care of the Tuberculous.—William Porter urges the importance of two indications in tuberculosis—relief of heart weakness and of constipation. He believes these conditions to be a part of the direct progress of the disease, and complications of no little gravity.

A Clinical Study of Four Hundred and Fifty Cases of Scarlet Fever.—Annie Sturges Daniel presents a detailed study of scarlet fever occurring in children under twelve years old in the tenement houses of the East Side in New York City.

Ureteral Calculus.—Howard A. Kelly reports a case of ureteral calculus in which the diagnosis was made by means of the wax-tipped bougie. The calculus escaped per vias naturales after forcible dilatation of the ureteral orifice.

Value of Formaldehyde in the Disinfection of Buildings, Rooms, and Cars.—John E. Owens reports gratifying results from experiments made with the German forty-per-cent. solution of formaldehyde.

Two Hundred and Twenty Cases of Hemorrhoids.—These cases, reported by Joseph B. Bacon, were all successfully operated on by the ligature method, with only one complication.

New York Medical Journal, March 3, 1900.

Rheumatic Gout.—B. C. Loveland considers this affection worthy of being called a painless rheumatism, and studies the clinical aspects of the disease. Illustrations and radiographs are given of cases which have come under his own observation. Treatment is comprised under the headings of dietary, hygiene, and hydrotherapy, and medicinal. He finds the most useful remedies to be the salicylate and benzoate of sodium and the iodide of potassium. It may be necessary to study each individual case for some time before finding the alkali which will give the best effects.

A Case of Ossification of the Uterus.—C. Jeff Miller reports the case occurring in a girl aged sixteen years, with absence of the vagina, and in the space normally the site of the uterus and appendages was a mass which was removed by abdominal incision, and which proved to be composed of true compact bone. No trace of ovarian or tubal structure could be found.

Typhoid Fever.—C. E. Page gives some general observations on the subject and describes what he considers to be the physiological treatment including physiological diet. He advocates the Brand bath, temporary fasting for diarrhœa, and free use of water internally. He considers that college teaching is very imperfect in the matter of fever therapy.

Another Accommodation of the Eye.—N. B. Jenkins calls attention to the power manifested by the eye in "adapting itself to badly fitting glasses." This "other accommodation" of the eye is the chief stock in trade of the wandering spectacle expert, and is the sheet anchor of unscientific refraction methods.

A Partial Study of a Child Presenting Multiple Deformities.—G. R. Elliott gives illustrations of a case occurring in the practice of J. Fraenkel and B. Onuf. The deformities were double drop-wrist, double drop-foot, subluxation of the left hip joint, and a forward dislocation of the right radius.

Thirty-two Cases of Typhoid Fever without a Death.—J. C. Crist advocates in his treatment of the disease bathing, milk with lime-water (but if this disagrees, he substitutes soft-boiled eggs, meat broths, and soups), and carbonate of guaiacol for the intestinal symptoms.

Primary Hemorrhage following Amygdalotomy.—A case in a woman aged twenty-six years is reported by G. B. Hope. Bleeding was finally checked by application of the galvano-cautery after the failure of cocaine, antipyrin, cold, and hydrogen peroxide.

Some Therapeutic Notes.—Philip Zenner commends the use of apomorphine in tachycardia and cacodylic acid in anæmia.

Boston Medical and Surgical Journal, March 1, 1900.

Psychology and Heredity.—Robert MacDougall, in concluding his article from the previous number, compares the Spencerian and Weismannian theories, and says that the moral problem is absolutely different according as we hold to one or the other. According to the first the effects of use and disuse are inherited, and the cumulative results of right thinking and right living in the end convert bad stock into good stock. Restraint, discipline, the conformance to a higher life are fundamentally hopeful. Under the Weissman concept there is no hope—the bad stock is no more got rid of by discipline and culture than are the impurities of a river by filtration of the water on the part of those living below the source of pollution.

The Relative Humidity of Our Houses in Winter.—Robert DeC. Ward says that the present means of heating our houses are wretchedly inadequate from the point of view of supplying sufficient moisture. The relative humidity of the air coming from an ordinary furnace may be somewhat increased by increasing the size or the number of the evaporating pans in the furnace, or by placing pans of water on, or better still within, the registers. Dr. H. J. Barnes has found that with a relative humidity raised from thirty-one per cent. to fifty-three per cent., his office is comfortable at a temperature of about 65°, whereas before a temperature of 70° to 71° was required.

Vivisection in Harvard Medical School.—James J. Putnam writes a strong paper in denial of charges brought against physiological investigations, meeting the various accusations and successfully disposing of them, showing that they are made in ignorance of what is really done in vivisections, of the actions of drugs used, and of the value of results obtained. He pleads with investigators, physicians and laymen, to oppose the bill to restrict experimentation on living animals, since the object of vivisection is to diminish pain in both human beings and animals by increasing our knowledge of the conditions which underlie health and disease.

Stricture of the Ureter a Possible Result of Laceration of the Cervix Uteri, and Uretero-Vaginal Fistula a Result of Trachelorrhaphy.—E. C. Dudley describes an interesting case.

Perinephritic Abscess Involving the Appendix.—Hugh Williams describes a case in which the appendix was probably secondarily involved. Recovery followed operation.

Philadelphia Medical Journal, March 3, 1900.

Cultivation of the Typhoid Bacillus from Rose Spots.—Mark W. Richardson reports the results of six cases in which a bacteriological culture examination was made of the exanthem in typhoid fever. In five of these cases the bacilli were found from two to twelve days (average about six) before the Widal reaction was obtained. The writer believes, therefore, that the method may be of diagnostic service.

Exploratory Laparotomy under Local Anæsthesia for Acute Abdominal Symptoms Occurring in the Course of Typhoid Fever.—Harvey Cushing reports five cases of this description, in one of which recovery occurred, and discusses the advantage of cocaine anæsthesia in such operations.

Typhoid Fever in New Orleans.—P. E. Archinard discusses the causes of the prevalence of the disease in this city, and gives a summary of twenty-two cases occurring in the practice of several physicians. Like all other germ-diseases in New Orleans, he says, typhoid fever is there of a decidedly benign type.

Monocular Diplopia in Typhoid Fever.—Edward B. Heckel reports a case of typhoid fever in which the diagnosis was not made because of the irregularity of the symptoms, one of which was a monocular diplopia lasting two days. Subsequently the patient relapsed into a typical typhoid condition.

Three Cases of General Convulsions in Typhoid Fever.—Thomas Ash Clayton reports three cases of this rare complication, two of which appeared to be due to the action of the toxins on the nervous centres, the other possibly being a case of intracranial thrombosis or hemorrhage.

The Therapeutic Use of Water.—George P. Sprague discourages a resort to hydrotherapy by those unable to judge of its value by its physiological effects. But when its physiological effects are kept in mind the scientific application of water is a valuable means of combating disease.

Brand Treatment.—J. C. Wilson and J. L. Salinger present a summary of 1,904 cases of typhoid fever treated during the past ten years by systematic cold bathing combined with the administration of drugs as indicated. The mortality was 7.5 per cent.

The Nervous System in Typhoid Fever.—Edward E. Mayer reports several cases in which the nervous symptoms were especially marked. He says that typhoid fever is as much an infectious disease of the nervous system as of the abdominal organs.

A Case of Suspected Typhoid Fever Shown to be Acute Catarrhal Otitis Media without Pain.—Charles H. Burnett reports a case in which paracentesis of the drum membrane was followed by a speedy subsidence of the fever and delirium.

The Diagnosis of Perforation in Typhoid Fever.—Alexander McPhedran says this accident often occurs unaccompanied by strong symptoms. Persistent pain is perhaps the most constant sign in these marked cases.

Surgical Sequelæ of Typhoid Fever.—Under this head Martin B. Tinker reports cases of œsophageal stricture, hip-joint ankylosis, costal osteomyelitis, and spondylo-arthritis.

Typhoid Fever Complicated by Meningitis.—H. M. Fischer reports a case in which the bacillus typhosis was found in cultures made from beneath the cerebellar meninges.

Water-Borne Diseases.—E. G. Matson advocates sand filtration of a city water supply as the only practical method of purification which has stood the test of experience.

The Treatment of Typhoid Fever.—Frank Billings advocates the cold bath with friction, the effect of which is to increase enormously the elimination of toxins.

The Ocular Complications of Typhoid Fever.—G. E. de Schweinitz discusses affections of the eye which may occur during or after an attack of this disease.

Observations on the Gruber-Widal Reaction in Typhoid Fever.—By Aloysius O. J. Kelly and Alexander A. Uhle. See Medical Record, vol. lvii., p. 193.

The Duty of the Physician in Preventing the Dissemination of Typhoid Fever.—By Thomas G. Ashton. See Medical Record, vol. lvii., p. 193.

The Value of Clinical Laboratory Methods in the Diagnosis of Typhoid Fever.—By J. H. Musser. See Medical Record, vol. lvii., p. 193.

Preventive Inoculation and Serum Therapy of Typhoid Fever.—By Joseph McFarland. See Medical Record, vol. lvii., p. 193.

The Examination of Urine for Typhoid Bacilli.—By Norman B. Gwyn. See Medical Record, vol. lvii., p. 193.

British Medical Journal, February 17 and 24, 1900.

A Modification of the Operation of Inguinal Colotomy.—In this operation, described by R. Cozens Bailey, after the abdomen had been opened and a loop of sigmoid flexure drawn out in the usual way, the proximal arm of the U-shaped sigmoid loop was then stitched all round to the edges of the incision in the external oblique muscle by a row of sutures which penetrated the external coats of the bowel only. A second incision a little over one inch in length was then made, parallel with the first and about two inches below it. This, which was placed just above Poupart's ligament, exposed the surface of the external oblique. The band of skin and subcutaneous tissue between the two incisions was next freed from the subjacent structures with the handle of the scalpel, and the loop of intestine drawn out through the lower wound, where it was subsequently kept in position by a glass rod passed through the mesentery. The upper skin wound was closed. The object of the operation as described was to allow the pad to make pressure upon a portion of the length of the wall of the viscus as well as upon the opening itself, and thus to obtain more efficient control, as in Frank's method of performing gastrostomy.

Notes on Some Cases of Gunshot Wounds from South Africa.—These cases, reported by William Dick, include wounds of the head, neck, and chest, and abdomen. They were mostly caused by Mauser bullets, and none of them received any operative interference. The author says it must be concluded from these cases that Mauser bullets do not carry with them septic infective material. The manner in which these wounds heal is held to be matter for future investigation—possibly, the wounds being small, extravasation is prevented by contraction, this contraction being rapidly followed by plastic effusion, resulting in permanent occlusion of the openings. Perforations of the bones seem to be accompanied by little or no fissuring, and heal as rapidly as wounds of the soft parts. Perforations of the lungs also heal quickly and give rise to very few acute symptoms.

A Case of Bullet Wounds of the Chest.—F. A. Saw reports a case of wound by a Mauser bullet. From careful measurements of the wounds of entrance and exit it was found that both lungs must have been traversed by the bullet, though its exact course and how the large structures in front of the vertebral column escaped could not be explained. The symptoms—temporary sensations of paralysis of the limbs, followed by retention of urine—would suggest that the bullet grazed the body of a vertebra. Considerable pain was suffered at the point of the right shoulder, which is generally associated with some lesion of the liver. The patient made a rapid recovery, was up in two weeks, and now, a month from the date of injury, is practically well save for a little dyspnœa on exertion and slight pain on taking a deep inspiration.

Twin Pregnancy with Central Placenta Prævia.—This case occurred in the practice of H. Oliphant Nicholson. The patient was successfully delivered and appeared to be rallying, when, on making a movement to turn in bed, she suddenly expired, about six hours after the termination of the labor. The author points out that the risk to the mother must be much more grave when this condition exists with a twin pregnancy, because it would not always be possible to separate the placenta entirely, thus giving the patient time to react from the effects of hemorrhage before emptying the uterus.

An Analytical Account of Fifty-seven Cases of Puerperal Infection.—In giving an account of these cases the author, W. Edgar Macharg, has not attempted classification, simply arranging them according to result, as fatal or non-fatal. The writer has attempted to bring into relation and prominence the chief points of interest in the total number of cases, at the same time giving particular attention to such as came to post-mortem examination. He hopes that the results may be found of value as being founded on a consecutive series in the practice of one observer.

A Case of Placenta Prævia and Rupture of the Uterus.—This case, reported by James Pearse, is interesting as having ended in recovery with practically no treatment. In order that union might not be disturbed the bowels were kept locked for a week, and during this time douching was avoided for the same reason. The author says that while laparotomy is undoubtedly the ideal treatment for this complication, such cases as the above serve to prove that even when this is impossible the outlook is by no means hopeless.

On the Use of Antistreptococcus Serum in Puerperal Septicæmia and Erysipelas.—Alex J. Anderson reports three cases, one of puerperal septicæmia and two of erysipelas, in which, after trying the older methods for a time, he used the serum as a last resource with excellent results. The author thinks the effects of the serum should be watched from hour to hour, day and night, on account of its depressing effect on the circulation, which lasts several days after the injections have been stopped.

Frequent Dislocation of the Right Shoulder.—P. O'Connell reports the case of a stout, well-built man, with large, powerful shoulder muscles, who constantly dislocates the right shoulder-joint. If he throws his hand above his head, or if he receives a slight blow on the shoulder, the head of the humerus slips, sometimes into the axilla, sometimes under the pectoral muscles. In one instance after the patient had flung his arm about in drunken sleep, spontaneous reduction took place.

Report on Three Cases of Gunshot Wound.—A. P. Blenkinsop reports that these three cases of self-inflicted gunshot wounds demonstrate the effects of small-calibre bullets and cordite ammunition, which effects are markedly different from those produced by the older form of rifle. Their chief interest from a medico-legal point of view rests in the fact that there was no scorching or tattooing of the tissues, although in each case the rifle must have been held very close to, if not touching, the skin.

Penetrating Wound of the Bladder and Rectum from the Buttock.—In this case, reported by J. R. Dodd, the wound of the buttock was opened up into the rectum as in the operation for fistula; the catheter was tied into the bladder, and the usual measures were taken for checking hemorrhage, which, however, continued for several days. With the exception of a severe attack of epididymitis in the left testicle, the patient made an uninterrupted recovery.

A Case of Exploratory Operation for Dilatation of the Stomach.—Ernest A. T. Steele thinks that the patient in this case would have recovered if the operation could have been undertaken before she was worn out with the constant retching. As it was, the retching ceased after the operation, and there was no pain, but a slight diarrhœa occurred and seemed to turn the scale, and the patient died suddenly with symptoms of cardiac failure.

The Bromide Sleep.—In this case, reported by Frank C. Ford, an epileptic lad, aged sixteen years, took nearly two ounces of potassium bromide in forty-eight hours. Although the stupor was marked, the writer was impressed with the comparatively slight effect of so large a dose, and he infers that manifestation of bromism depends rather on individual idiosyncrasy than on the quantity of drug taken.

A Case in which a Pulmonary Abscess was Successfully Drained.—Charles A. Morton reports a case in which the patient was expectorating about half a pint of fetid pus a day. There was an area of dulness at the right base posteriorly, and the exploring needle revealed the presence of pus. An incision was made and a drainage tube inserted into the suppurating cavity. The man made a good recovery.

Double Monster; Thoracopagus, Single Heart.—De Vere Condon describes this monster, which had two complete male bodies joined laterally from axilla to hip. An interesting point about the case is that the right child was extremely thin and emaciated, while the left child was plump. The latter is said to have lived for half an hour and the other to have been born dead.

When is Cancer Cured?—W. H. Jalland notes this case as throwing an interesting light upon what is called the "time limit." The writer removed a scirrhous growth from the axilla of a patient. Nine years and two months after he operated again, removing a lump from the site of the old cicatrix, together with the breast to which it was attached.

Fracture of Both Clavicles.—Another case of this rare accident is reported by Thomas Milne. In this case a shunter was caught by the shoulders between the buffers of two gently colliding wagons, the force seeming just sufficient to snap the clavicles, and nothing more.

Foreign Body in the Male Urethra.—Horace Wilson tells of a lady's bonnet pin passed by a drunken sailor up his urethra. Under an anæsthetic the object was recaptured, when the patient immediately rejoined his ship, feeling no subsequent inconvenience.

An Address on Medical Practice in European Countries.—Thomas Kilner Clarke summarizes the requirements for medical practice in different countries on the continent.

A Case of Puerperal Septicæmia.—In this case, reported by H. W. Webber, a favorable result was obtained from one injection of antistreptococcus serum.

Organization of Aseptic Operations and Some of the Causes of Failure.—An address delivered before the Leamington Medical Society, by C. B. Lockwood.

The Anatomy and Pathology of the Rarer Forms of Hernia.—By B. G. A. Moynihan. See MEDICAL RECORD, vol. lvii., page 421.

Recent Legislation in Relation to the Medical Profession.—An address by Fletcher Beach.

The Rôle of the Municipality in Public Hygiene.—An address by Sir Charles A. Cameron.

The Lancet, February 17 and 24, 1900.

On the Restoration of Co-ordinated Movements after Nerve Section.—R. Kennedy concludes as the result of experiments that after section and immediate coaptation of a nerve, restoration of conductivity and of voluntary function may be effected in a few days. This may be the result of regeneration of young nerve-fibres in the peripheral segment. Voluntary co-ordinated movements are regained, whether the two ends of the divided nerve are united as accurately as possible, or twisted so that non-corresponding ends of the nerve-fibres are brought into contact. In the latter case it is doubtful whether the restoration of function is due to the re-establishment of the old paths by decussation in the nerve cicatrix or to the reunion of ends of nerve-fibres which do not correspond but which happen to be brought into apposition. In suturing a divided nerve, therefore, the simple approximation of the two ends, no matter in what relationship, is all that is required.

A Case of Interstitial Fibroid Tumor Sloughing "en Masse," and Some Other Cases of Fibroid Tumors of the Uterus.—Arthur H. N. Lewers reports the following cases: suppurating ovarian tumor and uterine fibroids (ovariotomy was done and the fibroid markedly diminished in size); a case of abdominal hysterectomy with intraperitoneal treatment of stump; large abdominal tumor composed of subperitoneal fibroids (one of the latter had undergone cystic degeneration with formation of puriform fluid); subperitoneal fibroid complicating pregnancy—expectant treatment, normal labor; submucous fibroid causing hemorrhages—dilatation, enucleation, recovery (two cases); subperitoneal fibroid with adhesion to gut, left hydrosalpinx—removal of both; also the case named in the title.

A Brief Review of Our Knowledge Concerning Backward Displacements of the Pelvic Organs.—F. H. Wiggin believes that these conditions are largely unnecessary and due to preventable causes. Growing girls should be properly instructed by their mothers about mode of life, use of suitable clothing, passing urine at proper intervals, dangers of falls and of lifting heavy weights. Damage at parturition requires immediate repair. A modified rest cure should be instituted immediately after confinement, and the patient should in all cases visit the physician three months after confinement for further examination.

Measles in a Patient Aged Eighteen Years Complicated with Meningitis and Spinal Myelitis; Recovery.—A case is related by E. F. Eliot. The patient on the fourth day after appearance of the rash suddenly developed convulsions, epileptiform in character, which were referred either to toxic poisoning from measles, or to cessation of the menses, or to a general neurotic condition. The subsequent course of the case led to the diagnosis named in the title. The entire duration of the sickness was two months.

An Anomalous Case of Continued Fever with Abscesses of the Liver.—J. G. McNaught describes the history of a gunner in the artillery service, a man aged twenty-four years, who for a period of sixteen days gave symptoms of enteric fever with bowel hemorrhages. Five abscesses were found in the liver. Cultures from the spleen gave a bacillus somewhat resembling the bacillus coli and a coccus which was probably the streptococcus pyogenes.

A Successful Case of Cœliotomy for Intestinal Obstruction due to Persistent Meckel's Diverticulum.—A case occurring in a girl aged nine years is reported by C. A. Morton. The symptoms of onset suggested appendicitis. A portion of the small gut was found distended, but on tracing an empty coil of the bowel it was found that the constricting ring into which the gut had slipped was formed by a persistent Meckel's diverticulum.

Ocular Phenomena Associated with Cheyne-Stokes Respiration.—G. Y. Eales noticed in a man, aged sixty-one years, with cardiac valvular trouble, Cheyne-Stokes respiration, observing that during the interval of the series of respirations both pupils remained stationary and somewhat contracted, but as a new cycle came on they both gradually became widely dilated and so remained during the height of the cycle.

A Hepatic Mucoid Cyst.—W. C. McDonnell reports such a case in a man aged fifty-three years, suffering for some time with intermittent attacks of sudden epigastric pain. The cyst was located on the upper mid-surface of the liver, and contained a jelly-like mass of apple-green color, specific gravity 1.029, composed chiefly of mucin.

Topographical Relations of the Brain, the Frontal and Maxillary Sinuses, and the Venous Sinuses of the Dura Mater to the Walls of the Skull.—P. Regnier and J. Glover give an account of their researches, in which radiographic methods were applied to the investigation of the anatomy of the skull and face.

Epistaxis from the Ethmoidal Veins.—Four cases are reported by A. Brown Kelly. Epistaxis from the anterior ethmoidal vessels is controlled by firm packing between the septum and the anterior half of the middle turbinate, the strip of gauze reaching as near as possible to the roof of the nose.

The Anatomy and Pathology of the Rarer Forms of Hernia.—B. G. A. Moynihan discusses, in the first of the Arris and Gale lectures delivered before the Royal College of Surgeons, the anatomy and pathology of bilocular hernia, including inguinc- and cruro-properitoneal and intestinal hernia.

Hemiatrophy of the Tongue.—The case related by L. A. Parry was that of a man aged fifty years. The condition was referred to injury (possibly due to a previous fracture at the base of the skull) of the hypoglossal nerve in its passage through the anterior condyloid foramen.

Large Doses of Carbolic Acid in Equine Tetanus.—F. E. Place has injected in this disease as much as a drachm dose of the acid (B. P.), and has so used thirty-six drachms in eighty-four hours. The neighborhood of the neck and shoulders is chosen as the site of injection.

Two Cases of Pulsus Paradoxus.—John Hay describes with tracings two cases of the condition occurring in dyspnœa from bronchitis in a child, and in pleurisy and pericarditis (both with effusion) in an adult.

Diphtheria of the Conjunctiva.—S. Stevenson relates a case. He believes that a bacteriological examination will show the true diphtheritic nature of about two per cent. of all cases of ophthalmia.

Tuberculous Disease of the Kidney; its Etiology, Pathology, and Surgical Treatment.—By D. Newman. A continued article.

The Anatomy and Pathology of the Eye.—By E. Treacher Collins. The Erasmus Wilson lectures.

Medical Press and Circular, Feb. 14 and 21, 1900.

The Risks of Unoperated Uterine Fibromata.—E. Stanmore Bishop says the dangers may be divided into two classes: those directly due to the presence of the growth itself; secondly, those which render dangerous an operation undertaken late. All these are avoidable and unnecessary if surgical aid is obtained sufficiently early. There are five inherent dangers: Death from hemorrhage, from sepsis, from pressure upon important organs, death during or after pregnancy, death from cardiac degeneration owing to persistent loss of blood. The operation for fibroid has the advantage over that for malignant disease, that there is no recurrence for the patient to fear. There should be less waiting for the menopause.

A Case of Inward Displacement of the Lower Epiphysis of the Humerus.—D'Arcy Power describes a case of this injury in which the arm was in a state of cubitus varus, the long axis being directed inward at the elbow. The case belongs to a very obscure class, becoming better known by application of the Roentgen rays, which showed that separation of the lower epiphysis of the humerus had been subperiosteal. The external condyle had lost its cartilaginous covering, and the epiphysis seemed fixed in its new position by ossification of the periosteum.

Note on a Case of Loose Body in the Knee-Joint.—R. G. Patteson reports a synovitis with locking of the joint, preceded by occasional pains for six weeks and the feeling of something loose in the joint. A loose body was located and cut down upon, and when extracted appeared to consist of equal proportions of bone and cartilage. It was supposed to be derived from an outgrowth in the course of chronic rheumatic arthritis.

Chronic Total Inversion of the Uterus.—F. W. Ramsay reports a completely inverted uterus covered with phosphates. The base of the bladder was completely gone, exposing the fundus, the edges being composed of dense cicatricial tissue. The womb was removed and an operation done to close the fistula. The patient was able to do all her work and retain her urine for three hours.

Uterine Myoma Associated with Temporary Glycosuria and Umbilical Hernia.—Arthur E. Giles reports a case in which subperitoneal hysterectomy was done in a woman whose glycosuria was functional and due to nervous apprehension of the operation. Sugar persisted after the operation for a week. Cure of both conditions resulted.

Distended Pyosalpinx.—F. A. Purcell records a case of distended pyosalpinx of the right side, the opposite tube being distended and thickened. The uterus was removed by the subperitoneal method, with recovery.

Instruction in Obstetrics and Gynæcology.—Abstract of presidential address of W. J. Smyly delivered before the British Gynæcological Society, February 8, 1900.

The Dilatations and Diverticula of the Œsophagus.—A continued article by John Knott.

Treatment of Pleurisy.—A clinical lecture by Prof. G. Debove.

Berliner klinische Wochenschrift, February 12, 1900.

Epidemiology and Prophylaxis of Malaria from Most Recent Etiological Standpoints.—A. Celli believes that cases of malaria should be isolated in the same manner as are infectious diseases. He believes in the mosquito theory of causation, and advises the immediate removal of the patient from the place in which he contracted the disease. He does not think that we possess at the present time any means which can prevent the ravages of this insect, and the ideal place for the patient is a sanatorium on high ground with plenty of fresh air. The patient is not to be allowed to revisit the place of infection until examination of his blood and spleen shows absence of malarial organisms.

Polyarthritis Chronica Villosa and Arthritis Deformans.—M. Schueller concludes a lengthy article upon this subject. Arthritis develops often spontaneously without any preceding joint inflammations. The possibility of a bacterial origin is still uncertain. More likely a disturbance of nutrition lies at the bottom of the malady. Most of the patients suffer from constipation and flatulence, and an interference with the elimination of lime salts from the body. An essential point in treatment is to provide a dietary which is poor in this particular chemical element, and to pay special attention to the action of the bodily emunctories.

The Origin of Dermoid Cysts.—S. W. Bandler regards these structures as due to the development in abnormal situations of certain embryonal cells and organs, which in this new situation elaborate themselves in exactly the same way as if they were normally situated. Such abnormal development begins at a time when the loss of cell elements from their normal site is made good by the development of other similar cells at the original site. Hence, in spite of the abnormal development, we have the bodily organism coming to full maturity.

Experimental Researches on Bleeding in Uræmia.—P. F. Richter finds that in rabbits slow and gradually progressive renal insufficiency from increasing doses of renal poison is not changed by bleeding. There is no essential lessening of osmotic pressure in cases of sudden increased concentration of the blood through bleeding either with or without saline infusion. He would not, however, deny that clinical observation in man emphasizes the fact that bleeding in uræmic states is of benefit.

Nature's Methods of Protecting the Organism against Infection.—By P. Baumgarten. A continued article.

Auto-Intoxication.—By C. A. Ewald. A continued article.

Wiener klinische Wochenschrift, February 8, 1900.

The Influence of Thyroid Extract on the Circulation and Respiration, besides an Addition Concerning the Relations between Iodothyrin and Sodium Iodide, or Atropine.—Béla v. Feryvessy, from his experiments on rabbits, says that the influence of thyroid extract on respiration was not uniform. Often the intravenous injections were followed by no changes. Sometimes an acceleration resulted. The characteristic influence on circulation was a lowering of blood pressure. From his observations he cannot confirm the statements respecting the antagonistic influence of iodothyrin to sodium iodide or atropine. He thinks that the apparently positive results in regard to this have been deceptive on account of the transitory influence of sodium iodide and atropine.

Opinions of the Medical Faculty in Vienna. Murder Committed by an Intoxicated, Ethically Depraved Individual; Alleged Acute Intoxication and Somnolence.—V. Wagner relates this case and gives the questions asked by the court: Did this man commit this deed while entirely robbed of his reason, or was it during a period of insanity which alternated with a normal mental state? The answer was that he was ethically defective as well as being intoxicated at the time. The criminal was condemned for manslaughter and sentenced to eight years' imprisonment.

Disturbances of the Vasomotor Function and Sensibility after Peripheral Traumatic Facial Paralysis.—Carl Biehl reports a case and considers that it proves what Frankl-Hochwart has maintained, that the facial nerve contains also both sensory and vasomotor fibres.

Münchener medicinische Wochenschrift, Feb. 6, 1900.

The Reaction of Leucocytes to the Tincture of Guaiac.—Kurt Brandenburg believes that the reaction of pus to tincture of guaiac deserves a more extensive use as a convenient reagent for pus in the urine and other excreta. It is often advisable to filter the urine and use the filter for the reaction on account of the many reducing substances in the urine which hinder the appearance of the blue coloration. In like manner, by filtering off a few drops of blood dissolved in water, in cases of leukæmia, the reaction of the filter with guaiac tincture produces a blue color. The property of pus to color guaiac tincture blue depends in all probability on the influence of nucleo-proteids—this is seen even in extreme dilution. Nucleo-proteids extracted from various tissues do not give this reaction—only the nucleo-proteids derived from the leucocyte group (bone-marrow cells). Tissue abounding in lymphocytes, *e.g.*, adenoid, does not give this reaction.

Absorption and Fat-Splitting in the Stomach.—Franz Volhard concludes from his work on this subject that an extensive splitting of finely emulsified egg and milk fat takes place in the stomach. He believes Mering's method, in which the Soxhlet apparatus is used and the fatty fluid is spread over clay and dried with dry sodium sulphate, is the simplest and most convenient.

A Preliminary Communication on a New Staining Method for the Determination of the Finer Structure of Bacteria.—K. Nakarishi describes a new method of staining with methylene blue which has met with successful results. He has tried many aniline colors, and considers methylene blue best suited to this work.

Two Cases of Beri-Beri (Panneuritis Endemica Balz) on Board a German Steamer.—P. Schmidt, after submitting these reports, states that much microscopical work has been done to elucidate the etiology of this disease. But the work of both European and Japanese physicians has yielded no valuable results.

Some Remarks on the Basophilic Granules in the Red Blood Discs.—Martin Cohn thinks it most probable these granules are the result of protoplasmic degenerations which depend to a certain extent on the chemical alteration of the blood serum, since they are always present in anæmia.

Ischiadic Scoliosis.—Krecke is of the opinion that the bowing is not caused by functional incapacity nor by paralysis or contracture of the sacro-lumbalis, but comes from the patient's tendency to shift all the burden of effort on to the side that is not painful.

The Application of Gelatin for Checking Cholæmic Hemorrhages after Operations on the Biliary System, besides Remarks on Poppert's Waterproof Drainage of the Gall Bladder.—By Hans Kehr. A continued article.

Reports of Cases of Skull and Brain Injuries.—Carl Fröhlich reports two cases of this nature, the first of which ended in recovery, while the latter developed traumatic encephalitis after a year and resulted fatally.

Deutsche med. Wochenschrift, February 8, 1900.

The Diagnosis of Incipient Tuberculosis from the Sputum.—L. Brieger and F. Neufeld hold that (1) the sputum should be examined not only for tubercle bacilli but also for other bacteria, especially for those of the so-called mixed infections; (2) the examination should be repeated at intervals if no tubercle bacilli are found at first; (3) in any case the clinical symptoms must be carefully studied, for it is only by a comparison of the clinical and bacteriological findings that one can arrive at any satisfactory diagnostic and prognostic conclusions; (4) whenever repeated examinations leave the diagnosis uncertain, recourse should be had to the tuberculin test, which is positive and at the same time free from danger.

Turners' Palsy.—E. Lehrwald describes, under the title "Klimmzuglähmung," a form of paralysis induced by the strain of raising the body by the arms, the hands grasping a horizontal bar. In a reported case the trouble appeared quite suddenly and involved the deltoid chiefly, but also the biceps and in less degree the brachialis internus and supinator longus. The paresis was accompanied by atrophy of the affected muscles. In another case the paralysis was much more extensive. The author believes this affection is not very uncommon among weak and unskilful gymnasts, and says such persons should be warned against persisting in the offending exercises when they cause pain or excessive fatigue in the arms.

Treatment of Ulcerative Stricture of the Rectum.—Julius Wolff reports a case of stricture of the rectum following ulcer in which, after unsuccessful attempts to cure by less heroic measures, an extensive resection of the wall of the rectum was made. Healing did not take place, the stitches gave way, and the final result was an enormous opening at the anus, with consequent prolapse of the rectum. A resort was now had, many months after the primary operation, to a plastic operation, whereby the posterior wall of the rectum was re-formed with a skin flap, and the divided ends of the sphincter were freshened and reunited. The operation was a complete success.

Spondylitis Rhizomelica.—M. L. H. S. Menko reports a case of this affection, described first by Bechterew as chronic ankylosing inflammation of the spine and large joints, and later called by Marie "spondylose rhizomélique."

French Journals.

Experimental Study upon the Parasitism of Tumors.—W. Podwyssotski, basing his experiments upon the classical study by Woronin of the excrescences found upon the roots of plants—especially the cabbage—and taking the plasmodiophora brassicæ as the type of productive agent in parasitic tumors in the vegetable kingdom, studies the effect of such parasites upon animal tissues. He inoculated rabbits and guinea-pigs with small masses of the root of diseased cabbage containing the parasites in the stage of sporulation. Round or oval tumors formed, showing masses of cells much like those in leprous granuloma or large-celled sarcoma. The infiltration began in the perivascular lymphatic spaces. The cells of the tumor were filled with round corpuscles, of red blood corpuscle size, surrounded by a very thin membrane and containing very fine fat granules. The parasite produced an irritation of the cell nucleus, which enlarged, and to the presence of the parasite were attributed the hypertrophy and cellular proliferation. A number of illustrations show the microscopic appearances of what the experimenter believes are parasitic tumors or myxomycetic granulomas of mesodermic origin, produced in animals by the plasmodiaphora. In reference to the great question of cancer, he thinks his results show that a cellular inclusion of undoubted parasitic nature may be almost invisible in the protoplasm of the tumor cell, and that scepticism should not go to too great lengths because of the difficulty of discovering parasites.—*La Presse Médicale*, February 14, 1900.

Pulmonary Embolus in Phlebitis.—M. de Treigny considers the various causes for this sudden accident in the course of phlebitis when nothing indicates the imminence of the danger. Instances are cited. Curative treatment is purely symptomatic. He mentions the success obtained by Oeder by means of injections of camphorated oil every five minutes until 2.4 gm. were administered in an hour. Isch-Nall resected the veins as a prophylactic measure after a series of slight embolic attacks. Extirpation of suppurating phlebitis of the cord is also mentioned. Immobilization is a necessity, and before permitting a patient to get up or to receive massage after pregnancy, pelvic tumor, abdominal operations, convalescence from typhoid and other severe fevers, as well as fractures, we should assure ourselves by methodical exploration of the venous system that there is no sign of deep-seated coagulation.—*Journal des Praticiens*, February 10, 1900.

Treatment of Vaginismus.—Dr. Verchère says the first advice to give a woman suffering from vaginismus is to suppress all genital excitation, since absolute and prolonged rest of the organ may of itself alone bring about a cure. Iodoform is recommended as a dressing, being anæsthetic as well as antiseptic, and is usually efficacious. Various methods of treatment, from cold sitz baths to divulsion and cutting operations, are passed in review. The Sims method is in a general way regarded as too radical. Two successes are reported from subcutaneous section of the anal sphincter. Medical treatment is of great importance. Much attention must be paid to subjects predisposed to hereditary insanity. Antispasmodic and tonic treatment is usually indicated, while hydrotherapy and arsenical treatment are not to be forgotten.—*La Médecine Moderne*, February 14, 1900.

Renal Function in Chronic Nephritis.—L. Bernard finds that renal permeability is not uniform in all nephritis; there is a nephritis with permeable and a nephritis with impermeable kidney. There is no necessary relation between the existence of uræmic phenomena and those of renal impermeability. The term parenchymatous and interstitial as applied to nephritis are considered unfortunate. The evolution of each is different. The evolution in two periods of the nephritis termed parenchymatous is not a transformation into interstitial nephritis. We should say that at a given moment it becomes complicated with sclerous lesions which carry with them renal impermeability and its attending symptoms.—*La Presse Médicale*, February 17, 1900.

Reflections upon Muco-Membranous Colitis and Appendicitis Produced in the Course of this Disease.—Louis Beurnier says that authors are agreed that subjects of muco-membranous colitis are neuropaths. He has found this to be the case in all his patients. In a case reported, the symptoms led to an operation for appendicitis. The appendix was found healthy in appearance and under the microscope. The whole trouble was due to absolute fusion of the epiploön with the large intestine, the cementing process extending to the upper limits of the ascending colon. —*Journal des Praticiens*, February 10, 1900.

Il Policlinico, February 1, 1900.

Albuminuria in Diabetes and Renal Diabetes.—In an article concluded from the preceding number, Ferruccio Schupfer states, among the many conclusions drawn from his cases and experiments, that the albuminuria in diabetes may be due to (1) over-functioning of the kidneys; (2) diabetic coma; (3) cystitis and pyelitis; (4) the excessive ingestion of eggs; (5) nervous influences; (6) the passage of microbe toxins through the kidneys; (7) stasis; (8) renal hyperæmia; (9) parenchymatous nephritis; (10) shrinkage of the kidney. Cases published under the name of renal diabetes were merely ordinary cases of diabetes, in which the glycosuria disappeared or was diminished when a nephritis developed after the diabetes.

The Disappearance of the Red Corpuscles Stainable by Methylene Blue in the Blood in Grave Anæmia.—Vittorio Belli says that the presence of these corpuscles is not constant, but varies at different times of the day. The gravity of anæmia is shown rather by the frequency of the appearance of these cells than by their number or the depth of their coloring. Their absence shows improvement and cure of anæmia only when confirmed by repeated examinations during the course of the day.

Influence of Diphtheritic and Typhoid Toxins on Nutritive Exchange.—Domenico Pace concludes his article from a previous number, already abstracted in these columns, with tables illustrating the conclusions reached.

Chorea.—Angelo Ruffini calls attention to the fact that in 1892 he claimed that chronic chorea was due to slow and progressive atrophy of the ganglia of the motor zone of the cerebral cortex.

Journal of Tropical Medicine, February, 1900.

Notes from Lagos, West Africa.—Henry Strachan notes that the greatest prevalence of malarial fever in the tropics occurs shortly after the cessation of the rains, and that there are few cases during the rains unless these have been interrupted by short periods of dry, hot days. In other words, the malarial curve parallels that of the rise of subsoil water, and follows by some days that of the rainfall. When the ground is saturated, surface puddles which afford breeding-places for Anopheles are more readily formed and last longer. The same writer records his belief that blackwater fever is possibly a disease distinct from malaria. He says, in support of this opinion, that hæmoglobinuria occurs all through the year independently of the varying prevalence of malaria, and that the salicylates are more curative than quinine.

An Undescribed Form of Plague Pneumonia.—William C. Hossack reports five cases of an indefinite form of plague, which is especially important because of the danger of its escaping recognition. It is a pulmonary form, beginning insidiously, the general symptoms at the end of five or ten days being perhaps no more severe than they would be in a case of simple bronchitis, while the local lung symptoms are very vague. As a rule, there are no enlarged glands. Death occurs suddenly and unexpectedly from the fifth to the tenth day. The most striking feature is the pulse, which is weak and rapid, out of all proportion to the apparent local or general condition.

Typhoid or Malarial Fever.—W. E. de Korte discusses the diagnosis between adynamic remittent malarial fever and typhoid fever as observed in South Africa. There is a fever there which the public calls "slepende" or dragging fever, and for which no medical advice is sought; but when it suddenly becomes acute, with rise of temperature, the physician steps in and calls it typhoid. In such cases the writer has found the plasmodium malariæ. He does not deny the existence of typhoid fever in South Africa, but contends that many fevers so called are really malarial.

Plague in Siberia and Mongolia and the Tarbagan.—Frank G. Clemow reviews accounts in Russian journals of an endemic disease in several places in Siberia and eastern Mongolia, which has many points of superficial resemblance to the bubonic plague, although proof of identity of the two affections is wanting. The disease in Siberia seems to be connected with an endemic affection of the tarbagan (Arctomys bobac), a rodent of the nature of a marmot.

A Contribution to the Diagnosis and Treatment of Æstivo-Autumnal Malaria.—J. Preston Maxwell says this form of fever is much more refractory to the action of quinine than benign malaria, yet the prompt use of quinine by subcutaneous injection at the beginning of an æstivo-autumnal attack may avert the threatening paroxysm. He reports a case in support of this conclusion.

Clinical Report of Four Cases of Suspected Yaws or Frambœsia.—W. S. Griffith reports these cases occurring in a Kaffir woman and three of her children. The diagnosis rested between syphilis and yaws, and the writer inclined to the latter.

Monatsschrift für Geburts. und Gynäk., February, 1900.

Puerperal Tetanus.—Hans Kentmann says that although puerperal tetanus is the most frightful complication of the puerperium, it is also the most infrequent. This affection is rare in the northern zones, but comparatively frequent in the south. In a series of forty-three cases, the first symptoms of the disease appeared on the average nine days after confinement, the longest period being nineteen days and the shortest four. As to treatment, the severe cases do not seem to be influenced by antitoxin. It is important to eliminate the original focus of the disease, but irrigation, curetting, and even total extirpation of the uterus have not yielded the desired results. The prognosis is unfavorable. Kentmann relates the history of a case, and then speaks of the colossal power of resistance of the tetanus spore.

The Application of Hot Steam in Gynæcology.—R. v. Steinbüchel speaks of some of the affections in which the local employment of hot air and steam was followed by good results—dysmenorrhœa, endometritis with hemorrhages or with copious discharge, subacute or chronic uterine gonorrhœa, subinvolution of the uterus, myoma if the uterine cavity is not irregular in contour, carcinoma with hemorrhage and fetid secretion, hemorrhages after abortions, putrid endometritis. In order to obtain obliteration of the uterine cavity, the application of a temperature of 110° to 115° F. for a period of two minutes is necessary. When obliteration is not the aim, the steam is applied for only seven to ten seconds. Although the results from the short applications are less certain, still in this method stenoses and unintentional obliteration do not follow.

Can the Place of the Appearance of the Contraction Phenomenon be Determined in a Purely Anatomical Way without Objection?—Otto v. Herff concludes from his work on the living woman that, in order to designate any one place as the point in the uterine wall where the contraction phenomenon originates, this particular point must be proved never to shift. This result has not yet been attained.

Fibrinous Placental Polypi.—W. Langhans believes that dependent on every conception there occur certain polyp-like masses in the uterus, consisting of blood clot; these masses are pedicled, and situated generally in the fundus, hanging down either into the expanded uterine cavity or the expanded cervical cavity. They are capable of no further organization, and they have no relation to new growths.

Two Cases of Fibrosarcoma in the Broad Ligament.—Axel R. Limnel, in speaking of these two cases which he has treated, believes that the most probable origin of the fibrosarcoma was in the broad ligament, for it was not in the uterus, ovary, parovarium, or Gärtner's canal. The diagnosis is difficult and the condition is often mistaken for ovarian tumor.

Dystocia Caused by the Contraction Ring.—J. Veit-Leiden, in discussing this subject, concludes that there is no proof of the isolated condition of contraction of Bandl's ring without simultaneous contraction of the whole muscle surface of the uterine cavity.

Revue de Chirurgie, February 10, 1900.

Radical Cure of Large Umbilical Hernia.—M. K. Sapiejko describes the case of a woman, four months pregnant, with an enormous umbilical hernia. After making an incision, which extended from the xiphoid appendage to the symphysis pubis, he separated the skin from the aponeurosis the whole length of the incision, at a breadth of six inches at the umbilicus, narrowing above and below. He then fixed the left border of the aponeurosis to the right peritoneal surface by a continuous suture, and the right border to the left side. By this means the anterior part of the abdomen, formed of peritoneum, muscles, and aponeurosis, was made up of a double layer of these tissues. The skin was then sutured, after removal of two elliptical flaps.

The Treatment of Cancroids without Extirpation.—Charles J. Rossauder reports cases in which the injection of a one- to one-half-per-cent. solution of potassium hydrate into cancerous tumors has given good results. He believes that these injections, although not sufficiently strong to have a cauterizing effect, do provoke an irritation of the connective tissue around the tumor and in the capillaries, leading to coagulation of the blood and obstruction of the blood-vessels. Necrosis of the tumor is not produced, but its vitality is diminished and new growth inhibited.

The Treatment of Fractures of the Clavicle.—L. Gratschoff, after reduction of the fracture, uses an immobilizing apparatus, the essential features of which are a shoulder cap, an iron rod placed so that one end corresponds to the apex of the acromion process, and the other to a point one and three-fifths inches below the nipple of the normal side, with a four-part bandage going over the unaffected shoulder, around the hip of each side, and across the front. All start from the inferior end of the iron rod. Supplementary bandages support elbow and forearm. Two cuts illustrate the description.

Iliac Colostomy by Double Ligature.—Michel Gongolphe describes sixteen cases in which his operation has been perfectly successful and satisfactory. After making an abdominal incision, he draws out a loop of the ileo-colon and strangles it with a double-chain ligature. He fixes it to the wall, cutting it off from the peritoneal cavity, and forty-eight hours later removes it by the thermo-cautery without anæsthesia. The inferior end is left open in the iliac wound.

Metatarsalgia.—Niccolas Giannettasio reports a case, giving the radiographic and histological findings. The cartilage was found to be much diminished in thickness, and the cartilage cells were dispersed in elongated capsules.

Total Splenectomy.—Andrès F. Llobet describes an operation performed in a case of displacement and hypertrophy of the spleen, with primary cancer of the pedicle.

Tumors of the Biliary Ducts.—By F. Terrier and M. Auvray. A continued article.

Jour. des Maladies Cutanées et Syphilitiques, Jan., 1900.

Blennorrhagic Infection and Marriage.—Ignacio Callari concludes an essay with the suggestions that popular instruction should be given upon the perils of the disease in order that they may be lessened. Young people should be warned against a poisoned union and compromised posterity. They should be deterred from marriage while diseased by appealing to their honesty, reason, and interest, and they should be taught especially the necessity of thorough cure.

Transmission of Ecthyma by Direct Contagion from Animal to Man.—Le Calvé and H. Malherbe present an observation with bacteriological control experiments, in which a lady contracted the disease from a pet dog. Inoculation of another animal with the germ resulted in typical ecthymatous lesions and a general infection ending in death.

Ann. des Mal. des Organes Génito-Urinaires, Feb., 1900.

Bacteruria.—A. Gassmann gives notes of a case of bacteruria with remarks upon the diagnosis of prostatitis. The number of published cases of bacteruria according to Krogius' definition is still restricted. The present case originated in seminal vesiculitis. Urotropin and salol in ordinary doses are not capable to preventing development of cocci. The best results are obtained by instillations of silver nitrate.

Hypertrophy and Epithelial Neoplasms of the Prostate.—J. Abarrau and N. Hallé give fifteen observations in a continued article.

Ann. de Dermatologie et de Syphiligraphie, Jan., 1900.

Impetigo.—R. Sabourand presents his first memoir upon the clinical and bacteriological study of impetigo. He distinctly separates, in this the clinical portion, impetigo contagiosa of Tilbury Fox, from the superficial pustular impetigo of Bockhart developing about a hair.

The Question of Eczemas.—Brocq gives sixty-one pages of a continued article. Circinate seborrhœal eczema is set apart as an affection of probable parasitic nature. The opinions of various observers as to the varieties of so-called seborrhœal eczema are presented.

Norsk Magazin for Lægevidenskaben, February, 1900.

A House Epidemic of Diphtheria.—C. M. F. Sinding-Larsen describes an epidemic of diphtheria occurring in the Seashore Hospital for Scrofulous Children at Fredriksværn. The epidemic began with two cases at the end of December, 1898, and, in spite of repeated examination of all the children, and isolation not only of those presenting actual symptoms, but also of those in whom bacilli were found in the throat and nose (latent diphtheria), and disinfection of the wards, the end of the visitation was not until October 12th of the same year. During the epidemic there were seventeen clinical cases and twenty-seven latent cases.

Gelatin in the Treatment of Aneurism of the Abdominal Aorta.—J. Buchholz reports a case of abdominal aortic aneurism in a woman aged thirty-five years. The treatment consisted in rest, the application of an ice-bag day and night, and the internal administration of six ounces daily of a five-per-cent. solution of gelatin. At the end of three months of this treatment the patient was cured.

The Parasite of Cancer.—B. Vedeler describes the results of a careful parasitological examination of an adeno-carcinoma of the ovary, in which he found a micro-organism (pictured in the colored plates accompanying the article), which he believed to be pathogenic, though the proof of cultivation was wanting.

Correspondence.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From Our Special Correspondent.)

During the 14th and 15th of February, as every one knows, Lord Roberts made a curving advance upon Kimberley, which had the result of relieving the town and of forcing General Cronje to retreat from his entrenched positions toward Bloemfontein. The sanitary condition of Kimberley was found fairly good, although the mortality among the children had been terrible. In forty-eight hours railway connection was established between Cape Town and Kimberley, and trains full of supplies were running northward, while hospital trains were carrying the sick down to the base hospitals. The inhabitants of Kimberley were beginning to suffer from scarcity of food, especially of vegetables and milk, and the supply trains were the most efficient medical aid that they could have received. The New South Wales medical corps, the medical staff corps organized and equipped by Australia, distinguished itself in the relief operations. The ambulances, drawn by excellent Australian horses, kept pace with General French's flying cavalry column and picked up the wounded. The corps received many compliments for its excellent work.

General Hospital No. 4.—The first three general hospitals are, as I have said, situated near Cape Town, but General Hospital No. 4 is in Natal on the Mooi River, a tributary stream running northward into the Tugela River. It is constructed to accommodate five hundred sick and wounded, which should amply suffice for the wants of General Buller's force, for it must be remembered that this force has behind it a big hospital of one thousand beds at Pietermaritzburg as well as a stationary hospital at Estcourt. To this hospital Mr. Frederick Treves, certainly the operating surgeon of the widest repute in England at the present moment, has been attached, and did excellent operative work after the unfortunate attempts to relieve Ladysmith. But I learn by telegram that on February 20th he was prostrated with dysentery and had to go down to the coast to recover. There has been a good deal of dysentery and enteric fever among both officers and men of Buller's force. The routine treatment for dysentery at the Pietermaritzburg hospital is purgative doses of sulphate of magnesia, and, though the treatment is painful, Mr. Treves considers it to be on the whole successful, more successful than the exactly opposite treatment by opium. General Hospital No. 4 was made at its start the subject of severe criticism by the *Times of Natal*, a paper of some standing in the colony. The *Times of Natal* said that the administrative authorities had failed, that stimulants and medicine were forthcoming only after long delay, that the nursing was inadequate, that the food supply was deficient, and that while tons of stores lay at Durban undistributed, the hospital depended upon charity for such necessaries as pajamas and pillows. The accusations of the *Times of Natal* were founded upon completely incorrect information, as was at once pointed out to the editor, but they have provoked a feeling in Durban and Pietermaritzburg that, while so much has been done for the base hospitals at Cape Town, not enough has been done for similar institutions in Natal. The Mooi hospital is, as a matter of fact, well found and excellently managed; but it is quite possible that there was at first some disorder among the administrators in Natal, for it must be remembered that all the preparations were originally made in England under the idea that the chief fighting would be first in Cape Town, but that when the army arrived at Cape Town most of it had to go on at once to Durban to attempt the relief of Ladysmith. The change of programme may at first have led to some confusion, but for many weeks matters have been running quite smoothly. One thing, and as yet one thing only, can be fairly alleged against the medical administration in this war—*i.e.*, not enough female nurses have been provided, too much reliance having been placed upon the administrations of orderlies, better fitted to act as porters than as assistants in the dressing of wounds.

Two More Voluntary Hospitals are proceeding to the Cape, the Princess Christian Hospital and the Welsh Hospital. That there should be a Welsh hospital set on foot, as soon as a Scotch hospital and an Irish hospital were announced as starting for the seat of war, was a foregone conclusion; for Wales is very tenacious of its right to be considered a separate nation. A provisional committee has been formed in London for raising the money to equip a Welsh hospital, the following well-known medical men being responsible for the movement: Sir John Williams, physician accoucheur to University College Hospital; Dr. Frederick Roberts, physician to the same hospital; Mr. Edmund Owen, surgeon to St. Mary's Hospital; Mr. Thomas Jones, professor of surgery in Manchester; and Prof. Alfred Hughes, professor of anatomy in King's College, London. The Princess Christian Hospital, which will sail from Southampton at the end of February, has been presented to the government by Mr. Alfred Mosely, a native of Bristol. It is a completely equipped hospital of one hundred beds. Mr. Paul Bush, surgeon to the Bristol Royal Infirmary and lecturer on operative surgery at University College, Bristol, goes out as chief surgeon, and Major Mathias, R.A.M.C., is the government medical officer. The hospital has been called "Princess Christian" in recognition of the work done by Her Royal Highness Princess Christian of Schleswig-Holstein in the nursing-world, and possibly in compliment to her eldest son, Prince Christian Victor, who is at the front, and distinguishing himself as a major in the Sixtieth Rifles.

OUR LONDON LETTER.

(From our Special Correspondent.)

STORMS — INFLUENZA — MORTALITY RETURNS — MOSQUITOS — AMYLOID DISEASE — CHOLERA TOXINS — CHOREA — HÆMOPNEUMOTHORAX — DUODENAL ULCER — PRINCE OF WALES' HOSPITAL FUND — SIR M. FOSTER ELECTED M.P. — THE LATE DR. HYDE — THE WAR — THE ARMY SURGEONS — MORTALITY RETURNS — WEATHER — THE MIDWIVES BILL AND THE GYNÆCOLOGICAL SOCIETY — A PLEBISCITE OF THE PROFESSION — MASTOID DISEASE — CLINICAL EXHIBITION OF THE MEDICAL SOCIETY.

London, February 16, 1900.

Frost, snow, blizzard! a long chapter of accidents with corresponding pressure in the receiving-wards of the various hospitals; these have been the distractions of the last few days, and so immediately affecting us as to hold attention above everything, unless it be the more serious subject of the war. To-day, however, a change of wind and clearer sky make us more cheerful with the promise of less discomfort.

The effect on the mortality returns will not be perceived for a week or more. The London death rate for last week was 20.4. In the thirty-three principal towns of England and Wales it was 22.8. There was a sudden rise in the north of England. It marked 32.3 in Blackburn, 31.8 in Liverpool, 35.1 in Preston, 34.2 in Salford, 28.4 in Leeds, and 28 in Manchester.

Influenza is responsible for a considerable share in these high rates, as the epidemic has passed northward, where so many workmen are kept at home that the collieries and factories are very greatly inconvenienced, some of them being brought nearly to a standstill.

In London the epidemic continues to decrease. The deaths from it last week fell to sixty-three. In the first two weeks of the year the numbers were three hundred and sixteen and three hundred and forty-nine. This was the highest point reached. A substantial drop followed, the succeeding weeks showing two hundred and eight, one hundred and fifty-two, and one hundred and nine. Now with this week's fall to sixty-three we may consider the epidemic practically over. Ireland has also suffered from influenza, which is one of the causes of the abnormally high mortality in Dublin, Cork, and other cities. The rate in both these passed fifty in December, and in Cork was fifty-eight in January, but in both there has since been a fall. Typhoid and measles have contributed to their mortality.

Mr. Pearce Gould, senior surgical vice-president of the Pathological Society, has been requested by the council to act as president during Mr. Cheyne's absence in South Africa. Accordingly he presided at the last meeting, when he paid an appropriate tribute to Dr. Charlewood Turner, whose death I mentioned in my last. Dr. Nuttall then demonstrated a number of microscopic lantern-projections illustrating recent discoveries as to the part played by insects in spreading infective diseases, particularly that of mosquitos.

An account of experiments made by Dr. A. Green to test Krakow's statements on the production of amyloid disease was then given by Mr. S. Pigg. The experiments were made with cultures of staphylococcus pyogenes aureus injected subcutaneously in rabbits and fowls. The results were mostly negative, but in the case of one hen Dr. Green obtained the mahogany stain with iodine. No definite amylaceous change could be found in the twenty rabbits experimented on.

Dr. W. Myers reported his researches on the neutralization of cobra venom by Calmette's antitoxin. The venom seemed to contain two toxins, one hæmolytic, the other a nerve toxin. The former is destroyed before the latter when venom is gradually heated. In a concentrated form the venom retains its strength, but a dilution of one per cent. loses strength by keeping.

Dr. Bertram Abrahams then showed lantern slides and microscopic specimens illustrating the changes in the parietal cortex of a woman aged twenty-eight years who died on the thirty-seventh day of an attack of chorea gravidarum. These changes were similar, though less in degree, to those described by Dr. F. W. Mott in cases of status epilepticus, and as in them it was thought that the alterations in the cells depended on modifications in the chemical condition of their lymph environment. Moreover, their nature and extent were obviously compatible with complete recovery.

Hæmopneumothorax presents puzzling problems to the physician. There were two cases related at the Clinical Society and others mentioned by subsequent speakers. Dr. Rolleston related one in a man aged twenty-one years who after two days of diarrhœa was seized with pain in the right hypochondrium radiating to the umbilicus and right shoulder. He seemed moribund on admission, but rallied, and next day had signs of right pneumothorax with displacement of the heart. Paracentesis brought out blood and air at considerable pressure. Death occurred eight days after. The right pleura contained sixty ounces of blood but no air. No explanation was found. There were no signs of tubercle, pleurisy, hæmophilia, scurvy, cirrhosis of the liver, aneurism, or traumatism.

The other case was related by Dr. Newton Pitt. It was of a man aged eighteen years, who had sore throat and diarrhœa for three days and was then seized with pain and collapse. Six or seven hours after there was evidence of acute pneumothorax, with dulness over the right base and displacement of the heart, the impulse being two inches to the left of the nipple line. To relieve the pressure a Southey's tube was inserted in the sixth interspace in the axilla, and blood flowed, to the surprise of the doctors. Another puncture had the same effect, and as no relief followed it was concluded that hemorrhage was continuing. He died that evening. At the post-mortem eight pints of fluid blood besides clots filling the hand three times were found. The heart, aorta, and pleura were normal. There was no tubercle or necrotic change in the lung, but there was one emphysematous bulla about half an inch in size, torn open at the apex and attached to this a ruptured adhesion, the size of a knitting-needle, from which perhaps the blood may have come, but no aneurismal pouch or patent vessel was discovered. This case seems rare, if not unique.

Dr. Hingston Fox referred to the case of a man aged forty-four years who was taken with pleurisy and was tapped on the tenth day, when fourteen ounces of dark blood came away. Three days later signs of pneumothorax came on and the operation was repeated, forty-five ounces of blood coming with much air. The patient recovered.

Sir D. Duckworth thought that in these cases rupture of the lung with pneumothorax was followed by the hemorrhage, and behind all was tuberculosis.

Dr. S. West mentioned a case of pyopneumothorax in which pus was evacuated, and this was followed by hæmoptysis. At the post-mortem an old tuberculous cavity into which an aneurism had burst was found. As the cavity communicated with the pleura blood escaped both ways.

Sir D. Powell (president) said the precedence of hæmo- and pneumothorax wanted clearing up. In an experiment he could not pump more than six or seven pints of fluid into the pleura. He thought it curious for the blood to remain fluid in the presence of air.

Dr. Pott in replying mentioned that in looking up the literature he found cases in which eleven and twelve pints were said to have been removed.

Drs. Perkins and Wallace related a case of perforating duodenal ulcer on which they had operated with success, convalescence being uninterrupted. The whole abdomen was irrigated, the intestines being turned out for the purpose.

Mr. Barker took exception to this, as he did with regard to gastric ulcer in a discussion I lately noticed. He thinks the less the abdomen is meddled with the better, as the peritoneum can dispose of much septic matter.

Mr. Gould doubted the septic state of the contents of the stomach, though they are very irritating.

Mr. C. Symonds rather agreed with Mr. Barker as to the risk of evisceration, and recommended a medium plan, viz., flushing and then mopping with gauze.

Dr. Poynton thought duodenal ulcer more frequent than is generally supposed. In two years' necropsies at St. Mary's Hospital he had seen eight such lesions and met other cases in the wards. All were chronic with thickened, raised edges, and had formed adhesions. Prolonged dyspepsia with severe pain was present in some of the cases for five to ten years. Extreme severity of the pain was suspicious.

Sir Michael Foster has been duly elected member of Parliament for the University of London. He made a short speech to those present, remarking that this is the first time the graduates had elected one of themselves. He took it that his fellow-graduates did not send him to Parliament simply to add one more unit to either political party, but that he should place at the disposal of the House his special experience in science and learning. He would take his seat at first among supporters of the government. The old cry of civil and religious liberty made him prick up his ears. He was born in the same town as Oliver Cromwell, and his forefathers harbored John Bunyan when he preached outlaw sermons in the wilds of Hertfordshire.

The Prince of Wales presided at the annual meeting of the council of his hospital fund. The receipts for 1899 exceeded £48,500, showing an increase of about £9,000 on the amount for 1898.

I regret to record the death of Dr. Samuel Hyde, of Buxton, at the early age of fifty years. A native of the town, he settled there soon after qualifying. He was chairman of council of the Balneological and Climatological Association, and editor of its journal. He wrote many contributions on the effect of waters, especially those of Buxton. His "Buxton, its Baths and Climate," reached a fourth edition in 1898. His treatise on "Rheumatoid Arthritis" appeared in 1896. Many other articles from his pen on allied subjects have been published. Last summer his active life was interrupted by obstruction of the bowels, for which colotomy had to be done. He rallied well, and was able to absent himself from home for some time so as to gain rest, but complete recovery was not to be, and he sank and died on the 8th instant.

February 23, 1900.

The war makes such demands on our attention that other subjects seem to be of minor importance. Nevertheless we pursue our usual routine of work, and engage with some interest in professional conversations and discussions. Newspapers, of course, are full of the war, and the medical journals are occupying themselves with it more than ever before. The civil surgeons at the front send letters giving their impressions of the hospitals and cases. We read them with some interest, but an increasing conviction that they are of no use out there except to assure the public of the excellence of the military surgeons and of the arrangements of the army medical department. The fact that so far this branch has made no blunders is making a strong impression on the public. At length the Duke of Cambridge has found words of praise for the Royal Army Medical Corps and its work. At a critical inspection of the Langman Hospital on Wednesday His Royal Highness warmly congratulated the generous donor and all concerned. Then he expressed his gratification that every class in the empire had shown splendid spirit and done its best. Then he added "No class has done more in the work of the campaign than the medical men." This from the late commander-in-chief is praise indeed. In office he never did justice to the medical officers, and always opposed any redress of their grievances. The stress of war seems to have converted him. Will his successor now make the *amende honorable* and indorse the praise of His Royal Highness?

Rapid variations in the weather, disastrous floods succeeding the snow and storms, with the usual consequences to the public health—these are the characteristics of the week, though one day seemed to bring promise of spring.

The mortality returns are not yet satisfactory, though the epidemic of influenza is nearly over. In the thirty-three great towns the average death rate was 25.8. This is an advance, but it must be remembered that it shows the deaths registered, not those taking place in the week. The rates of the three preceding weeks were 22.6, 21.2, and 22.7. In London the rate was 22.9; Birmingham, 33.4; Manchester, 37.2. There is a very remarkable return for Preston, 54.8. If some error or misprint has not crept in, this calls for investigation.

Midwives, no doubt, will always be with us in some form or other, but why, oh why, must a midwives bill be forever troubling us? And why should the questions involved stir up more passion than reason? Here we are threatened with a possible second reading next week of a most obnoxious measure promoted by a set of interested persons who play on the feelings of the public. Their proceedings and object may be judged by the fact that they have not hesitated to issue an advertisement in the daily press urging that "all married people should agitate to secure the passage of the bill," telling them it "will practically abolish the system of man-midwifery by creating a class of properly trained, qualified, and registered midwives who will be employed with perfect confidence in all cases." And the very people who resort to such methods of agitation declare privately that their scheme cannot injure the profession, and they pretend, too, that their clients will attend only normal cases. Those who look forward as well as backward tell us that once certified and registered these gossips can no more be restrained from practice on all the women and children they can reach, than the old apothecaries could be hindered from becoming full practitioners as soon as they were properly educated and licensed. And a number of consulting obstetricians who are assisting the agitation are declaring that they do so out of pure benevolence and pity for women laboring with child. Their opponents sneer at this, and say they only want to be called in to help the midwives. If such be their motive they can hardly expect ever to be consulted by the men whose bread they would take away to bestow it on the women who would practically be their partners. It is certainly a fact that there is qualified aid at the disposal of all parturient women in England, and that being so the only women allowed to compete should be fully qualified too—and not mere midwives or nurses. Women can enter the profession; an increasing number are doing so. Their interest is to resist the encroachment of the midwives and support the present law of the land that every registered practitioner must be qualified in our three branches—medicine, surgery, and midwifery.

Amid the din of controversy that has been provoked on the question the voice of Dr. W. J. Smyly, of Dublin, has been heard and deserves an acknowledgment of his tolerant attitude. Dr. Smyly has been elected president of the British Gynæcological Society, and came over to deliver his inaugural address on the 8th inst. He is a past master of the Rotunda, which some think the first obstetric school in the world, and his experience extends to midwives, for they are taught at the Rotunda, and Dr. Smyly considers with benefit to the public. He, however, objects to the proposed bill because it does not apply to Ireland. This is certainly a new grievance from the Emerald Isle, and withal a little inconsistent with the proposition that the Rotunda has worked so well for one hundred years. The opposition of the general practitioners in England is more significant, as they constitute the *corpus vile* on which the experiment is to be tried. If successful, happy Ireland would soon claim her share of the benefit. Dr. Smyly touched on the threat once made to charge the Rotunda officers before the Medical Council. That was foolish, as the Rotunda has the authority of a royal charter. Very different is the position of the Obstetrical Society of London, which has not a vestige of authority for granting its diplomas, in which it does a profitable business. Even the general medical council—the slowest of all slow bodies to move—condemned the Obstetrical Society's trade and threatened to prosecute its managers, but to the disgust of all reformers it soon after climbed down, and there is still a brisk demand for the sham diplomas. With the holders of these competing for practice, no wonder the English general practitioners object to an inferior grade of partially qualified persons being shoved upon them.

Dr. Smyly told the society that in Ireland no distinction is made between monthly nurses and midwives, and he thought it unfortunate that in England the same plan is not followed. A midwife who met with a complication in Ireland at once sent for a doctor and remained as nurse with the patient.

At the conclusion of the address, Dr. Macnaughton Jones (the retiring president) proposed the vote of thanks. In doing so he said the society took a moderate view and was practically in accord with the medical council. He remarked too that every registered practitioner was a midwife, and he objected to anything which would impair the traditions and prestige of the obstetric art.

The vote was seconded by the venerable Dr. Routh, who contrasted the present teaching with that when he was young. He said we must have midwives, but they should be kept in their proper places.

In view of the possibility of the bill coming on in the House, *The Lancet* has issued a post-card plebiscite asking for a plain yes or no to questions put in order to show whether the profession is for or against the bill, and, further, for or against any legislation on the matter.

The adjourned discussion on mastoid disease at the Medico-Chirurgical Society took place on the 13th inst., but it cannot be said to have added to our knowledge of the subject. It gave indeed an opportunity for some surgeons to express an opinion on the operations which have been performed, and for others to repeat or supplement their former statements. The subject is one for specialists, and Mr. Barker said naïvely that "this department of surgery was in one sense a legitimate specialty," a grudging admission quite characteristic of general surgeons. These gentlemen praise Mr. Ballance because he is a general surgeon of a very high position, but as he has been a diligent worker in "this department of surgery" for some fifteen or sixteen years, and is aural surgeon at St. Thomas' Hospital, the aurists naturally look upon him as one of themselves. His position, training, and experience combine to make him an ideal aural surgeon, and otology is unquestionably a surgical specialty. His treatment described at the former meeting is, as I told you, a twofold operation, the first for the cure of chronic purulent otorrhœa, the second for healing up the wound by epithelial grafting of the raw bone cavity. The disadvantage, or, as one speaker called it, the defect, of the proceeding is the double operation and the possibility of having to resort to a third reopening for the removal of the gold-leaf which Mr. Ballance employs. He, however, has not had to do this. Indeed, he said the patient was quite unconscious of the removal of the gold-leaf, and though it might possibly be unnecessary, he did not at present see his way to dispense with it. Further, he did not consider his technique perfect, and therefore his suggestion might be further improved upon.

The difficulty and responsibility of deciding whether to operate were duly discussed, but no new indications were arrived at. With every improvement the tendency is to increase the number of operations, and the constant danger of intracranial extension points in the same direction. On the other hand, such extension is rare, for most practitioners know of cases in which otorrhœa has lasted for years without inconvenience. I have known it to last forty years without any serious symptom. Nevertheless, a complete operation is a protection from the risk such a patient is always running, and Mr. Ballance's plan seems a distinct advance.

The exhibition of cases at the Medical Society on the clinical evenings is usually very interesting—much more so than many papers—though only a few lend themselves to reporting. At the last meeting there was a resection of intestine in a boy aged seven years; a case of urticaria pigmentosa in a boy aged fifteen months; cyanosis in a girl aged eighteen years, probably congenital, but without cardiac murmur. It was suggested as to this that perhaps the opening was too large to produce a murmur and the valves were normal, another suggestion being that the aorta arose on the left-hand side. The right ventricle seemed dilated. There was shown the heart of a boy aged fourteen years, who was brought to a former meeting, and who died suddenly eight days later. The left ventricle was hypertrophied and the aortic opening reduced to a slit. Another heart case was in a man aged twenty-two years, the heart-beat being on the right side in the sixth space, the stomach and the liver being also transposed. Two rather rare cases of rheumatism were present; one of osteo-arthritis in a girl aged eight years after several attacks of acute rheumatism; the other in a girl who had chorea followed by cardiac disease and embolism. A somewhat obscure case of tumor of the femur in a man aged twenty-nine years was thought to be osteitis deformans involving only one bone. Three cases of hernia due to or associated with abnormal descent of the testis elicited the mention of some other cases more or less similar.

Besides patients, appliances were shown, viz., a tourniquet to compress the artery in amputation of the hip-joint, but which has also been used in other operations; two jackets for aiding respiration in emphysema; one applies pressure continuously, the other intermittently. Both had been tried and improvement followed. The rival inventors can discuss their relative value.

AN APPENDICITIS OPERATION IN 1867.

To the Editor of the Medical Record.

Sir: In his excellent historical essay on appendicitis recently published, Dr. Edebohls says: "In his first case of operation (1867) for perityphlitic abscess resulting from perforation of appendix, Dr. Weber contented himself with cutting down as far as the fascia transversalis, allowing the abscess to open spontaneously through the wound thus made."

The case of L. H——, referred to, was the second operated on in this city by what was then known as the Willard-Parker method, and there was a feature in the progress of the operation which was of considerable interest to me and others at that time, and may be of interest even now, because the procedure then employed by force majeure, or accident, if you please, might be followed with advantage in suitable cases as a modification of the method usually employed in modern times.

In making the incision I was advised by one of the surgeons present to make it much nearer to Poupart's ligament than it had been my intention to do. Very soon I came down upon the large vessels and could feel and see the iliac artery pulsate. In fact, I had proceeded very much as if I had intended to tie the iliac artery. When I had gone so far and found that I was below the abscess and behind the peritoneum, I thought I had gone far enough; the gentlemen present were of the same opinion, and a drain was laid to the bottom of the wound; the greater part of it was left open. It was, indeed, to my great satisfaction and the patient's welfare that the pressure of the pus collected worked in the direction of the least resistance, and the abscess discharged within forty-eight hours after the incision through the wound made.

In all my other cases of appendicular abscess operated in the old way, I cut down through the abdominal muscles direct into the abscess cavity, but have often thought that my first experience had pointed a way to get at the appendix by a different route from the one in vogue, and have the advantage of avoiding the division of the abdominal muscular structures. It is long since I have practised surgery, but it seems to me it might be worth trying whether it be practicable and safe to cut down as far, tying the common iliac, and remove the appendix that way. Abdominal hernia, infection of abdominal muscles, etc., would then be readily avoided. With these few words on an ever interesting and important subject I leave the consideration of my proposition to the surgical confrères.

LEONARD WEBER, M.D.

25 WEST FORTY-SIXTH STREET.

ANTIPNEUMONIC SERUM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of February 24th, Dr. A. H. Smith, in replying to my letter which appeared in the MEDICAL RECORD of January 27th, refers me to his article in the "Twentieth Century Practice," vol. xvi., p. 122, wherein he "has discussed at length the claims of antipneumonic serum therapy." I am sorry that Dr. Smith's answer only implies that I had no knowledge of the existence of this article, and also that, in his opinion, antipneumonic serum is a remedy of such doubtful efficacy that he considered it not worth mentioning in his recent paper.

In justice to myself, I wish to state that at the time of writing the letter to which Dr. Smith now replies, I had read the aforesaid article in the "Twentieth Century Practice." In this article Dr. Smith gives an excellent historical sketch of the attempt at antipneumonic serum therapy, beginning with Netler (1888) and ending with De Renzi and Pane. He mentions as the latest achievements in this field the first thirty-two cases of De Renzi and the first five cases of Maragliano—all of which, by the way, are quoted from my first article on the subject (*New York Medical Journal*, May 7, 1898).

My surprise, therefore, was caused by the fact that Dr. Smith does not take into consideration in his recent paper the advances which have taken place in this field since the publication of the first successes of De Renzi and Maragliano.

As a matter of fact, however, a large number of successful cases with Pane's serum have been reported since then by Massolongo (Milan), by Cantieri (Siena), by Maragliano (Genoa), by De Renzi and Pane (Naples), and by many other clinicians. All the reported cases were of the gravest character, and the percentage of cures is enormously in excess of that obtained with the old empiric methods.

Professor Maragliano, in the closing lecture of the session of 1898, said to his students: "Taking the results of the past-year and those of the year before, I am becoming more and more convinced of the antitoxic power of Pane's serum, and of its efficient therapeutic action in pneumonia. All the cases treated with the serum were most severe."

Professor De Renzi, at the Congress of Internal Medicine held at Turin in 1898, said: "A case of pneumonia, no matter how grave, treated in time with a sufficient amount of serum, must surely recover."

For my part, I do not think that we can afford to ignore the testimony of these observers.

ANTONIO FANONI, M.D.

66 WEST TENTH STREET.

OUR VIENNA LETTER.

(From our Special Correspondent.)

VIENNA, February 13, 1900.

PROFESSOR SCHAUTA has been using some new instruments in his clinic this week. One, a needle devised by Joannesdu, of Budapest, for carrying wire, is large and hollow, curved like an aneurism needle, and in a case of ventral hernia in a stout woman with very thick abdominal walls seemed to be very successful. Another is a double hook for craniotomy, designed by Zweifel, of Leipsic. It looks like two of the Braun hooks fastened together, side by side, and is supposed to be so adjusted in the tissues; then the two handles are turned apart, thus turning the hooks at the other end from each other. Professor Schauta thinks that it would be of advantage were it not for the fact that the hand must be removed before swinging the hooks, thus leaving one in doubt as to whether the maternal tissues are not being lacerated; and for this reason he is not prepared to indorse it fully, although it is quick and effective.

The professor has sacrificed his beard to the cause of asepsis, but neither he nor any of his assistants wears gloves while operating. They scrub thoroughly with soap and water, then with alcohol and bichloride. He uses Schleich's method of anæsthesia—ether, chloroform, and petroleum—and says that in the two years he has employed it in his clinic he has never had an accident; the patient comes out of the narcosis much more readily, and the after-effects are not to be compared with those following the use of any other anæsthetic.

They are treating all the chronic retroversions by the so-called "Belastungstherapie," a method introduced here by Dr. Josef Halban, one of Professor Schauta's assistants. After emptying the bladder the patient is placed on a table in the dorsal position, and a colpeurynter smeared with vaseline is introduced into the posterior cul-de-sac and filled with 0.5 kgm. of quicksilver. This is left in the vagina for one-half hour, unless it causes pain, in which case a shorter time is allowed. This treatment is continued daily, gradually extending the time and the amount of the quicksilver until the patient tolerates 1 kgm. of mercury one hour. In thirty-five cases recently followed up by Dr. Halban the results have been excellent. In the chronic cases of para- or perimetritis, he uses it in connection with abdominal massage, or makes counter-compression with shot on the abdominal wall after Freund's suggestions. The advantages of using quicksilver in the vagina in place of shot, which Freund used, would seem to be that the mercury much more readily assumes the shape of the cul-de-sac and causes less pain—acting really much more like massage.

The Wertheim operation, of shortening the round ligaments by going through the anterior vaginal wall, is done in place of the Alexander whenever possible.

At a recent meeting of the Dermatological Society, Dr. Rudolf Metzenauer, first assistant to Professor Neumann, read a report of some interesting investigations he has been carrying on in cases of hospital gangrene, whereby he has succeeded in isolating a bacterium which they are not prepared to classify, but which he believes to be the bacillus of hospital gangrene. It is a large bacillus, about one and one-half times larger than the tubercle bacillus, stains readily with the Weigert stain, and is found not only in the gangrenous tissue where the staphylococci, etc., exist, but is plainly visible in the deeper tissues in which no other bacteria can be demonstrated. In a set of three hundred and fifty slides he has never failed to find it. He has not yet succeeded in growing a culture, but he believes it to be anaerobic.

Medically there is little of interest, influenza playing the most important part in the wards at present.

THE APPENDICITIS QUESTION.

To the Editor of the Medical Record.

Sir: Dr. J. S. Horner's interesting article in the Medical Record for February 24th, under the above caption, calls for further response on my part as a sort of spokesman. He says that "it is only a step from operating on a mild case because it is likely to become severe, to operating on a normal appendix because it is liable to become infected." What is a mild case of appendicitis? Is it one in which the round slough is about to cause a perforation, without premonitory symptoms enough to keep the patient in bed; or is it a case of safely ulcerating mucosa with such spasm of the muscularis of the bowel that the patient is screaming with pain? Will he please define for us "a mild case." I know only the pathology of appendicitis, and do not know a mild case from a dangerous one. The doctor says that we are to "operate in primaiy cases when circumstances arise which in the opinion of the physician make it justifiable." In the opinion of which physician? Does Dr. Horner not know physicians whose opinion he would not trust? I have been present at consultations in cases in which concretions and pus had already escaped through the wall of the appendix, and some of the consultants thought that they could still cure the patient with sweet oil or opium or salts.

We are to be guided by our knowledge of the pathology of appendicitis and not by the opinion of any one who has not looked at the lesion in any given case. The doctor draws a picture of a case "with everything apparently favorable for a mild attack," and quotes the conversation between the physician and members of the family, including the statement that if the physician is honest he will answer concerning operation: "No! The chances are ninety-nine out of one hundred that he will recover." I will give one thousand dollars to the West Pawlet school fund if such percentage statement is correct for appendicitis cases in that town. If such percentage statement is not correct, then Dr. Horner should be careful about going on record, for we have some pretty correct data for guidance.

I made a similar offer two years ago, when Dr. Terry, in the *New York Medical Times*, stated that he had cured forty-nine cases of appendicitis out of fifty-one by medical treatment. I offered to give the above-named sum to a public institution if Dr. Terry would simply state that he personally knew what had become of the cured cases, and if some of them had not since died of appendicitis or had not been operated upon. In answer to my offer a great deal was said about the bad taste of betting in order to settle scientific questions, but nothing was said about the bad taste of publishing misleading statistics for the guidance of physicians who were dealing directly with human life and human happiness. Dr. Terry finally admitted that he knew little about the outcome of some of the cases with which I happened to be familiar. I did not accuse him of dishonesty, but of untrained observation and of unscientific method. Dr. Horner says: "There has as yet been no reason of sufficient importance presented to the profession why a mild case should be operated upon." What text-books does the doctor possess upon the subject? It seems to me that several authorities have given explicit reasons.

The doctor refers to my published letters from a series of appendicitis patients, all of whom stated that they suffered less under surgical treatment than under any sort of medical treatment, and he likens these letters to the testimonies from irresponsible patients in the public press. Has he actually read the letters in question? They are published in the Medical Record for May 21, 1898, and are republished in the third edition of my book on the subject. These letters are worth reading in a genuinely critical way. Dr. Horner quotes me properly as saying that physicians must either tell the patient at the beginning of an attack of appendicitis whether it will probably be a mild or a severe attack, or else they must confess that it can only be told afterward; but he says that the same thing is true of typhoid fever, pneumonia, and scarlet fever. Very well! If a case of typhoid fever, pneumonia, or scarlet fever began at a localized focus of infection, which could be readily picked up between the thumb and finger and put into a bottle, most of us would come to our senses in a few years about the proper method of procedure in the treatment of these cases. Dr. Horner says that hospital medical statistics show an immensely heavier rate of mortality than physicians find in their private practice. Where are these private practice statistics? As a matter of fact, physicians are apt to speak out of memory, and hospital statistics are in black and white. That is the chief explanation for the difference. Not long ago I stated, out of memory, that I had not lost a case of general septic peritonitis in which the patients were treated by flushing out the peritoneal cavity with hot saline solution, and by intravenous saline infusion. My statement was honest in intention, as I believe the statements of most physicians to be; but on going over records later, I found that two patients had died after recovery from the acute symptoms, because the function of the bowel could not be restored.

Dr. Horner says that my rule of operating in acute appendicitis as soon as the diagnosis has been made is impracticable. That depends upon the locality. It certainly is impracticable in localities where the surgeons have not proven their ability to make the suffering rate, the loss-of-time rate, and the death rate in appendicitis less under surgical treatment than under medical treatment of any sort. It is practicable, and is practised by many physicians in localities in which the environment of the patient enables him to benefit by the progress that has been made in our comprehension of the whole subject of appendicitis.

Robert T. Morris, M.D.

58 West Fifty-sixth Street.

Cholelithiasis.—In a recent address before the Nottingham Medico-Chirurgical Society upon "The Dangers of Delay," Dr. A. W. Mayo Robinson expressed his opinions upon treatment of cholelithiasis as follows: (1) Seeing that statistics from various countries and by many observers agree in showing the frequent association of gall stones and primary cancer of the gall bladder and liver, it is desirable that cases of cholelithiasis should be submitted to surgical treatment at an earlier stage than has hitherto been the custom. (2) In all cases of tumor of the gall bladder, even if unaccompanied by symptoms, an operation should be advised, and the obstruction, usually a calculus, should be removed. (3) If these rules were followed, primary cancer of the gall bladder and extension to the liver would probably be less frequent. (4) If early operation in cases of tumor of the gall bladder was followed out, even if cancer had commenced, it could be caught in an incipient stage, when a cure by cholecystectomy, or even partial hepatectomy, might be reasonably hoped for. (5) An exploratory operation, even in a patient seriously ill, with a localized tumor in the gall-bladder region, is worth advocating, though malignant disease be feared, in the hope that the disease may be inflammatory, and so capable of relief. (6) If there are any secondary nodules in the liver, or if adjoining viscera are invaded, the operation had better be terminated as a simple exploratory one.—*British Medical Journal.*

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, February 20, 1900.

JOHN H. HUDDLESTON, M.D., CHAIRMAN.

Some Observations in Counting Blood Cells.—DR. A. H. GARDNER presented some results of such observations. The technique followed by him had been the use of a smear from the finger, hardened in alcohol and ether, stained, and then examined with an oil-immersion lens. In nearly every instance he had counted the number of leucocytes in a cubic millimetre, and had endeavored to make the observation about midday. He stated that the generally accepted proportion of the various cells were: multinuclear, sixty-five to seventy per cent.; lymphocytes, twenty-five per cent.; eosinophiles, 0.5 per cent. About one-fifth of the lymphocytes were usually of the large variety. The most interesting part of his work had been in connection with typhoid fever, eleven cases having been studied. In a case of typhoid fever reported in detail by the speaker, the largest number of lymphocytes noted had been sixty-five per cent., and this had been on the tenth day, while the smallest number had been thirty-one per cent., occurring on the twenty-first day of the disease. In another case, in which four counts had been made after the occurrence of a relapse, the highest number had been sixty-four per cent., and the lowest forty per cent. On one occasion he had counted sixty eosinophiles. It was noticeable in all these cases that by far the larger number of lymphocytes were of the small variety. Similar results had been observed in the other typhoid cases. In two of the cases there had been slight leucocytosis, and these were the ones in which the Widal reaction had been absent. In a case of Hodgkin's disease there were twenty-nine per cent. of lymphocytes, twenty-seven of which had been of the small variety. In a case of sarcoma of the pleura there was twenty-two per cent. of lymphocytes, of which eighteen had been small. In a case of æstivo-autumnal malaria there was forty-nine per cent. of lymphocytes, thirty-five of which were small, and three eosinophiles had also been found. In a case of tumor of the brain there were twenty-nine lymphocytes, twenty-eight being small, and there were also four eosinophiles. An interesting case was referred to—one of chronic alcoholism with ascites and pleuritic effusion, in which examination of the latter showed 4.3 per cent. of multinuclear cells, 1.2 per cent. large multinuclear cells, 13.4 per cent. small multinuclear lymphocytes, and eighty per cent. eosinophiles. The blood of this man showed thirty-seven per cent. of multinuclear lymphocytes, eleven per cent. being large, thirteen per cent. small, and there was also thirty-nine per cent. of eosinophiles.

DR. I. ADLER said that he was of the opinion that much could be done by studies of this kind toward elucidating many interesting clinical and pathological problems. It was still a moot question as to how the multinuclear lymphocyte was formed, and studies of this nature would help to solve this and similar problems. It also seemed to him quite probable that these studies would make it necessary to give up very largely the attractive but mechanical notion of phagocytosis. It was probable that leucocytosis, when present, was not so much the effect of phagocytosis and the elimination from the system of germs and effete matter, but rather a renewed activity of the blood-making apparatus.

Membranous Colitis.—DR. WILLIAM H. THOMSON read a paper on this subject. He began with the statement that it was to be hoped that but few physicians would be called upon to treat a case of membranous colitis at the outset of their professional career, for it would under such circumstances prove most discouraging to the youthful physician. These patients were apt to develop a train of vague nervous symptoms in addition to their abdominal misery. In no other complaint was the morbid self-consciousness of abdominal affections more marked. Many writers had been led to look upon the disease as primarily a neurosis. Chronic bronchorrhœa or a chronic gleet was never a neurosis. The neurotic theory of the etiology of membranous colitis was most unfortunate, as it led the physician in the wrong direction in regard to treatment. Microscopical examination of the membranes discharged from the bowel showed a structureless material, wholly devoid of clots, leucocytes, or other ingredients of an inflammatory exudate. The clinical symptoms were utterly unlike those of ulcerative colitis. For example, constipation usually preceded and followed membranous colitis, while diarrhœa was one of the characteristics of ulcerative colitis. Hæmaturia and albuminuria were not uncommon as temporary symptoms in membranous colitis. He ascribed these renal symptoms to the entrance of the bacillus coli into the blood through the diseased intestinal wall. All the sections of the colon were characterized by abdominal distress, with tenesmus or pain before and during defecation. One of the important etiological factors was direct irritation of the rectum; *e.g.*, by horseback and bicycle riding, and pressure from uterine fibroids. Perhaps the most potent factor was the habitual and prolonged retention of hard scybalous masses of fæces in the rectum. The first indication for treatment was to relieve the colonic symptoms proper. Nothing was so soothing to the tenesmus and the general abdominal distress as irrigation of the colon with decinormal saline solution at a temperature of 110° F. This irrigating fluid should contain five drops of oil of peppermint to the pint of water. The irrigation should be given with the Kemp rectal irrigator, and several gallons of the saline solution should be used. This irrigation might be used as often as once in twelve hours. Unfortunately such treatment was not curative. He believed that in small or alterative doses of castor oil the physician possessed a remedy which was distinctly curative in this affection. It was proper to give the castor oil in an emulsion, each tablespoonful of which would contain half a drachm of the oil. It should be given half an hour before, or more than one hour after, meals, and should be continued for months at a time. Another useful remedy was nitrate of silver, given in doses of gr. ¼ of the silver salt, combined with gr. ix. of turpentine, in capsules, three times daily. After a course of this medication for six weeks, sulphate of copper should be substituted for the silver salt, and should be given in doses of gr. ¼. Abdominal massage and outdoor exercise were useful adjuncts. As these patients were very apt to reduce the dietary unwarrantably, he advised that they should be told simply to exclude beans, corn, spinach, and the woody vegetables.

Mucous Colitis.—DR. WALTER MENDELSON read a paper on this topic. He stated that there were three prominent symptoms in mucous colitis, viz., (1) neurasthenia, (2) the passage of mucus in various forms from the bowel, and (3) the existence of abdominal pain. These, were the history of long duration, made up the clinical picture of mucous colitis. The three symptoms usually coexist, but any one might be present or might largely predominate. Practically all cases gave a history of neurasthenia, and, although it was not always marked, it was invariably present.

The intensity of the pain was variable in degree. It was very common for the pain and the desire to go to stool to come on very early in the morning. Not all of the patients had loose passages; some passed hard masses of fæces. The mucus was always separated from the fecal matter, and not mingled with it as in catarrhal processes of the bowel. The essentially nervous nature of this disease should be kept in the foreground. The cause of this disorder was to be found in those occupations which overstrained the nervous system, and hence it was far more common in women than in men, and was a disease of brain-workers as distinguished from other occupations. The disease was most common between the twentieth and forty-fifth year, but childhood and old age were not entirely exempt. Mucous colitis he would attribute to a perverted action of the intestinal glands, the result of a disturbed metabolism brought about by abnormal innervation. In the treatment the rule should be not to treat the bowel trouble as such, but to treat the individual. It was of the highest importance to improve the general nutrition by the combined use of rest and food. Some clinicians advised the use of unbolted flour, small fruits with seeds, and other irritating articles of diet, with the idea of thus stimulating the intestine to do its work better. In administering enemata he had rarely found it necessary to use the long rectal tube, and had ordinarily employed either drugs or decinormal saline solution. One or two quarts should be given daily at the same time each day. It should be retained for about fifteen minutes. Drugs played a very subordinate part in the treatment of this disease. Unless the patients were willing to give the necessary time to the proper treatment—usually several weeks—very little could be expected. The neurotic woman was usually cured, while the hysterical woman broke off treatment and relapsed again and again, and rarely recovered completely.

Report on Three Cases of Amœbic Colitis.—DR. H. R. A. GRAESER reported these cases. The first of these was that of a man who had never lived outside of New York City. In his stools the amœbæ had been found at every examination. At first no Widal reaction had been obtained, but about one week later this reaction had been present, and there had been abundant evidence that this man had also become infected with typhoid. He died one week later, but no autopsy could be obtained. The second case was that of a young woman who had eight or nine stools daily. At every examination of the stools, after the first one, amœbæ had been present. The patient had improved rapidly, and had left the hospital before being regularly discharged. The third case was that of a man, who had from eight to twenty stools daily. His blood contained no plasmodia, and the Widal reaction was negative. The first examination of his fæces showed many very active amœbæ, and many Charcot-Leyden crystals. At no subsequent examination were the latter present. The treatment with calomel internally and quinine locally seemed to have given the best results. The fæces to be examined for the amœbæ should be received in a warm vessel, and immediately examined on a warm stage in order to find the live amœbæ. The amœbæ in these cases very often contained red blood cells. In the formed fæces these amœbæ were most abundant in the mucus on the surface of the fecal masses. In every case of obstinate or chronic diarrhœa the stools should be examined for living amœbæ or other intestinal parasites.

Examination in Cases of Amœbic Colitis.—DR. HARLOW BROOKS presented a brief summary of the eight cases of amœbic colitis occurring in the fourth division of Bellevue Hospital since December, 1897. He had also observed four other cases in private practice of other physicians. Four of the patients had certainly been infected outside of this city. One symptom, not previously mentioned, was the very severe, cramp-like pain in the skeletal muscles, especially in the muscles of the calves. The cases had been benefited chiefly by the use of enemas, and a solution of quinine, 1 : 5,000, or a solution of nitrate of silver of the same strength. None of the cases, so far as known, had relapsed. The stools for examination should be received in a warm bed-pan, and if acid should be at once neutralized by the addition of sodium bicarbonate. A portion of the stool should be then poured into a warm, wide-mouthed bottle, corked, and sent at once to the laboratory for examination under the microscope, preferably on a warm stage. It was important to take the precautions mentioned, and to make the examination as soon as possible after the stool had been passed. In such specimens many of the amœbæ would be found in an active state. If the stools became acid or cooled, the amœbic movement would be destroyed. Unless the movement of the amœbæ could be seen, it was often most difficult to make a correct diagnosis. He had not found stained specimens very satisfactory. The specimens could be fixed as were blood specimens, preferably by heat fixation. They could then be stained by the ordinary Loeffler stain. The nucleus did not readily stain, while the foreign bodies adhering to or within the amœba stained readily, thus obscuring the amœba itself. Generally the number of amœbæ present corresponded to the severity of the symptoms. Amœbæ from the stools discharged shortly after having taken a quinine enema were usually motionless.

Duration and Prognosis of the Various Forms of Chronic Colitis.—DR. JAMES K. CROOK read this paper. He asserted that nature paid no heed to the artificial divisions of the intestinal canal so carefully drawn by the anatomists, one or more parts, or even the whole intestinal canal, being sometimes involved at once in the disease process. In chronic inflammatory states of the large intestine, with recognizable symptoms, the prognosis was naturally quite serious. The various types of colitis had been sufficiently described by the foregoing speakers.

DR. ROBERT T. MORRIS said that he wished to say a word in support of the theory that some of these cases of membranous colitis and mucous colitis represented a functional neurosis. Surgeons considered some of these cases coming to them quite curable. This was probably because of the special nature of the cases which they saw—namely, those having a recognizable and definite source of peripheral irritation. As he was speaking from memory and not from accurate clinical records, he could not state just what proportion such cases bore to the total. A common surgical cause was a loose kidney. He recalled one such case, occurring in a hysterical woman, in which after fixing the kidneys most of the symptoms had disappeared, and she had gained somewhat in weight. He felt sure that many cases of membranous or mucous colitis could be relieved or cured by attention to an enteroptosis as the underlying cause.

DR. SPENCER FRANKLIN said that he had treated a good many cases of tropical or amœbic dysentery, and, finding almost no result from internal treatment, he had abandoned it in favor of enemas given with the long rectal tube. His plan had been to flush out the colon with saline solution, and then throw into the bowel, almost daily for a week, four ounces of a solution of nitrate of silver having the strength of ten or twenty-five grains to the ounce. This treatment seemed to physicians here very heroic, and while he would advise giving, as a preliminary, a hypodermic injection of morphine, he felt that such extreme measures were perfectly justifiable in the severe cases met with in the tropics. Since he had adopted this method he had not lost a single case.

Dr. Adler said that in the German Hospital, of this city, it was the practice to examine every diarrhœal stool microscopically, and by this method it had been found that amœbic and protozoic or infusorial diarrhœa was very much more common than was ordinarily supposed. The zoölogy of the human bowel had been by no means exhausted, and the subject was much more extensive than was usually believed. He had seen many cases of amœbic colitis, and was thoroughly convinced that the tropical colitis was the result of an entirely different species of amœba. His experience would not lead him to be anything like so sanguine as was Dr. Brooks. He could not recall having permanently cured any one of his patients. Sometimes there would be a cessation for several months, or even for a year or two, yet even Dr. Graeser had shown that microscopical examination of the mucus of the bowel would reveal the presence of the living amœbæ. He had seen no real benefits in these cases from the internal use of salol or tannalbin, but calomel, given in large doses or in small doses, invariably killed the amœbæ and checked the diarrhœa. This good effect would last for a certain fixed time—perhaps a week or two—after the administration of the calomel.

Dr. William B. Graves exhibited a colon taken from a case of chronic mucous colitis. The man had been under his observation for fifteen years, and had died with some uræmic condition. The colon was very much swollen and narrowed in its diameter, and was adherent at the splenic junction. Its lumen was almost obliterated.

Dr. Harlow Brooks said that he had examined two caess of mucous colitis post mortem, with an entirely negative result.

Dr. William H. Thomson said that the changes found in this colon were quite characteristic of cases of chronic nephritis affecting the colon, and the antecedent condition might have been very different. It seemed to him that the mucous colitis described by Dr. Mendelson was identical with his own cases of membranous colitis. Every patient with membranous colitis would in time become neurasthenic. From careful notes he could say most positively that some of his patients had presented not the slightest evidence of neurasthenia until they had been sufferers for some time from membranous colitis.

Dr. Mendelson replied that the results of treatment had convinced him that the nervous element was the prominent though not the only one, and if it could be eliminated the intestinal affection could be cured. Many of the cases coming to him had lasted for a number of years, and the intestine had previously received assiduous attention, yet with little or no benefit.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, February 19, 1900.

Frederick Holme Wiggin, M.D., President.

Report of a Case of Rupture of the Perineum in Coitus.—Dr. R. Abrahams made this report. He stated that, according to a recently published article, medical literature contained only twenty-two recorded cases of a similar nature. His patient was a woman of twenty-six, who married in the latter part of December, 1899. Her previous health had been good, and she had never suffered from prolapse of the rectum, hemorrhoids, ischio-rectal abscess, or any inflammatory process in the perineum. At the first sexual intercourse the hymen had been ruptured, and a little blood had escaped. During the first six weeks of their married life, the couple cohabited six or eight times, and on the last of these occasions there had been a little pain and considerable bleeding attendant upon the act. These were regarded, as she had expressed it, as "the finishing touch to virginity," but the following morning she had been astounded to observe that fæces escaped not only from the anus but from another opening higher up. This had led to her consulting Dr. Abrahams. On examination, the external genitalia, the vagina, and the uterus had been found well developed and perfectly normal, but there was a complete rupture of the perineum as if it had been designedly made with a surgical instrument. Two fingers could be readily passed through the wound into the rectum, but careful examination had failed to reveal any recto-vaginal or recto-vulvar communication—only what might be called a recto-perineal fistula. The patient had become alarmed at the prospect of an operation for the repair of the rupture, and had disappeared from observation.

Dr. Edwin Gaillard Mason said that he had seen one similar case during his experience in St. Mary's Hospital. The patient was a young woman who had been married a few months, and the rupture had occurred during the first attempt at coitus. The hymen was exceedingly thick, and he had cut it away. The laceration had extended through the recto-vaginal fold. Between the time of the occurrence of the laceration and the operation for its repair sexual intercourse had taken place through the rupture.

Exhibition of New Devices for the Administration of Anæsthetics.—Dr. S. Ormond Goldan exhibited a bag fitted with a valve obturator, and also a simple apparatus for the administration of nitrous-oxide gas in conjunction with ether. It was devoid of valves, and it was possible to induce a perfectly normal nitrous-oxide anæsthesia without the admission of air. He also showed a device for administering the chloroform through a tracheotomy tube, and also a triple tenaculum which he had found very useful for preventing the tongue from dropping back while performing artificial respiration without proper assistance.

Dr. J. W. Draper Maury exhibited a modification of the S. S. White apparatus.

Discussion on Anæsthetics.—This was the special topic for the evening's discussion.

Selection of the Anæsthetic in Surgery.—Dr. John A. Wyeth opened the discussion by a consideration of the selection of the anæsthetic, considering, however, only the use of chloroform and ether unmixed. He said that during the first few years of his practice he had employed ether almost exclusively, and during this time had not failed to note the great irritation sometimes caused by this anæsthetic agent, and the great difficulty of inducing complete narcosis in alcoholic subjects without producing asphyxia. He had, therefore, been led gradually to make more and more frequent use of chloroform. At present, in about seventy-five per cent. of his operations he employed chloroform, either wholly or in some stage of the narcosis. In using chloroform he invariably injected beneath the skin one-fourth of a grain of morphine and $\frac{1}{150}$ of a grain of atropine about fifteen minutes before commencing the anæsthesia. These agents stimulated the heart, and allayed to a considerable extent the anxiety of the patient. He believed chloroform was dangerous chiefly to the heart, and that it was during the early stage of its administration that this danger was imminent. The depression of the heart, when observed at all, occurred almost invariably prior to the induction of complete narcosis.

Administration of Chloroform.—Chloroform should be administered with very great care, and only by an expert. In giving chloroform, he preferred to use the ordinary Esmarch's screen, keeping his finger on the pulse and watching the pupil for any sudden dilatation. If the patient gradually gave way to the anæsthetic and the pulse showed no interruption in its rhythm, he felt satisfied that the chloroform was having no unfavorable effect. The pulse might be rapid —120 or more a minute—or it might be as slow as 50 or 60 beats per minute, but these variations were not suggestive of serious danger so long as the heart beat regularly and rhythmically. If, however, a beat was lost here and there, or if two successive beats fell off in fulness, and then rose again in volume, it was always to him a signal which was to be respected, and he promptly withdrew the chloroform for a moment to note the effect. Should sudden pallor of the face occur, especially about the lips, on resuming the chloroform, he stopped the anæsthetic, and lowered the patient's head, preferably placing him in the Trendelenburg position. If the heart still showed resentment to chloroform, ether was at once substituted. If there had been no alarming symptoms from the first use of chloroform, he returned to it after having administered the ether for a short time. Another alarming symptom of the too profound effect of chloroform was the sudden and wide dilatation of the pupil. When this occurred, he always desisted from the use of chloroform anæsthesia. In his opinion, it was not proper to endeavor to bring the patient rapidly under the influence of chloroform. The free admixture of air was essential to safety. The average time for complete narcosis with chloroform was from fifteen to twenty minutes.

Ether Narcosis.—When ether was employed, he always used it with the Ormsby inhaler, or some form of inhaler which did not allow of the passage of the atmosphere directly over the inhaler and into the apparatus. The Allis instrument, or any similar form of open inhaler, seemed to him extremely objectionable because the passage of the atmosphere over the inhaler lowered the temperature within the inhaler and carried a chilled vapor into the respiratory passages, often exciting inflammation in this way. The introduction of a warm, moist anæsthetic vapor facilitated and modified the anæsthesia satisfactorily. In a series of administrations at operations in the Mt. Sinai Hospital he had proved that with the Ormsby inhaler the patient could be anæsthetized with ether and maintained under narcosis, and would come out of the anæsthetic more rapidly and with less irritation of the kidneys or other organs than by any other method of administration. It was well known that the elimination of the ether vapor by the kidneys was the cause of very considerable irritation of these organs. Of course, the greater the volume of ether in the blood, the greater was the volume that must be eliminated by the kidneys. Just here was observed one of the advantages of the closed inhaler—*i.e.*, the diminution in the quantity of the anæsthetic necessary for a given period of narcosis.

Ether and Chloroform Contrasted.—In the hands of a tyro ether was safer than chloroform, and this without regard to the condition of the patient, but in the hands of an experienced anæsthetist, and one who had studied his case carefully and had satisfied himself that the use of chloroform was justified, this agent was practically without danger. He preferred chloroform in all cases in which there were pathological changes in the kidneys, and in which heart lesions were absent. When the lungs were seriously involved, as by tuberculosis, gummatous tumors, or inflammatory changes, or when there was a moderate pleuritic effusion, chloroform was preferable. When, however, in any way the heart had become crippled, ether was the safer anæsthetic. For operations in the abdominal cavity, chloroform was preferable for the reason that vomiting was less likely to occur during and after the operation. He was especially afraid of chloroform in patients who had had repeated attacks of rheumatism, and in whom the action of the heart was weakened by serious valvular lesion, atheroma, or fatty metamorphosis. In alcoholic subjects chloroform was preferable because of the difficulties met with in securing profound narcosis from ether.

Chloroform Unsafe for Children.—In children, ether was, in general, the safer anæsthetic. He had been taught that chloroform was the better anæsthetic in this class of cases, but he had learned that in children under twelve years of age chloroform was not so safe as ether. He had seen death occur in a child of ten years, without a single danger signal, and when not more than one drachm of chloroform had been administered by an expert. Chloroform was especially dangerous in children who were poorly nourished or weakened by any dyscrasia. Particular care was necessary when the child struggled and made deep and rapid inspirations. Over the age of twelve years, in healthy subjects, he believed chloroform to be as safe as ether.

The Amount of the Anæsthetic.—DR. THOMAS L. BENNETT took up this topic. He stated that in his opinion many of the symptoms of prostration noticed after operation, and attributed to hemorrhage or shock, were really due to overstimulation from the use of an excessive amount of the anæsthetic. Many factors entered into the production of nausea and vomiting after operation, yet he was sure that there was a direct relation between these symptoms and the quantity of the anæsthetic employed. Asphyxia might result from an overdose of the anæsthetic agent, or from foreign bodies in the air passages. Syncope was invariably due to an overdose. Mucus, saliva, vomited matter, or blood might flow into the pharynx, and be carried into the trachea. Here it acted as an obstruction to respiration, and, as a result, the inspiratory efforts were greater, and these substances were drawn deeper and deeper into the lungs. Acute pulmonary œdema, in his experience, had been a rare complication of anæsthesia. The influence of anæsthetics upon the kidneys had received much attention, and all observers agreed that the chief factor was the quantity of the anæsthetic employed. The necessary amount of the given anæsthetic would depend upon: (1) The requirements of the individual patient; (2) the requirements of the particular operation; (3) the method of administration; (4) the administrator. Large, strong, energetic, wiry, neurotic, and intemperate patients, as a rule, required more than the average amount of the anæsthetic, while small, weak, lethargic, phlegmatic, and temperate people required less than the average amount. Many children about the age of puberty required an unusually large quantity of the anæsthetic. The amount would vary according to the nature, severity, location, and duration of the operation. Operations on the rectum, perineum, bladder, the eye and ear, and abdominal operations requiring severe and deep manipulations, all required a very deep narcosis. As to the method, he would say that when he had experienced great difficulty in securing ether narcosis by the open method he had succeeded quite rapidly when he resorted to the closed inhaler. There were two ways in which ether might be administered with a given inhaler, viz., (1) using a small quantity at short intervals, and (2) using a larger quantity at longer intervals. His personal preference was for the first method, just as he favored the drop-by-drop method of administering chloroform. On an average, about four ounces of ether would be required for the first hour, if the closed method was used, and about two ounces for the next hour.

Nitrous Oxide and its Modifications for Prolonged Surgical Operations.—Dr. S. Ormond Goldan read this paper. He said that in the use of nitrous-oxide gas for prolonged operations, the following precautions should be observed: (1) A sufficient quantity of gas should be at hand; (2) a hot cloth should be wrapped around the valve if the apparatus became covered with frost; (3) the patient's face should be turned on the side. Operations of delicate dissection, or where venous engorgement was undesirable, contraindicated the use of nitrous-oxide gas. The use of this gas was not contraindicated in abdominal operations, but it had been found necessary to flex the legs and thighs well in order to secure the proper relaxation. This was a point which had served him well, though he did not recollect having seen it mentioned in the books. It was undesirable to carry the anæsthesia to the production of clonic spasm. The time required for the induction of anæsthesia by nitrous oxide varied from thirty seconds to two minutes. About four gallons of gas was required in the average case to produce anæsthesia. Nitrous-oxide gas was an asphyxiating agent, although it also had anæsthetic properties, as was proved by its use with oxygen. When administered in conjunction with carbonic dioxide the patients often complained afterward of headache. To obviate this the inhaler should be opened occasionally, and then filled with fresh gas. For the administration of nitrous oxide and oxygen Dr. Hewitt's apparatus was generally employed. The effort was to give each patient as much oxygen as he or she would tolerate. The percentage of oxygen must be varied from time to time throughout the narcosis, depending upon the effect. The mask was kept constantly supplied, and the inhalation was continued uninterruptedly. This mode of anæsthetization required the greatest skill. As much oxygen as possible should be administered without interfering with the anæsthesia. Consciousness was almost immediately regained after nitrous-oxide anæsthesia. Sometimes there was intense headache for hours after its administration. Nausea and vomiting were also occasionally persistent for some hours. Hysterical attacks occurred at times after this anæsthetic. Anæsthetization with nitrous-oxide gas and oxygen was the most expensive of all the methods. In one operation lasting two hours, in which these gases had been administered in minimum quantity, the cost of the anæsthetic agents alone amounted to seven dollars.

Experience with Ethyl Chloride in General Anæsthesia.—Dr. James P. Tuttle read this paper, which was based on some experiments that he had made during the past three months with kelene, or pure ethyl chloride, as an adjunct to anæsthesia with ether. The first experiment had been made on November 15, 1899. The patient was a strong man aged forty-five years, having a fatty tumor on the border of the scapula. Insensibility to pain had been induced in four minutes, but the muscles had not relaxed promptly, and supposing that this could not be readily induced by kelene, the anæsthetist had been directed to change to ether. Complete narcosis had been induced so rapidly then that he had been at first alarmed. His next experiment had been on a case of hemorrhoids. For three minutes and a half kelene had been administered, and then, the cornea having become insensitive, ether had been given with the Ormsby inhaler, and complete anæsthesia had been induced in two minutes more. Since then he had adopted the following method: The kelene is sprayed upon the under surface of an Esmarch inhaler, and the spraying is repeated from time to time. As soon as the cornea became insensitive, ether was given by the Ormsby inhaler. In forty cases of which he had notes, the time required to induce anæsthesia had never exceeded seven minutes. As a rule, consciousness seemed to be retained up to the time of changing to ether. There was sometimes momentary spasm of the glottis at the time of beginning the use of the ether. The shortest time required for inducing anæsthesia had been three minutes and a half, and the longest seven minutes. Occasionally there had been a little struggling, but ordinarily the patient was conscious, and a reassuring word or two, explaining to him that there might be a momentary spasm or choking, was sufficient to prevent any struggling. He had asked a number of patients whether they had any recollection of the application of the ether cone, and in each instance had received a negative reply. In four cases the use of the ethyl chloride had proved unsatisfactory. In one of these it had been found exceedingly difficult to anæsthetize the patient with ether. None of these four persons was at all the worse for the kelene, and he felt sure that in none of these instances had the induction of ether narcosis been rendered more tedious or difficult by the preliminary use of the kelene. The average quantity of kelene employed had been between 10 and 20 c.c. He considered it important that the kelene should be kept in a closed graduated tube. He had seen no deleterious effects from this use of ethyl chloride.

Closed Inhalers Dangerous. — Dr. Hobart A. Hare, of Philadelphia, opened the general discussion. He stated that the physicians and surgeons in Philadelphia believed the best form of inhaler for both ether and chloroform to be the simplest one imaginable—the ordinary towel cone with a piece of absorbent cotton in the top of it, or an Allis inhaler for ether, and the folded towel for chloroform. Personally, he was very much opposed to the various forms of cumbersome apparatus that had been shown this evening. He was opposed to them because of their cumbersomeness, and because he believed much the same objections applied to tubes and bags in connection with inhalers that applied to tubes in infants' nursing-bottles. He believed a good many pulmonary accidents had occurred from the use of these bags and tubes in connection with inhalers. We were told, of course, that these things could be boiled and sterilized, but how often in private practice was this neglected when the physician or surgeon returned home tired out after a long and trying operation? He had seen a gynæcologist in Philadelphia use one of these bag inhalers, and had always been impressed with the idea that his patients were being anæsthetized primarily by the anæsthetic and secondarily by carbon dioxide, and thirdly, perhaps, anæsthetized or benumbed by taking into the system the effete material which it was known the breath was continually giving off. Physiological experiment had proved most positively that, after all, it was not the carbonic-acid gas which was given off from the lungs which acted so deleteriously in crowded rooms—as in the historical Black Hole of Calcutta—as the effete material expired. For these reasons he was of the opinion that an anæsthetic agent should be selected and used by itself without having its effect obscured and rendered more complex by the use of these closed inhalers.

Comparative Safety of Chloroform and Ether in Children.—He had been particularly interested in the title of Dr. Wyeth's paper because he believed it was a common fault to resort to the routine use of both ether and chloroform without carefully selecting the anæsthetic to suit the needs of the individual case. He had been greatly surprised to hear the statement by Dr. Wyeth that the use of chloroform in children was more dangerous than in adults, for he felt sure that medical literature would not support this assertion—indeed, it seemed reasonable to suppose that what might be called "the fresh heart" of the child could stand chloroform better than the heart of an older person. Again, ether seemed to him particularly objectionable in children because the delicate mucous membrane in the respiratory passages of the child was so much more apt to become inflamed as a result of the irritation set up by the ether.

Effect of Chloroform on the Heart.—He would also take issue with Dr. Wyeth in regard to the effect of chloroform on the heart. He did not believe that chloroform exercised primarily any very distinct depressing influence upon the left heart of an healthy individual. The explanation of the sudden circulatory failure which took place frequently during chloroform anæsthesia he believed was to be found, not in the heart, but in the vasomotor system. It was perfectly possible for a man to bleed to death into his own arteries. These deaths from chloroform, then, he would ascribe to vasomotor paralysis. A very large proportion of deaths from chloroform had occurred in the hands of dentists who had administered the drug to patients semi-recumbent or sitting up in a chair. In confirmation of this view, the speaker referred to a case seen by him in a private hospital of a colleague. The patient had suddenly become utterly pulseless, and the apex beat of the heart could not be felt over the precordium; indeed, a hasty auscultation had hardly revealed the heart sounds. Dr. Hare said that he had suggested in this emergency that the operator grasp the abdominal aorta. This had been done immediately, and at once the heart had begun to beat more naturally. This case seemed to him convincing evidence of the very important part played by the vasomotor system. When vasomotor failure did not occur, and still chloroform produced death, it did so, in his opinion, by paralyzing the sister centre of the vasomotor centre, *i.e.*, the respiratory centre. Dr. Hare said that he had studied this matter very carefully on animals for the Hyderabad commission, and had become thoroughly convinced that the primary effect of chloroform on the circulatory apparatus was to lower the blood pressure.

Atropine before Anæsthesia.—Again, surgeons innumerable had found that the use of atropine just prior to the administration of chloroform gave a more satisfactory anæsthesia. This was because atropine was one of the best vasomotor stimulants. The atropine more than the morphine was responsible for Dr. Wyeth's good results when these two drugs had been given prior to anæsthesia. The foregoing facts should impress another lesson, viz., that before anæsthesia is induced, or an operation performed, the limbs should be bandaged in a feeble patient. In urgent cases an abdominal compress should be applied with the same object in view.

Shock following Anæsthetization.—It had often seemed to him that the amount of the anæsthetic agent employed depended more upon the anæsthetizer than upon the anæsthetic agent or upon the patient. Some anæsthetists seemed to know almost instinctively when to add more of the anæsthetic, and when to stay their hand. The profession at large seemed to pay too little attention to the question of the shock produced upon the patient by the administration of an anæsthetic. This was a matter which could not fail to impress itself upon physicians rather than upon surgeons. He had repeatedly seen persons subjected to operations and recover apparently satisfactorily from them, and yet for many months afterward they had carried with them a distinct stigma resulting from the operation or the anæsthetic. Many women after such an experience do well for a short time, and then become vaguely nervous and out of health, and ultimately have to take the "rest cure."

Position of the Head and the Use of Tongue Forceps.—When one wished to be sure that air passed freely into the lungs, the head should be thrown forward in the position which it occupies in a trained runner. If the anæsthetic was properly given, the head maintained in this position, and the jaw properly manipulated, there would be seldom any occasion for the anæsthetizer to make use of the tongue forceps which so commonly decks the coat of the young hospital interne whose duty it is to administer the anæsthetic.

Avoidance of Nausea.—He believed in many cases the preliminary use of morphine increased the tendency to nausea and vomiting. He had discovered that if it was desired to avoid this nausea, whether due to the anæsthetic or to the morphine itself, it could be ordinarily accomplished by combining nitroglycerin with it.

Influence of Athletics and Fright.—He was of the opinion that nitrous-oxide gas should be used very carefully in any case in which there was atheroma, because this anæsthetic greatly increased the blood pressure. In the presence of valvular disease of the heart he would employ ether in preference to chloroform, and also in cases of fatty degeneration of this organ. On general principles, ether seemed to be a safer anæsthetic in young athletes than chloroform, because statistics showed very clearly that these persons were specially prone to accidents with chloroform. When engaged in laboratory work it had been recognized as a fact that strong, well-built dogs were very prone to die under chloroform, and that the better bred the dog the more susceptible was he to the lethal influence of this anæsthetic. Dr. Hare mentioned this amusing fact, he said, to emphasize the influence of fright, the highly bred dog exhibiting great fright before the anæsthetic had been administered.

The Effects of Different Anæsthetics Compared.—DR. R. COLEMAN KEMP continued the discussion, speaking of the effect of anæsthesia on the kidneys. He stated that, other conditions being the same, the secretion of the kidney varied with the quantity of blood flowing through the kidney, and by conditions affecting the general arterial pressure. Ether and nitrous oxide could be taken as the types of the vasoconstrictor anæsthetics; nevertheless, with ether the constriction of the renal vessels was entirely out of proportion to the constriction of the other vessels in the body—in other words, ether seemed to exert a selective action on the kidney. Moreover, in experiments on animals with these anæsthetics, the percentage of albumin was large with ether as compared with chloroform, and persisted for a long time. With the A. C. E. mixture the chloroform depression was noted and the typical effect of ether on the kidneys. The main objection to the Schleich mixtures, when given with the closed inhaler, was the occurrence of the chloroform heart and the ether kidney. Anæsthol contains chloride of ethyl, ether, and chloroform. The chloride of ethyl exerts a certain depressant effect upon the heart and upon the circulation. Nitrous-oxide gas and oxygen should be considered the safest anæsthetic, provided the patient was not atheromatous, and when kidney lesions were suspected or were known to exist. Chloroform, as regards the kidneys, occupied a close second position to nitrous-oxide gas. The mixtures possessed no advantages, since they combined the bad effects on the heart and on the kidneys, and one was ignorant of the actual amount of the various constituents taken into the system.

DR. FERDINAND HASBROUCK spoke from his personal experience as a dentist who had been administering nitrous-oxide gas constantly for over thirty years. He had administered the gas to nearly ninety-five thousand people, and had not yet lost a patient. He thought he was familiar with the case referred to by Dr. Hare, and believed it was one case out of one hundred and twenty thousand. (To this Dr. Hare assented.) Regarding the apparatus that had been exhibited, he said that it was very defective. The calibre of the tube was much too small to prevent the unpleasant suffocative sensation complained of by so many persons. He could administer nitrous-oxide gas to adults or children almost imperceptibly. As a rule, the sensations were pleasurable rather than disagreeable. He ascribed his good results to the use of a very large tube, and the old-fashioned Johnson inhaler. He had administered the gas for operations of one or two hours' duration—probably five hundred times for operations lasting one or more hours—and had never experienced any very great difficulty with it. He called attention to the fact that the valve in the iron cylinder containing nitrous-oxide gas might be broken without the knowledge of the anæsthetist, and thus leave him in a very unpleasant position.

A Large Mortality from Ether Anæsthesia.—Dr. R. H. M. Dawbarn called attention to the change of opinion which had taken place in New York City in recent years in favor of the more general use of chloroform as an anæsthetic. He believed that almost invariably when a man died under chloroform it was due to the ignorance of the anæsthetist. He made the statement that Dr. R. Coleman Kemp and Dr. William H. Thomson had records proving most conclusively that in the hospitals of this city about one patient in nineteen dies from ether anæsthesia. The speaker said that in the last ten years he had not had a single death from suppression of urine or from ether pneumonia after ether anæsthesia, and he attributed this largely to the use of a simple modification of the Clover inhaler. The breathing over and over again of the same ether in such an inhaler prevented chilling and undue irritation of the respiratory passages. Undoubtedly it produced a carbonic-acid anæsthesia, but so eminent an authority as Dr. H. C. Wood, of Philadelphia, had expressed his conviction that such anæsthesia was not injurious. The modified Clover inhaler to which he had referred could be cleansed in a moment—certainly in much less time than was required for cleaning the Allis inhaler. For the last ten years he had almost always given prior to anæsthesia gr. $\frac{1}{150}$ of atropine and gr. 1/6 of morphine, with a little whiskey. This medication reduced the quantity of the anæsthetic required, and certainly reduced, and sometimes annihilated, the element of fear.

Ether Gelatinizes Acid Urine.—Dr. J. A. Bodine referred to the observation, made some years ago by Dr. Andrew H. Smith, of this city, to the effect that when acid urine was mixed with ether in the laboratory it would gelatinize after a time, but that this did not occur when the urine was alkaline. This suggested the possibility, which seemed worthy of further study, that if the precaution was taken to have the urine acid before giving ether, the effect on the kidney might be less dangerous.

Fright an Important and Dangerous Factor.—The speaker laid great stress on the element of fright and apprehension concerning the administration of the anæsthetic, and referred to a case occurring in the practice of a surgeon in New York City, in which death had occurred just before the administration of the anæsthetic had been begun. In this person the autopsy revealed all the vital organs in a normal state. Because of this fright before anæsthesia, he favored the administration of a moderate dose of morphine. The reason that chloroform was relatively safer in obstetric practice was that the woman looked upon parturition as a natural process, and welcomed the anæsthetic as a relief from the pain. Future research regarding anæsthesia should be directed toward studying the effect of the anæsthetic upon the blood, as the field of pure clinical study of anæsthetics had been nearly exhausted.

A Simple Home-Made Ether Inhaler.—Dr. A. Ernest Gallant spoke of the important and responsible position of the skilled anæsthetist, and contrasted the usual fee which he received with that demanded and received by the operating surgeon. He advocated allowing the patient to hold the ether cone; the additional time required would be more than compensated for by the diminution of fright. His method of using the Allis inhaler was to remove the bandage from the frame, to cover the lower portion of the frame with a layer of absorbent cotton retained by slipping a rubber elastic band over the frame, and then loosely to fill the frame with gauze. The ether cone used and recommended by him could be readily made by any one at home, the frame being made from a piece of ordinary stove-pipe, tin, or galvanized iron leader pipe, three inches in diameter, and three and a half inches long, or even from a heavy piece of cardboard. If the latter was used, it should be wetted on one side to make it flexible, and then bent to an oval shape. The gauze was to be adjusted over the end, and a newspaper, folded eight inches wide and wrapped in a towel, was wound tightly around the frame, both ends being left open. The loose gauze having been put into the frame, the inhaler is ready for use.

Effect of Chloroform after Nitrous Oxide.—Dr. J. W. Draper Maury said that he understood that in Germany the custom was not to give chloroform by the drop method, as had been stated, but by saturating the mask with the chloroform. If nitrous oxide was followed by chloroform it almost always induced vomiting, and not infrequently the effect of chloroform on the heart after the use of gas was deleterious.

Schleich's Mixtures Commended.—Dr. M. L. Maduro spoke favorably of the Schleich mixtures, and in this connection cited the experimental work of Dr. S. J. Meltzer. This investigator claimed that the petroleum ether was the dangerous constituent, though Schleich denied this. The work of Drs. Kemp and Thomson was interesting, but was more than offset by the results of experience, as abundantly proved by the statements that had been made in this discussion.

Dr. Parker Syms spoke with great earnestness in favor of the growing tendency to turn over the administration of anæsthetics to those specially trained for this work.

Dr. Emil Mayer brought up the question as to when consciousness ceased, and the important bearing which it had upon the conduct and conversation of those present in the anæsthetizing-room.

Dr. Hare emphasized the fact that the dose of the anæsthetic which the patient got was not that quantity which was put upon the towel or mask, or which was breathed, but the amount which was absorbed. For this reason, if the patient breathed in one ounce of ether in a closed inhaler, and breathed it over again ten times, there was very little difference in the effect upon that patient, as regarded the quantity of the anæsthetic, from giving a good many ounces of ether on an open inhaler. In his opinion, the reason that the parturient woman could take chloroform so much more safely than others was because the pain stimulated the abdominal vasomotor centres. In conclusion, he advised that a careful selection of the anæsthetic should be made for each case.

Dr. Goldan, in closing, said that he always made it a practice to sterilize thoroughly his bag inhaler each time. Regarding the physiological experiments of Drs. Kemp and Thomson, he would say that their results were decidedly at variance with clinical experience, for certainly it was rare to find bloody urine or suppression of the renal secretion after etherization. Chloroform should never be given immediately after nitrous-oxide gas; if it must be given, ether should be used as an intermediate agent.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 3, 1900:

	Cases.	Deaths.
Tuberculosis	193	171
Typhoid fever	7	3
Scarlet fever	160	23
Measles	818	33
Diphtheria	262	54
Laryngeal diphtheria (croup)	21	13
Cerebro-spinal meningitis	0	7
Chicken-pox	17	0

A Resected Coil of Small Intestine Twice Perforated by a fragment of bone 4 cm. long by 1.5 cm. wide was demonstrated by Büdinger at a meeting of the Gesellschaft der Aerzte in Vienna on October 20, 1899. The patient had presented himself on account of a painful swelling in the right inguinal region, which upon operation proved to be a collection of foul-smelling pus. — *Klinisch-therap. Wochenschrift*, 1899, No. 43.

Precocious Dentition.—Heard (*British Medical Journal*, December 2, 1899, p. 1543) reports the case of a girl, born at seven and a half months, labor being induced prematurely on account of a justo-minor pelvis. The infant was perfectly normal and healthy in every way, but the two lower central incisor teeth were visible under the gum. These cut through within a few days after birth, the right on about the fourth and the left on the fifth day. In a few days an abscess began to form, and the teeth to loosen. It was decided to extract the teeth, and a distinct effort was required in the operation. They were typical milk-teeth of a whitish color. For some time after the lateral incisors appeared there was a gap, but this subsequently closed.

A Story of Sir William MacCormac.—Here is a story of Sir William MacCormac, which strikingly illustrates his well-known kindliness of disposition and willingness to assist in any emergency. On the night of the terrible explosion which occurred some years ago at Shoeburyness, when Colonel Fox Strangeways and eight others lost their lives, Sir William was telegraphed for at a late hour and hurried off to Fenchurch Street, where, after no little difficulty, he was provided with a special train. By a stroke of luck a well-known journalist had also "caught wind" of the catastrophe, but on reaching the station he discovered that the train had gone. Seeing the preparations that were being made for the "special," he boldly approached Sir William, and was invited, to his astonishment, to share the saloon. At the station a brougham was waiting for the famous specialist, and recognizing that unless he continued to stick close to his fellow-traveller he would have all his journey for nothing, the reporter hit upon another expedient. With a glance at the doctor he took possession of the two cases of surgical instruments, and with one in each hand he mounted the box and sat beside the coachman. At the station hospital his entrée was unchallenged, as he was assumed to be the great surgeon's servant. Having written a hurried account of the disaster and secured a list of the killed and injured, he promptly roused the telegraph clerk from his bed and was thus able to send his office in London a full and exclusive description of the whole affair. Naturally he still retains the liveliest recollection of the services rendered him by the man who is now at the Cape.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended March 2, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Alabama, Mobile	February 17th to 24th	3	
Florida, Jacksonville	February 17th to 24th	2	
Illinois, Rockford	February 16th to 17th	2	
Indiana, Evansville	February 17th to 24th	3	
Indianapolis	February 17th to 24th	2	
Kentucky, Louisville	February 15th to 22d	4	
Louisiana, New Orleans	February 17th to 24th	55	23
Mississippi, Greenwood	February 10th to 17th	87	
New York, New York	February 17th to 24th	2	
Ohio, Cincinnati	February 17th to 23d	1	
Cleveland	February 17th to 24th	20	
Youngstown	February 17th to 24th	1	
Utah, Salt Lake City	February 17th to 24th	1	
Virginia, Portsmouth	February 17th to 24th	6	2
Washington, Spokane	February 17th to 24th	9	
Tacoma	February 10th to 17th	9	
SMALLPOX—FOREIGN.			
Brazil, Rio de Janeiro	January 12th to 19th	..	29
Canada, New Brunswick: Restigouche County	January 16th to February 3d	73	
Gloucester County	January 25th to February 8th	39	
Northumberland County	February 1st	1	
Westmoreland County	January 18th to February 3d	3	
Ontario, Amherstburg	February 2d to 24th	1	
Quebec, Gaspé Basin	February 6th to 15th	4	
France, Lyons	January 27th to February 3d	..	2
Paris	February 3d to 10th	..	4
Germany, Konigsberg	January 27th to February 3d	1	
Gibraltar	February 11th to 18th	3	
Mexico, Mexico	January 28th to February 11th	24	19
Spain, Corunna	February 3d to 10th	3	1
Madrid	January 20th to February 3d	..	21
Straits Settlements, Singapore	January 6th to 13th	..	1
YELLOW FEVER.			
Brazil, Rio de Janeiro	January 12th to 19th	16	6
CHOLERA.			
Arabia, Oman	January 11th	*	
PLAGUE.			
Madagascar, Tamatave	December 16th to 23d	1	1
PLAGUE.—INSULAR POSSESSIONS UNITED STATES.			
Hawaii, Honolulu	January 23d to February 19th	6	5

* Generally prevalent and spreading.

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A SYSTEM OF MEDICINE, by many writers. Edited by Thomas Clifford Allbutt, M.D. 8vo, 998 pages. Vol. IX. The Macmillan Company, New York.

A MANUAL OF SURGERY. By Charles Stonham. 8vo, 3 vols. Illustrated. Vol. I., General Surgery. Vol. II., Injuries. Vol. III., Regional Surgery. The Macmillan Company, New York.

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NERVOUS AND MENTAL DISEASES. By Charles S. Potts, M.D. 8vo, 455 pages. Illustrated. Lea Brothers & Co., Philadelphia and New York.

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TRAITÉ PRATIQUE DES MALADIES DES PAYS CHAUDS ET TROPICAUX. Par le Docteur J. Brault. 8vo, 528 pages. Illustrated. Librairie J. B. Baillière et Fils.

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Original Articles.

SOME POINTS IN THERAPEUTICS OF HEART DISEASES.[1]

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In diseases of no other organ do the indications for treatment differ so widely as they often do between different conditions in both the acute and in the chronic affections of the heart. In the limits of this paper I can only point out the salient features in these contrasts, with the reasons why the heart in its disorders at one time calls for one class of remedial measures, and for a wholly different class at another, so that this organ should be regarded as the last in the body whose disorders can allow of any routine fashion of treatment.

First, as to the acute disorders. The great majority of them are of an inflammatory character. But it is a serious mistake to regard them as always or predominantly so. In many instances, as in diphtheria, the danger to the patient is not from inflammation, but from a parenchymatous myocardial degeneration. A similar danger often arises in the hearts of children during attacks of the exanthemata, in pertussis, and in pneumonia, in which the deaths are due primarily to the involvement of the heart, which may be fatally weakened by the toxins of these infections without giving any auscultatory signs of a carditis. Even in the carditis of rheumatism, a specific softening and consequent distensibility of the myocardium generally take place, which may be revealed on physical examination only by percussion; while on the other hand there may be evidences of general failure in the circulation whose gravity should be fully appreciated, though the auscultatory signs be relatively little marked. Overstrain also may produce an acute condition of dilatation with its symptoms and indications for treatment differing from any of those above mentioned, and this may occur not only in healthy hearts from undue muscular stress, but also from injudicious exertion in convalescents from a prolonged fever.

First, then, I will allude to the acute inflammatory states. The condition, then, is one of great excitement of the viscus. Our chief complication on that account arises from the fact that normally this organ rests the least of any other in the body. The two layers of the pericardium rub against each other in health seventy times and more in a minute, in pericarditis a hundred and twenty times and more. Could the slightest inflammation in any other part of the body get well readily if it was moved as often? Nevertheless rest is one of the most imperative indications in all inflammations, and none the less so in the case of the heart. Rest from over-action must invariably be the first aim in acute carditis of every form. This truth cannot be emphasized too strongly. When the heart is beginning to fail in acute cardiac inflammations, as the pulse, dyspnœa, and other signs of circulatory embarrassment develop it is from an over-fatigue which in the majority of cases will only be aggravated by administering heart stimulants. The recognition of the exact indications for treatment is then of the supremest importance, and I would define them thus:

With a febrile temperature, cardiac pain either sensible to the patient or elicited by pressing upward during expiration under the left costal arch, with hurried breathing, rapidly rising pulse, and, on auscultation, disturbed rhythm with or without murmurs, the treatment should be as follows: Leeches to the precordium, afterward constant poultices of flaxseed meal made with extract of hamamelis, and laudanum poured on just as the cataplasm is applied, and then covered with oiled silk and that part carefully so covered without a single exposure night and day. This is not a mere minor detail, for I have seen an acute pericarditis fatally aggravated by a medical teacher baring the chest of the patient in a cold ward for upward of an hour while a large class of students listened to the interesting friction sound. While there is no vascular connection between the circulation of the skin and the blood-vessels of internal viscera, there is the most intimate vasomotor association between the nerves which control the blood-vessels of the viscera and the cutaneous nerves of the corresponding skin areas above them. Cold applied suddenly to the skin of the abdomen will check a post-partum hemorrhage, not by the cold striking in, but by the same blood-vessel constriction occurring within, through reflex vascular action, which the cold causes in the blood-vessels on the surface. In disease this mutual sensitiveness becomes heightened in two ways. The internal irritation causes a hyperæsthesia of the cutaneous nerves, which reacts all the more upon the vasomotor nerves of the internal viscera. Let a cold hand be suddenly laid on the precordium in health and it will cause the heart to bound. In a carditis the heart is all the more sensitive to such an impression. So with a phthisical localized pleurisy at one lung apex, the application of a cold hand will cause the patient to give a cough, while the same application to the chest over the sound lung will not. I have used this fact for diagnosis in physical examination. Owing, therefore, to this relation between the skin and the heart, I always am particular to use vascular sedatives to the precordium as a preventive as well as a remedial measure when acute carditis is impending or present; and besides what I have recommended by the protection of moist heat, I would add that no vascular sedative is so potent in acute inflammation as topical blood-letting. This is wholly through the surface nerve impression of the bleeding, and this fact is illustrated in a great variety of other conditions. A leech applied at the sternal notch will often surprisingly relieve the agonizing dyspnœa of a thoracic aneurism; a few leeches to the epigastrium will as surely check the vomiting of acute gastritis; leeches on the mastoid will also likewise relieve the pain of meningitis, etc.—all of which examples can be explained in no other way than that of the production of reflex nerve sedation. In acute rheumatism, which is so common a cause of cardiac inflammations, the tendency to sweating and consequent easy surface chill should be guarded against from the beginning by discarding sheets and directing the patient to have only underwear of flannel, and to lie between blankets throughout his illness.

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[1] Paper read before the Jersey City Practitioners' Club, February 13, 1900.

One medicine takes the lead of all others in acute inflammations of the heart, and that is aconite. It is the ideal heart sedative in all such conditions on account of its prompt alleviation of cardiac pain and consequent irritation, and secondly on account of its specific action of slowing the heart beats. While the salicylates have proved invaluable in diminishing the pains of the acute arthritis, it must be confessed that they have wholly failed as preventives of rheumatic carditis. In fact I am certain that the old treatment with alkalies showed better results, as far as involvement of the heart is concerned, than does our experience to-day with the salicylic salts. But a steady employment of aconite pushed to producing its specific effects upon the pulse will often change marvellously for the better the whole clinical aspect of the case. This is shown very strikingly in some of the acute exacerbations of chronic heart disease. We repeatedly see cases admitted to our hospital wards with the worst conditions of general anæmia and intense dyspnœa, and then find the patients greatly improve without any medicine, evidently simply from rest in bed. Now, this common experience is explicable only by assuming that the dropsy and the pulmonary engorgement with hydrothorax are largely due to the heart failing from fatigue, and then recovering measurably from this weakening fatigue by rest in bed. But on the same principle I have again and again in these chronic cases stopped the administration of heart stimulants and substituted aconite, with an immediate change for the better in the gasping for breath and in the progressive increase in the pulmonary œdema. The indications here for giving aconite rather than digitalis, etc., are a strong laboring heart impulse and a rapid pulse. The same recommendation for aconite may be given in all cases of rapid pulse with distinct cardiac pains—in other words, when the evidence is plain of an irritable heart on account of causes directly traceable to intrinsic cardiac irritation, whether from the effects of previous inflammation or from over-strain. On the other hand, a quick pulse with high tension is not uncommonly the beginning of chronic heart disease from primary kidney disease. In this case veratrum viride is much better than aconite, owing to its specific dilatation of the arterioles, as well as to its slowing effect upon the heart.

Very different from the indications furnished by acute carditis (including in this term its three forms of endo-, myo-, and pericarditis) are the conditions presented by acute parenchymatous degeneration. Thus the toxin of diphtheria is one of the most powerful proteolytic poisons known. It digests and dissolves living muscular tissue more powerfully than pepsin dissolves the muscular elements of food. Thus the living heart begins to fall to pieces under its influence, and to this is added a like degeneration of the heart's great adjuvant in the circulation, namely, the muscular layer of the arteries. A very striking fall in blood pressure, therefore, takes place, which goes on progressively increasing till death, as has been conclusively established in experiments with this toxin on animals, as well as clinically in the human subject. In striking contrast, therefore, with the flush of acute rheumatic carditis, a surface pallor is the characteristic hue of these patients, quite different also in its way from the bluish pallor of carbonic-acid poisoning. We often note the same pallor, with its accompanying rapid, small, and irregular pulse, to result from other toxins of the exanthemata. Now, there is one drug often mistakenly administered in these conditions of heart weakness which is extremely mischievous, and that is digitalis. It is frequently prescribed with the idea that it is a heart-muscle tonic, and that, therefore, whenever we have a weak heart, we at once should give digitalis. But this term "tonic" is one of the vaguest terms current in our therapeutics, and that is saying a great deal. Thus we read of arsenic being a tonic, also iron, cod-liver oil, electricity, a cold bath, and a sea voyage. Anything, in short, that does good is called a tonic, the original conception evidently being derived from "tone" in music, as when the relaxed strings of a violin or of a piano are tightened or toned up. But vague terms lead to the loosest kind of practice, and what we need is to form very definite ideas about the specific action which we are aiming for under the term tonic. Now, the action of digitalis upon the heart is to throw its walls into an irregular kind of cramp. The heart, under its influence, has a mottled or nutmeg-like appearance, from the white, anæmic, contracted bundles compared with the more red, non-contracted neighboring strands. The general effect of its action, however, is to diminish the size of the heart's cavities. The drug, therefore, is of the greatest service when the heart walls are over-dilated and too much residual blood remains after each systole from inability of the dilated cavities to contract strongly enough to expel their contents. Cramp the heart walls to one-half the abnormal width and the heart systole then will work to much greater advantage, on an easily understood mechanical principle.

But here comes the important fact about digitalis, that in order to produce its contractile effect it must have a more or less normal muscle fibre to work upon. It is utterly powerless with degenerated heart muscle, whether it be in fatty degeneration or in the parenchymatous degeneration of diphtheria, or by the weakening of the fever toxins as in typhoid fever. Not only is it then powerless, but it is actually harmful from its cramping rather than stimulating effect upon the heart's action. I have seen the utmost distress caused by it in diphtheria, especially in a case which I shall never forget. But to illustrate my meaning I shall cite only one case, and that in an adult. He is a copper-mine magnate. After thirty years' active life spent in working copper mines which are situated at an average level of six thousand feet above the sea, he began to be very short-breathed. After some two years of increasing dyspnœa, accompanied by a cough ascribed to bronchitis, he had a sudden attack of pulmonary congestion which nearly terminated his life. He came on East and was seen by several medical consultants, who all agreed as to the diagnosis of great cardiac dilatation, without either valvular disease or general endarteritis. Again and again digitalis had been prescribed for his heart dilatation, and each time his symptoms were so much aggravated after taking it that he came to know digitalis by its effects in bringing on cardiac distress. When called to see him, I asked him if there was not a good deal of arsenic given off in the fumes of his smelting-works, among which works he was accustomed to be constantly going about on his daily rounds of inspection. "Oh!" said he, "arsenic lies around there like hoar frost!" Now, percussion showed the heart to be enormously dilated; no heart impulse was anywhere palpable. The pulse was extremely irregular, but there was no valvular leakage, and not a trace of œdema anwyhere. Arsenical fatty degeneration of the heart, with passive dilatation favored by high altitude (with some similar degeneration of the liver), was my diagnosis of the etiology of his cardiac condition; all digitalis was stopped and other remedies were prescribed, with the result that not only has he been able to lie down and sleep for eight hours as he had not done for two years, and also to attend copper-mine speculations in Wall Street, but he had a fall on the icy pavement five weeks ago in which he was knocked senseless and broke two ribs, without any more serious results following than if he had a normal heart.

In the heart weakness of diphtheria, instead of digitalis or its congener strophanthus, we ought to push the administration of alcohol to its utmost limits, with strychnine, caffeine, and, above all, the hypodermic injection of camphor in sterilized oil, in dose of gr. viii. of camphor to ♏ xx. of sterilized oil, repeated p.r.n. These remedies are also indicated in rheumatic conditions when the heart is beginning to fail. When, therefore, to stop aconite and the use of the other sedatives above mentioned as so valuable in acute carditis, and change to the stimulant class instead, is a proper question, and the answer is, when the heart is beating feebly instead of strongly, and when the feet are beginning to be no longer hot but cold.

The chronic sequelæ of acute endocarditis form too extensive a subject to permit me to do more than allude to some of their aspects. In the first place, after the beginning of convalescence from a severe rheumatic attack it would be greatly to the future advantage of the patient if he should be kept in bed for at least two months, especially in the case of children. When we consider that the rows of small vegetations along the edges of the valvular flaps act as so many irritating foreign bodies, like the granulations on the eyelids in trachoma, we have the explanation of the progressive involvement of the valves which we find a year afterward, with increased incompetence or constriction from the increasing fibrosis due to chronic inflammation. Prolonged rest and continued administration of aconite afford the greatest safeguards against the supervention of an irremediably damaged heart. The sequelæ of acute pericarditis, on the other hand, may be either wholly unimportant or the most distressing of all results of a cardiac inflammation. This last condition is when in addition to pericarditis we have peri-pericarditis as it may be termed, in which the inflammation extends beyond the pericardium so as to leave it finally attached to the sternum, ribs, and pleura. These consecutive adhesions prevent the heart from contracting fully in systole, and the most terrible dyspnœa may follow, with general valvular incompetence and dropsy. Inspection shows this state of things by actual recession occurring between the ribs during the systole. I speak of this condition mainly to emphasize the great relief which follows on the firmest strapping of the left chest, which approximates the ribs and lower end of the sternum to the laboring heart and prevents their undue external pull upon its walls. In all such cases for the frequent cardiac pains (which pains also often torment patients for months after acute endocarditis before good compensation is established), belladonna is of much service from its specific action in all disturbed conditions of rhythmically acting muscular fibre, by allaying spasm and restoring normal rhythm. Belladonna is thus often very beneficial in mitral stenosis.

The greatest contrasts of cardiac therapeutics, however, meet us in the treatment of chronic diseases of the heart which begin later in life than most instances of acute carditis. We may take for illustration such a case as the following: A man who has led an active, though meanwhile physically sedentary, business life, consults us for a shortness of breath, which he has noticed more or less for many months, but which lately is growing much worse. His complexion is quite significant; face full and irregularly mottled, with a decided yellowish paleness underlying a superficial reddish coloration of the cheeks. The forehead is often greasy. While he is speaking to us we notice that he has to take one or more inspirations before he finishes a sentence. He then may complain of nothing else about his breathing, but his mind has become sluggish or forgetful, and he is much troubled with gastro-intestinal flatulence and with disturbed sleep. We examine his heart and find that the cardiac impulse is very feeble or scarcely to be felt at all. There are no valvular murmurs, but the first sound at the apex is often a prolonged rumbling, while the second sound at the base may be too clear. His pulse is weak or ill sustained, and sometimes on exertion it intermits a beat or two. This man may die suddenly, and his autopsy may show no valvular disease whatever, but the aorta may be lined with atheromatous patches and the coronary arteries be found narrowed by a similar condition in them, while the heart walls prove to be the seat of extensive myocardial degeneration. Now this form of heart disease is by no means uncommon. My experience tells me that myocardial degeneration is one of the commonest and most efficient of all causes of failure of compensation in the heart diseases of patients after middle life, and that it precedes valvular incompetence in a large proportion of them. We meet them afterward with general anasarca, pulmonary œdema, mitral and tricuspid murmurs, etc., and put them down as cases of chronic valvular disease, when in reality the valvular incompetence and the arrhythmia and general dilatation are all secondary to a primary slowly developing change in the nutrition of the heart walls themselves, long unrecognized because there were no murmurs present. The first question which I ask myself, therefore, in such cases is, how long this patient's heart has been weak in its stroke, and not how long has he had valvular trouble of this kind or that, and the first question then to elicit from the patient is, when did shortness of breath first attract his attention on going upstairs or while walking against a wind? Then should follow a careful examination of his arteries and of the skin, such as whether the skin of the abdomen is chalky white and cannot be reddened by friction or by drawing the finger-nail upon it.

In the treatment of such cases of chronic heart disease I may mention the following points: First, every organ of the body which has to do with nutrition must be called upon to do its share to help the laboring heart, and if any of them are out of order they must be set to rights as a special part of the treatment of the heart disease; for every influence or condition which affects these injuriously constitutes by so much a factor of the cardiac trouble. In other words, we must not think only of the heart now. In this connection come, first, the effects of portal stasis. Gastric and intestinal flatus alone, without and still more with ascites, greatly embarrasses the heart, both mechanically and through its nervous relations. This flatus is due to fermentation in the alimentary canal, owing to readily understood causes. Gr. x. of sodium benzoate t.i.d. are helpful against this complication. Sodium phosphate, ʒ ii., dissolved in a tumblerful of quite hot water and sipped slowly, should be taken every morning. A blue pill, once every four nights, with half an ounce of the sodium phosphate the next morning, is a remedy I would not like to do without in such cases, and I have kept up this mercurial laxative for months together with the most striking benefit. When the kidneys are sluggish, whether albuminuria be present or not, there is no diuretic which will equal daily flushing of the bowels with three or four gallons of decinormal saline solution, at 110° F., by means of Kemp's rectal irrigator. It is now that digitalis is of such inestimable service in cases of dilatation subsequent to hypertrophy, with mitral regurgitation, ascites, hydrothorax, etc., but no clinical fact I think is better established than that in these conditions mercurial laxatives are the most effective adjuvants to this drug. I prefer in a new case to begin with full doses of a half ounce of the infusion of digitalis every three or four hours for the first two or three days, and then substitute for it afterward thirty drops of a mixture of equal parts of the tinctures of digitalis, strophanthus, and nux vomica. Always with each dose of digitalis nitroglycerin should be given to obviate the arteriole constriction which digitalis causes, and as soon as the digitalis beigns to disagree with the stomach its administration should be promptly intermitted. When neither digitalis nor strophanthus is well borne, a very good pill may be given instead, of sparteine sulphate gr. i., powdered squills gr. ss., caffeine citrate gr. iss., and strychnine gr. $\frac{1}{30}$. In quite a number of these cases, which at first sight might seem to indicate clearly the administration of digitalis, this drug fails altogether, or, after being apparently useful for a while, it loses its effect and causes much gastric disturbance instead. There can be little doubt that in such instances the myocardial degeneration has advanced too far for digitalis to be of any service, but fortunately we are not by any means left without other remedies.

The most important part of my subject, however, I have left to the close of this paper, and it is this, that the physician should not forget that all nervine medicines such as digitalis, strophanthus, nitroglycerin, strychnine, caffeine, sparteine, and the rest can never be other than temporary makeshifts. All that they can do is to relieve symptoms, and that only for a while. They may be of great service in warding off immediate dangers, and as adjuvants to the real remedies which act upon nutrition; but if a progressive degenerative process is going on, they are powerless to cure it. I am sure that one of the chief reasons for ultimate failure in the treatment of many chronic heart diseases is to be found in too great a reliance on such drugs. Permanent improvement is to come from other agents and measures which restore nutrition rather than stimulate function.

The first of these which I would mention is fresh air. If we are to have sanatoria for treating tuberculosis by fresh air supplied continuously night and day, I would advocate a similar aim, still more demonstrably applicable, for the prevention and cure of chronic heart failure. Throughout the whole animal kingdom muscular power invariably is found to be directly in proportion to the activity of the respiration, that is, to the amount of oxygen consumed. If we could breathe from every part of the body as insects do, instead of by one localized breathing apparatus, the muscular power of a man might be like that of a flea, and, as Huxley calculated, one man then could move Newgate prison across the street. Every muscular function in the human body is weakened by sedentary modes of life, because in such life breathing is lessened. But whereas surgeons deal chiefly with the skeletal or so-called voluntary muscles, we physicians should remember that for us general muscular weakness means, to begin with, weakened bronchial muscles; and therefore fresh air, or open air in summer, is one of the best things for chronic bronchitis and emphysema. Muscular weakness also means gastric and intestinal atony; witness how chronic constipation ceases after two weeks' camping in the woods. Muscular weakness means atony throughout all the pelvic viscera, and weakened portal circulation. Woe to our gynæcologists if our ladies should take to the modes of the Bedouin or Tartar women, for their offices would be empty. I have known an old gentleman, who had been spending three years of catheter life, empty his bladder naturally after a month's open-air breathing at Palm Beach, Fla. But last, and by no means least, general muscular weakness means weakness in the whole circuit of the circulation from the heart to the remotest arterial twig and back again, for here muscular function is everywhere the dominant element.

Let fresh air be systematically and continuously provided to enter the lungs without effort on the part of the patient with failing heart, and a great train of serious symptoms will finally vanish, and that not temporarily as too often with drugs. We have also for our encouragement here the physiological fact that no one of the higher tissues has such recuperative powers as muscular tissue, as may be witnessed in the rapid recovery from the remarkable muscular wasting of typhoid fever.

Among drugs, on this account alone, I never fail to administer iron as soon as I can, and keep it up continuously in chronic heart disease, because the one business of iron in our blood is to help us breathe.

There are other drugs, such as mercury, the iodides, and arsenic, which are slow acting and constitutional, and not functional in their effects, whose modes of operation we do not know, but which I feel assured are often of great service in chronic cardiac disease. The bichloride of mercury, given in doses of gr. $\frac{1}{24}$ three times a day for a week, has been for long a favorite remedy with me for chronic endarteritis. It may then be left off for two weeks and afterward resumed as before. Among the iodides the sodium is much to be preferred to the potassium salt, because potassium in any combination is weakening to the heart. I have prescribed it in doses of gr. v. three times a day for weeks and months, and in many cases with such undoubted advantage that I rarely fail to administer it sooner or later in chronic enlargement of the heart, accompanied by arterial disease. Dr. Balfour in his work on the senile heart praises a combination of the liq. arsen. hydrochlor. with the liq. strych. hydrochlor., equal parts, as the only liquid preparation of the two drugs which will make a clear solution. The dose is from four to six drops. I have frequently used it, and in some cases in old people with benefit.

Finally we have the completest contrast to the recommendations for absolute rest in bed and heart sedatives in acute carditis, in Oertel's mountain climbing for heart disease, and in the various forms of resistant muscular exercise, massage, and Schott's saline and carbonic bath courses. These are all excellent in principle and frequently in effects, but they may also be fatal in cases not adapted to them. The salient fact demonstrated by these measures, each in its separate way, is that muscles ought to be made to breathe as well as to contract, and that unused muscles fail in nutrition because disuse lowers their consumption of oxygen. The muscles use up more oxygen than all the other tissues put together, and when by massage and by passive exercise, and lastly by graduated resistant exercises, every accessible muscle is made to call for more arterial blood, the whole muscular apparatus, including that of the heart and blood-vessels, shares in a reinvigoration which may long be beneficially felt in an enfeebled heart wall. Meantime the cutaneous stimulation of the carbonic and saline baths reopens vast tracts of closed arterioles and by so much lessens the tired heart's work, for high arterial tension always implies undue cardiac labor. In the appropriate cases the benefit following upon these modern methods is sometimes marvellous, but an irremediably diseased aorta or arteries, permanently rigid throughout the body, cannot safely be subjected to the strain of these measures.

Pneumatocele.—A sonorous tumor formed above the ear in a man, aged forty years, whenever he blew his nose. Under pressure it would disappear with a whistling noise. The patient, who has a discharge from the ear on this side, hears better when the tumor is distended with air. Treatment was by wide incision and osteoplastic closure of the orifice.—BERGER, *La Méd. Mod.*, December 16, 1899.

THE INOCULATION WOUND OF LUES.

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The diagnosis of lues in its earliest stages is as important as it is often difficult. Perhaps too much stress has been laid upon the typical Hunterian chancre and a sore with classically indurated base as necessary features of the initial lesion before a diagnosis can be ventured. It is my intention in this brief communication to speak of some typical lesions upon various portions of the body which have in my experience marked the site of luetic infection. Contrary to the teachings of most writers I have insisted upon the great desirability, if not an absolute necessity, of beginning treatment both local and constitutional at the earliest possible moment, if it is expected to get the best results in this affection. It is also of the utmost importance from the side of prophylaxis that the dangers be early appreciated by the patient, so that necessary precautions may be taken to limit its spread to others in accidental ways. To be sure, a very large proportion of unusual sites for the inoculation wound, and of wounds acting in unusual ways, is found in patients who present themselves with secondary evidences so well marked that the primary manifestation is carefully sought for.

Such was the case in a young man seen by me for the first time several weeks ago. A typical maculopapular eruption occupied the face, trunk, and penis, forming erosive lesions about the moist glans penis and prepuce. Upon the left side of the neck and about the angle of the jaw was a pronounced and very hard swelling made up of a mass of lymph nodes. There had been no preceding lesion upon the virile member nor within the oral cavity. The scalp and post-auricular region on the left side were the seat of a marked seborrhœal eczema of long standing. The appearances about the ear were peculiar and at once attracted attention. The eczematous infiltration was more marked than is usual; the color was duskier, and a few outlying papules were rather coppery in hue. The skin of the whole region behind the ear was firmer to the touch than one would expect from an uncomplicated eczema. The history given was that on November 3d last in an election fight his opponent had bitten through the external ear. A simple dressing had been applied without stitches, and the wound appeared to do well for about three weeks, when it began to do badly, although the description is not that of a typical chancre. A physician was visited, who ordered an ointment.

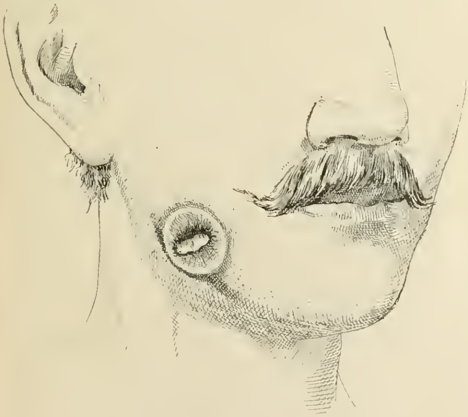

Fig. 1.

When first seen at the clinic, the external ear was deformed—chiefly from the surrounding infiltration; the concha bulged forward and the lumen of the canal was almost occluded. It was chiefly upon the color and induration of the eczematous patch behind the ear, and the enormously enlarged and indurated nodes, that the diagnosis was made. Under inunctions of blue ointment the whole picture has already changed and the seborrhœal eczema as well is rapidly disappearing.

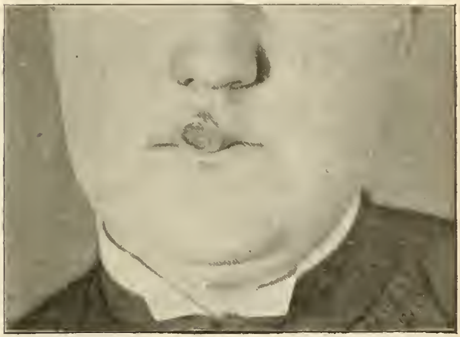

Fig. 2.

In chancres about the face and head, as in the case just related, swelling of the lymph nodes is almost invariably excessive, and is a point to be remembered in differentiation from sycosis, ordinary wounds, cold sores upon the lips, etc.

Infection due to bites is not unknown in literature, and many extra-genital chancres undoubtedly have this origin, in which no definite history of such injury is acknowledged by the subject. I have in my notes of cases three or four in which injury with the teeth was acknowledged, and I have seen others in which I strongly suspected it. Fist blows are sometimes as dangerous as injury by the teeth. On November 22, 1886, M. P—— came to me with a chancre upon the bridge of the nose which had followed an injury inflicted in this way by her husband two months before. She had been to a "black-eye artist" and had the ecchymotic area painted. The possibility of an infection at the hands of the artist, perhaps through moistening the brush in his mouth, could never be excluded.

Slight injuries are not infrequently the starting-point of infecting sores, and it is oftentimes an impossibility to discover whether the object inflicting the wound has been itself infected, or whether the solution of continuity has afforded the opportunity for subsequent entrance of virus derived from an entirely different source.

A gentleman came to me some years ago for an opinion as to the nature of a round ulcerating sore hidden by the mustache (Fig. 1). He stated that in curling the ends of the mustache the barber had burned the lip some weeks before. There was not much induration at the base, and, while stating my strong suspicions, I advised temporizing. Confirmatory signs soon appeared. Here the possibility of an infecting kiss after the injury has to be considered. I have many times seen chancre of the lip which followed upon a very clear history of fever sore, but there was likewise often a clear history of suspicious kissing before the herpes had healed.

While I believe it to be among the great rarities of practice that acquired lues should exist without an initial lesion, I have seen the primary wound so insignificant from start to finish, and the signs of induration in an infecting ulcer so slight, that I can readily believe that the point of inoculation often has so little to show for itself that it escapes detection. Twice recently I have observed upon the finger in physicians papular indurations, which, though they marked the point of entrance of the poison, never reached more than a pea-size development. Then, too, in women we must remember that by the time the wound is looked for upon the cervix or vagina it has perhaps healed.

Acquired lues without chancre may exist if we are to understand by the term chancre an induration even approximating that of typical lesions. As to the location of accidentally acquired infecting wounds and their relative frequency, I shall speak now simply from my own experience, and I must premise with the statement that I have recently been impressed with the relatively large number of accidental infections which have fallen under my eye. In one hundred consecutive histories of lues of all stages and varieties taken from my private record book, a lesion upon which a diagnosis could be made was either present, or there was a clear history and scar evidence of extra-genital infection, in fifteen instances. The lip was involved eight times, the finger four times, the hand once, the nasal septum once, and the cheek once. In twenty-eight subsequent histories there were ten instances of primary lesion occurring upon what are generally considered unusual situations. In this series the lip was implicated twice, the cheek twice, the finger three times, the nipple once, the eyelid once (Fig. 3), and the arm once.

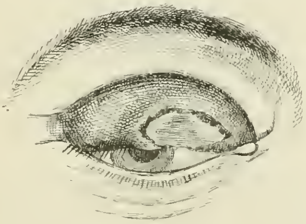
Fig. 3.

Believing these figures to show a much larger percentage of accidental infection than holds true when large series of cases are studied, I have turned to public practice for a comparison. In a series of two hundred consecutive cases of lues at the Good Samaritan Dispensary I find twenty records of extra-genital chancre being present, or good evidence was shown of such having been present. The lip was the site of lesions seen by me personally in eight instances. In one case there was a double chancre involving both lips resulting from a bite. In two instances a man and wife came together for treatment, both showing typical indurations. Once the husband's sore was on the right lower lip, while that of his wife was upon the left upper one (Fig. 2). This case is almost identical with one I published in 1885 in the March number of the *Journal of Cutaneous and Venereal Diseases*. At the time I did not know that there was any connection between the two patients, but after publishing the paper I learned that the woman who had left her husband and burned her lip with creosote had become most intimate with my young male patient. Their lip lesions were here also rights and lefts. The dangers to other members of a family arising from lip lesions, whether primary or secondary, has become pretty generally known, but is seldom brought home more forcibly than in two succeeding cases in this list: a young woman, A. H——, was treated for a chancre of the lip, and despite instructions as to precautions necessary the next extra-genital chancre seen was one of the tonsil in her sister.

Next to the lip comes the cheek with four instances to its credit, the nipple with two, and one each for the nose, ear, chin, tonsil, rectum, and back.

Statistics must vary of necessity according to the line of practice in which the lesions are seen. The gynæcologist undoubtedly finds a large proportion located on or about the cervix, while those observed by the laryngologist would make tonsillar lesions seem more frequent.

Reviewing then this series of cases we find in less than four hundred consecutive records of lues there were no less than forty-six non-genital inoculations. This is probably a larger proportion than will be found reported elsewhere, and, like all statistical data, is subject to error. I simply give the records for what they are worth, not as proving anything, but rather once more and in another way to direct attention to an unfortunate prevalence of non-licentious lues.

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CHORION EPITHELIUM AND DECIDUA IN TUBAL GESTATION.[1]

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Physiologists are not as yet agreed on the question regarding the origin of the chorionic epithelium, although many observers have for years attempted its definitive solution. Even the number of layers of the villous epithelium is as yet a matter of controversy. While most of the writers describe a double epithelial layer, there are yet some opposing this opinion. Moreover, the believers in a double layer attribute the different layers to a different origin.

Turner found two layers in the epithelium of the chorion, and considers the lower layer as the proper chorionic epithelium, which atrophies at the end of pregnancy; the upper, more persistent layer being of maternal origin. He found that in the whole series of placentæ there is interposed between the vascular chorion of the fœtus and the maternal blood-vessels a layer of cells, which is in close relation to the maternal blood-vessels. They constitute, or are derived from, the epithelium of the uterine mucous membrane and belong to the maternal part of the placenta. Kameneff considers the lower layer as the proper chorionic epithelium, but believes it to be persistent, and contrary to Turner he found the upper layer only at some points of the villi, and only in immature placentæ. Langhans considers the upper layer as the only proper epithelium, the lower being a formation of the connective tissue of the membrana granulosa. Kastschenko finds the epithelium of the chorion in the human placenta to consist of two layers: the upper, "protoplasmatic," forms the main mass surrounding the chorion and villi like a continuous multinuclear plasmodium, the lower being derived from a proliferation of the single cells of the upper layer. Both layers are accordingly of fœtal origin. Kupffer also finds a double epithelial investment of the chorion, but he does not believe that the villi stand in any relation to the uterine glands. Minot believes also in the existence of two layers. In regard to their origin, he agrees with Kastschenko that the external covering is fœtal ectoderm. Hofmeier, on the other hand, claims never to have found a double epithelial covering in specimens of placentæ of later months, and declares the contrary findings of others to be an optical delusion. Keibel found a double epithelial lining of the villi, but he could not see the pretended intrusion of the villi into the crypts of the uterine glands. Klein found a double epithelial covering of the villi even in the tubal placentæ. They are intimately surrounded by the decidua; otherwise there is little difference between the uterine and the tubal decidua. According to Seleuka, the villi of the chorion invade the uterine glands, and in advancing further receive the flattened glandular epithelium as a second layer for their investment.

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[1] From Professor Ribbert's pathological laboratory, University of Zürich, Switzerland.

Thus most of the authors describe a double layer of the epithelium of the chorionic villi, and many of them believe one layer to be a derivative of the maternal uterine glands. The disputed question could, therefore, be answered by a comparison with the placenta in tubal gestation, where the villi are embedded in a glandless mucosa. Inasmuch as few authors only have been fortunate enough to examine a tubal placenta *in situ*, and especially a full-grown placenta as in the following case, I thought this case not an unsuitable one to contribute somewhat to the solution of the question at issue.

In January, 1899, Professor Ribbert, the director of the Pathological Institute of the University of Zürich, received a woman's internal genital tract, obtained by laparotomy. The operation was performed for a full-time tubal gestation. A living child was removed. The macroscopical inspection of the preparation, hardened in alcohol, shows the uterus and right adnexa to be quite normal. The left Fallopian tube, 4 cm. away from the uterine opening, is dilated into a sac, the length of which is 20 cm., the circumference 35 cm. The placental site covers almost the entire posterior wall of the sac. The diameter of the placenta is 12 cm., the greatest thickness 5 cm., and the rest of the placenta, as yet adherent to the tubal wall, 1–2 cm. The thickness of the anterior wall of the sac is 2 mm. Nearing the placental site the wall of the sac becomes gradually thicker, ending in an elevation around a pit in which the placenta is situated. The thickness of this edge is 7 mm. The wall of the tube arching over the placenta is greatly thinned out, being at some points less than 0.5 mm. in thickness. The tubal canal leading from the uterine cavity into the sac does not admit a probe. Of the left ovary nothing is distinguishable.

Five months later Professor Ribbert delivered to me this specimen for microscopical examination. I took out small pieces from several points and cut them partly in paraffin, partly in celloidin. The structure of the anterior wall consists mostly of connective-tissue fibres of the usual type. Of the muscular coat only isolated fibres are seen scattered between the connective-tissue fibres. Nowhere could I find a continuous muscular coat. There is cellular infiltration of lymphocytes as well as leucocytes through the whole tissue. Fibres of red blood cells are lying in spaces between the connective-tissue fibres. These spaces have no endothelial lining. The blood-vessels, especially the veins, appear to be enlarged. All traces of the tubal mucosa have disappeared. The entire external surface of the tube is covered with an exudate consisting of fibrinous material, and fibrinous-looking connective-tissue strands hang down from the wall.

At the placental site the wall of the tube is greatly thinned, consisting at some points of the thickened serosa only, which is surrounded by a thick layer of fibrin. The serosa consists of a layer of thick connective-tissue fibres. Here and there separated muscular fibres can be seen. The next layer toward the inner surface of the sac consists of more loose connective tissue containing less lymphocytes and red blood cells. In this part isolated villi scattered between delicate connective-tissue fibres can already be noticed. Gradually the connective tissue disappears, and the villi are seen in all directions close to each other and separated only by fibrinous material, leucocytes, and islets of red blood cells.

In the placenta proper the villi graft themselves on a fibrinous layer, which does not contain any cellular elements. The nuclei have almost entirely disappeared. There is no recognizable intervillous sinus system. The villi consist of a homogeneous-looking fibrinous connective tissue. In some villi degenerated nuclei or granules are embedded. The stroma of the villus, staining a bright pink by hæmalaun and Van Gieson, is surrounded by a ring of fibrinous material of dark yellow color, which is distinctly differentiated from the surrounding tissue. But even in this margin, which I hold to represent the degenerated ectoderm of the villus, cells and nuclei have entirely disappeared. Nearer the tubal wall the villi impinge upon a fibrinous stroma of an alveolar structure, which contains numbers of cells which are in no way different from the common lymphocytes. Sometimes they resemble rather the inflammatory elements in salpingitis. At some points the nuclei have a narrow margin of protoplasm and resemble the cellular elements of dysmenorrhœa membranacea. These enlarged connective-tissue cells, which sometimes take an ovoid form, could, superficially seen, be mistaken for decidual cells. But on examining the preparations more closely we see that they present different characters from the real large vesicular decidual cells. They are different in form as well as in size, and the typical stratification of the true decidual cells is also missing here. The fibrinous intervillous stroma has at some points a close resemblance to young granulation tissue. At times it resembles a fibrinous exudate, like that in diphtheritic membranes. The cellular elements of the villi have disappeared even in this richly cellular tissue. In the stratum next the sac's cavity, the nuclei of the intervillous substance are becoming more sparse, and later on in the placenta proper disappear entirely. Where normally the intervillous spaces are found, slits filled with a partly homogeneous, bluish-red, partly filamentous, scarcely staining mass are seen, through which small, round degenerated cells without nuclei, of the size of soaked red blood corpuscles, are scattered. At the advanced stage of this pregnancy it is entirely out of question that this mass could represent, as Gussener thinks of his case, a kind of uterine milk for the nutrition of the embryo.

The structural modifications in our case afford us four points of interest:

1. The hyperplasia of the Fallopian tube in tubal gestation consists only of a proliferation of the connective tissue and not of the hypertrophic muscular coat. The muscular part, on the contrary, has almost entirely disappeared by the direct destructive action of the growing connective tissue.

2. The tube, at the placental site, is thinner than normal, consisting only of thickened serosa and a layer of fibrin without any muscular elements. The growing placenta had the same effect upon the tube as a malignant growth.

3. Decidual cells are entirely absent in this full-time tubal gestation.

4. The stroma of the chorionic villi, as well as their covering, have entirely lost their cellular elements.

These histological modifications, I am inclined to think, may serve to contribute to the solution of the question about the origin of the chorionic epithelium, and how far the maternal tissue contributes to the formation of the placenta by furnishing decidual tissue. Is the development of the fœtal part of the placenta in the Fallopian tube the same as in the uterus?

But before analyzing this question at length, I wish to cast a rapid glance at the strange atrophy of the tubal muscular coat in our case. In spite of the immense thickness of the posterior wall of the sac, the muscular coat has almost entirely disappeared. At the placental site especially no circular fibres could be found, and through the entire wall of the sac I failed to see a continuous muscular layer. These findings are at variance with the accounts given by other observers, who found hypertrophy of the muscularis. Although Aschoff, who in a case of tubal gestation of two to three weeks' duration found also an atrophy of the tubal muscularis, remarks that most of the reported cases of hypertrophy of the muscular elements in tubal gestation have not been microscopically examined, yet even if the recorded hypertrophy really belonged to the muscular layers and was not mistaken for the proliferated connective tissue our observation could easily be explained. The described histologically examined cases of tubal pregnancies concerned young ova between three and twenty weeks. I searched in vain through the whole current literature to find a microscopically examined case of a full-time tubal pregnancy. My interpretation would, therefore, be that at the outset, when the whole tubal wall begins to hypertrophy, the muscular coat is also participating in this hypertrophy, but later on the proliferation of the connective tissue predominates. This proliferation bursts first the muscular fascicles and later on destroys them entirely. Fueth, it is true, already found in a very young ovum a cuneiform bundle of villi pushing forward and in close attachment to the tubal wall, and surrounded by cells similar to the elements of the cell-columns derived from the tips of the villi. The bundle was invading the muscular fascicles and dislodging them. The ovum was splitting the tubal muscularis, lifting off the submucous layer, and in its advance destroying almost entirely the circular layer. Fueth also mentions a preparation from the women's hospital of the University of Kiel, in which the ovum was lodged very near the open end of the fimbriæ. He emphasizes the extraordinary shrinking of the tube at the site of the ovum, contrasting with the greatly thickened neighboring wall. At the site of the ovum the wall was scarcely 1 mm. thick, and consisted only of peritoneum and delicate connective-tissue fibres. Muret, in whose case the ovum was also inserted at the open ostium abdominale, noticed the wall at that point to be greatly thinned; mucosa and muscularis had entirely disappeared, and the wall consisted only of peritoneum. Prochownik describes, in an ovum situated near the ampulla, intact chorionic villi with fresh budding closely beneath the serosa. Excepting the serosa and a very thin layer of connective tissue nothing of the tubal wall was left. Leopold found in a case of tubal gestation of eight weeks' duration, in which the ovum was inserted at the abdominal end, the muscular coat greatly diminished and at some points distorted and displaced. Thus even in very young ova a loss of the tubal muscular tissue was observed.

Now a few words will suffice about the strange phenomenon of the chorionic villi having entirely lost their cellular elements. According to Turner, the lower layer, which he considers the only chorionic epithelium, atrophies at the end of pregnancy, while Kameneff considers the lower layer to be persistent, and finds, on the contrary, the upper layer covering only some points of the villi, and even this only in immature placentæ. Eckard noticed at the cell layer of the villous epithelium a different development at different times of the formation of the placenta. Very early, certainly from the twelfth week, the cells cannot be found everywhere. According to Langhans, there is only at the tips of the villi a fast and durable attachment between the cell layer and the maternal tissue; at the other parts of the villus this layer becomes thinner and cannot be seen in the last three months of pregnancy. Thus the opinion of most of the authors is that one of the two layers of the villous epithelium, even in uterine full-grown placentæ, is doomed to atrophy. We could, therefore, assign the entire loss of both layers in our case of tubal gestation to the unfavorable conditions under which the placenta reached its full development.

But the question immediately presents itself, why the nuclei in the stroma of the villi disappeared. In about twenty full-time uterine placentæ which I have examined for comparison's sake, I always found deeply stained nuclei in the villous stroma as well as in the ectoderm. I would not try to give a definite answer to this question. But the histological modifications of the villous covering would allow the following interpretation:

The cell—Dr. Langhans' layer—is, according to the opinion of the discoverer himself, finally bound to atrophy, and the villous covering consists then of the "protoplasmic" layer or syncytium only. The syncytium is declared, as above alluded to, by many observers to take its origin from the flattened and changed epithelium of the uterine glands. The mucosa of the Fallopian tube, not containing any glands, could not, therefore, furnish to the villi of the tubal placenta any cell material for its syncytium. The villous covering accordingly consisted from the very start of one layer of Langhans' cell layer only. When this layer atrophies later on, the villi are entirely denuded of their epithelial covering. The accounts given by those who describe a double epithelial covering in early stages of tubal gestation are surely difficult to reconcile with my interpretation. But I have no doubt in assigning a purely optical delusion to such findings, as Hofmeier does to the assertion about the later stages of uterine pregnancy.

The entire disappearance of decidual structure in our case is in conformity with the observations of Virchow, who claims the absence of a decidua in tubal gestation. Lately Aschoff came to the conclusion, from the cases he examined, that a real decidual development does not take place in tubal gestation, not even at the placental site. Otherwise he finds no difference between the structure of the uterine and that of tubal placentæ. The cell proliferations of the fœtal epithelium at the tips of the villi lead to the development of columns of cells, which in coalescing form a large sucking-plate. This plate invades the tubal wall, destroys mercilessly mucosa and muscularis, and opens the blood-vessels for the placental blood circulation. Prochownik also emphasizes the slight development of the decidua tubaria. Kossmann speaks also of a spotty appearance only of decidua around the blood-vessels in tubal gestation. Berry Hart says that in extra-uterine placentæ we begin to see the serious damage caused to the placental structure by its development in connective tissue. The villi are less perfect in contour, blood extravasation is present, blood crystals are in abundance, while the decidual cells are few and less perfect. We may say, he continues, that the development of the extra-uterine placenta is a destructive one, reducing the placenta practically to compressed villi, while the serotina is destroyed and replaced by blood crystals and organizing blood clot. Gülland found that the decidual cells become more and more degenerated and are replaced ultimately by a fibrinous layer, which contains immense numbers of leucocytes, most of which are also degenerated.

Contrary to these authors, others have seen a perfectly developed decidua. Orthmann found in eight of his ten cases of tubal pregnancies all stages of the changes of the mucosa to decidua. Zedal finds certain cells in the tubal serotina having the same shape and quality as the well-known decidual cells in the uterine mucosa. Yet he mostly observed a considerable proliferation of the intercellular substance. The outline of the cells is often more or less blurred, and finally the nuclei of the cells are destroyed in the more changed parts. In place of decidual tissue a homogeneous-looking fibrinous mass could be seen, which at some points has a striated appearance. He attributes the degeneration of the decidua to mechanical causes. In our case a full-time child was removed, and the pressure in the tube was consequently immense. The disappearance of the decidua could, therefore, be attributed to mechanical causes. Walther finds a delicate connective-tissue stratum bordering the epithelium, in which large connective-tissue cells are to be seen in large aggregates. These piles of cells can be traced even within the intermuscular connective tissue, and here again near the perivascular tissue. Thus the tubal wall is, in fact, filled with nests of decidual cells as if invaded by the cells of a malignant growth. In our case the tubal wall is also filled with nests of cells, but they resemble in no way true decidual cells. Webster, Goebel, and Mandel found a partly developed decidua even in the other non-pregnant tube. In our case no traces are found even at the placental site. This phenomenon cannot be easily interpreted, but I incline to accept Aschoff's view and that of the other writers, that in our case also a development of a decidua never existed.

The fact that our fœtus reached its full development would surely suggest the idea that this tube furnished to the embryo a better lodgment by the development of a true decidua. But, on the other hand, we find the villi advanced to the tubal serosa. This phenomenon refutes the last assumption; for if the proliferating fœtal cell-masses had found in the decidua a cushion, rich with blood-vessels, to furnish enough blood to the intervillous spaces for the nourishment of the embryo, the villi would not have penetrated so far in search of a highly vascularized tissue. They never do this in uterine pregnancies except in deciduoma malignum. The fact that the villi advanced here through the mucosa and muscularis to reach the well-vascularized serosa makes the view acceptable that no decidua was ever developed here.

As to the possibility of the fœtus reaching its full-timed development, although the wall is gradually becoming thinner as the size of the fœtus increases, there cannot be any other interpretation than that the menacing rupture of the tube by the contractions of the hypertrophied muscular fibres in the early months of the pregnancy was prevented by the immense proliferation of the peritoneum over the thinned part. In the later months, when the muscles have already atrophied, considerable contractions cease to occur, and the danger of a rupture or a tubal abortion is greatly diminished.

I would not try to give a definite answer to the question why a decidual development had not occurred here. According to Strahl, the uterine epithelium changes into a syncytium, or simple protoplasmatic mass with deeply staining nuclei. This layer is located between the stroma of the uterus and the connective-tissue groundwork of the chorion and villi. It would, therefore, seem that in the tube the mucosa has a different destination. Here, as Frommel, Wyder, and Abel claim, the mucosa is doomed to atrophic changes by the great pressure within the amniotic sac. On the other hand, if the decidual cells originate, as Hennig and Abel claim, from the leucocytes, immigrated from the blood, or, as Aschoff thinks, that the decidua takes its origin from the proliferated fœtal epithelium at the tips of the villi, it is hard to explain why a decidua should not develop in tubal gestation as well. Langhans, Orthmann, and Dobbet claim that the origin of the decidual cells is from the spindle-shaped cells of the uterine mucosa. Now the tubal mucosa, having normally only one function, namely, to forward the ovum into the uterus, would not have the faculty of furnishing a decidual proliferation even under changed conditions. But if the decidua was a product of the villous epithelium, nothing would prevent its development in extra-uterine pregnancies as well.

Anyhow, the main difficulty of embryonic histological researches is and remains yet, as Marchand appropriately remarks, our defective knowledge of the genetic meaning of the epithelial covering of the chorionic villi.

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SOME REMARKS ON WHOOPING-COUGH AS SEEN IN DISPENSARY PRACTICE.

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THE cases forming a basis for these remarks were taken from my service at the New York Dispensary between November, 1894, and February, 1900. Except those whose parents speak only Italian, all children up to the age of fifteen years are referred to on the occasion of their first visit to this class.

Two hundred and sixty-one cases of whooping-cough are recorded among 22,666 new cases of all diseases. This probably does not accurately represent the relative frequency of the disease, as the diagnosis was entered in the books only when the history was definite or a paroxysm occurred during examination.

Aside from these there were other cases in apparently incipient stages that had not declared themselves. It is almost needless to state that a paper of this sort is necessarily lacking in scope. Many of the patients did not return after a diagnosis was made, for a dispensary clientèle possesses unbounded faith that the disease will hold its course regardless of an array of drugs. A mild case is not likely to return unless some complication arises, making the child worse. Although provision is made for visiting all patients with severe illness at their residences, some of these passed from observation. An accurate estimate of the duration of the disease, efficacy of treatment, and mortality cannot therefore be obtained. It is with these limitations in view that the paper is presented. Thus recorded, the relative frequency of whooping-cough to that of other diseases is a fraction over one per cent. The percentages by years are as follows:

Twenty-nine per cent. during 1895; twenty per cent. during 1896; thirteen per cent. during 1897; fifteen per cent. during 1898; sixteen per cent. during 1899. For the three months of November and December, 1894, and January, 1900, there were seven per cent. of the cases. Fifty-five per cent. were seen in the summer months and during September and January.

In point of frequency of sex sixty per cent. were females and forty per cent. males. Sixty-seven per cent. of cases occurred between the ages of six months and five years. The percentages fell to one per cent. for the eighth, and the same for the ninth year. There were but two cases at three months and none later than ten years. As the age was entered at the first visit there is a slight source of error equivalent to the length of time the disease had existed before advice was sought. In about one-half of the cases in which notes were made of the duration of the disease before coming for treatment, the characteristic cough had been observed from two to three weeks and was then very pronounced. The eighth and twelfth weeks furnished the next largest number of patients—periods when severe complications or relapses are rife.

Complications.—The number of cases in which complications were noted at the time of the first visit or subsequently is sixty-seven—or 25.6 per cent. Sixty-one per cent. were females, showing no increased liability of sex. In speaking of complications it may be well to state that bronchitis has been included in this category. While the lesion is so common as to be a part of the disease in nearly every instance, there were many cases without physical signs. Only those are included in which signs were present. The complications naturally arrange themselves in two groups: (*a*) Those dependent upon the violence and strain of the paroxysm; (*b*) those due to lesions associated with the disease.

Of the first group there were: Hemoptyses, 6; epistaxis, 2; subconjunctival hemorrhage of both eyes, 1; umbilical hernia, 2; ulcer beneath the tongue, 2.

Of the second group there were: Mild bronchitis, 2; bronchitis of moderate severity, 25; severe general bronchitis with involvement of the small bronchi, 8; broncho-pneumonia, 19; tuberculous meningitis, 1; adenitis of the anterior cervical glands, 1; pericarditis (plastic stage), 1; malnutrition and wasting, 8. Four of these cases terminated fatally—three with broncho-pneumonia and one with meningitis. As some had more than one complication, the total number of cases under this heading does not equal the number of complications. Aside from the sixty-seven cases presenting complications, measles coexisted in two and scarlatina in one. Forty-six per cent. of the complications occurred during the months of January, July, and August; 13.5 per cent. in January; 13.5 per cent. in July; 19.5 per cent. in August. As only thirty-two per cent. of the whole number of cases were seen during these months, and the complications exceed them by so much as fourteen per cent., it seems fair to assume, even from so small a number of cases, an increased liability to complicating disorders during these months. Gastritis did not occur as a complication, although vomiting with the paroxysms was a frequent manifestation. Gastro-intestinal disturbance existed in the wasted babies, but was not directly assignable to the infectious disease. Diarrhœa in those not artificially fed or suffering from malnutrition did not add a serious phase to the malady. It was observed almost entirely during the hot season. Wasting is used merely as a descriptive term and does not refer to essential infantile atrophy. There were eight of these cases—three of them under one year, two between one and two years, and three at three, four, and five years. Two of those under two years were artificially fed, and one was insufficiently nourished at the breast. The two at three and four years had broncho-pneumonia, and the one at five developed tuberculous meningitis. In looking over the statistics to inquire if possible into the relation shown between the frequency of the disease at stated ages and the occurrence of complications, there seems to be an increased liability to those of the graver sort in the very young, but no increased liability to complications in general. Thus fifty-eight per cent. of all the cases of whooping-cough were observed between the ages of six months and four years, while fifty-nine per cent. of the complications—fourteen being cases of broncho-pneumonia—occurred during the same period. There is a falling off between the third and fourth years as shown by sixteen per cent. of the cases having only six per cent. of the complications. Between the fourth and fifth years the ratio is increased to fifteen per cent. of the complications for ten per cent. of the cases. Only one patient had convulsions, and these were due to the onset of a broncho-pneumonia. Cerebral hemorrhage can be excluded, as the patient was under observation for nearly three months. Broncho-pneumonia was a late complication, occurring as a rule about the eighth week, although one case was seen in the third week.

Relapses of whooping-cough were noted in five cases (possibly recrudescences would be a better term). These came for treatment after having gone through the period of characteristic cough, followed by a short period of immunity from it, and this in turn succeeded by a revival of the whooping. Four of the cases had persisted three months and one for two months.

The two cases of ulcer at the junction of the frænum of the tongue with the mucous membrane on the floor of the mouth were observed after the disease had existed for three months in one and seven weeks in the other. One child was fourteen months and the other two years old, and as they were seen for the first time there was no saying when the ulcer first appeared. The ulcers were about one-sixteenth of an inch in diameter, superficial, grayish, not associated with stomatitis, and not painful.

Loss of control of the sphincter ani during the paroxysm was not a troublesome affection except in one child three years old.

The average duration of the disease cannot be given with any exactness owing to insufficient data. The longest case recorded was four and one-half months and the shortest two weeks, the latter including the paroxysmal stages only.

Before concluding, a few facts may be gathered from three interesting cases accidentally left out of the foregoing enumeration.

The first was that of a boy, eighteen months, breast-fed, who came for the first time with an empyema of the left pleural sac. Operation was done by incision and gauze drainage, as the child was too weak for more elaborate surgical measures. The paroxysmal cough was frequent and severe, but seemed to favor expansion of the lung. Recovery was rapid and complete. Three years later he was strong and healthy, and but for the scar there were no physical signs. The second was a girl, breast-fed, extremely wasted and having diarrhœa. The whooping persisted four months, and in the later stages the chest was never free from fine moist râles. Tuberculous involvement seemed highly probable, but recovery was complete. Two years later the child was well nourished, and a physical examination gave a hyper-resonant note over a chest that was deep and emphysematous in type. There were no changes in the breath sounds, and the heart was normal. The third case was that of a boy who acquired whooping-cough at twenty months, which ran its course in eighteen weeks. He was in good flesh two years later, the chest emphysematous in shape, the resonance somewhat high pitched, and the breath sounds were normal. There was no abnormal cardiac condition.

It is only surprising that emphysematous changes are not more common. Tuberculosis would seem to have an inviting field for operation in whooping-cough. It is difficult to understand why it should not be of more frequent occurrence. When it makes its appearance it is far more likely to be late than early. Without wishing to advance on untenable ground, it may be that the organism is somewhat protected against a secure lodgment of the bacilli by the very violence and frequency of the cough. This is, to a certain degree, borne out by the occurrence of broncho-pneumonia after the spasmodic feature has become less prominent. The fatality of these pulmonary complications, even as shown in these inadequate records, is suggestive of their tuberculous causation. The one case of tuberculous meningitis occurred in the ninth week, and was fatal in five days. That prognosis, when consolidation appears, must not be invariably bad was clearly shown in one case—that of a girl of three years with well-marked emaciation, and broncho-pneumonia late in the disease, who recovered. Two years later she was well nourished and the physical signs were normal. Evidence that pulmonary tuberculosis is not a common complication or sequela of whooping-cough is also forthcoming from the fact that very few cases of the disease are seen in the service. It is of interest as well that in but one of the cases of meningitis was whooping-cough a factor. Only one case of adenitis was observed, and this was not sufficiently characteristic to be considered tuberculous. There were no cases with bone or joint lesions.

Atelectasis was never regarded as a positive condition. There were cases in which slight dulness and changes in the breath sounds over small areas were suggestive of this condition. If these signs were transient some degree of assurance was felt in considering them to have been due to collapse or defective aeration.

A word or two here in a negative way at least as to the relation between cardiac disease and whooping-cough. The great strain of the paroxysm might properly be regarded as an etiological factor. Not one of these cases, while under observation, had an endocardial complication, nor was it possible to be satisfied that there was cardiac enlargement. Moreover, there have been no cases of cardiac disease on my records in which the etiology was clearly related to whooping-cough. The one case in which there was a pericardial friction sound passed from observation.

It is obvious that careful records of urinary analyses could not be made, and the presence of albuminuria or nephritis as a complication definitely noted. In so far as the external evidence of nephritis is concerned, there was none to indicate any severe forms of this disorder.

Speaking of treatment, belladonna, when indicated by the severity of the paroxysms, was preferred above other drugs on account of safety, tolerance, and expediency. Given in increasing doses it occasionally ameliorated the severity of the seizures. In addition to this a supporting treatment of cod-liver oil and malt preparations was prescribed. That the mothers had faith in the latter was shown by the regularity of their return for the "thick medicine." They cared little for other medication. Antipyrin was prescribed for several cases, in doses of gr. ii. combined with potassium bromide gr. iv., but was discontinued, as these moderate doses were ineffectual. The drug being a depressant it did not seem safe to prescribe it in large doses unless the patient could be kept under the most careful supervision. While there are instances when the disease is exceptionally severe, and vigorous measures may be demanded, it does not seem good therapy in the cases of average severity to attempt to substitute a drug danger for the danger lurking in the disease, unless the former can be proved the less harmful measure. Bromoform has not been prescribed during my service. My predecessor, Dr. John H. Huddleston, made use of it in several cases, and to him I am indebted for the following: "In some an improvement in the severity of the paroxysms without any change in their frequency was reported. Too much reliance could not be placed in these statements, and whatever improvement there might have been did not compensate for the danger of unequal dosage when given in a mixture. On this account its use was discontinued."

If anything is to be learned as to prognosis it should be borne in mind that as a rule the hygienic surroundings in which these children were reared were as poor as can be found in the city. Even so the outlook was not a grave one unless broncho-pneumonia set in. The latter is a complication that can be very largely avoided where better conditions prevail. Such crude methods of treatment as could be adopted afford a great deal of encouragement for the successful management of cases when every detail of diet and hygiene can be carried out in a suitable climate.

SIX NEPHRECTOMIES.

By F. V. CANTWELL, M.D.,

EL PASO, TEX,

LATE SURGEON TO ST. FRANCIS' HOSPITAL, TRENTON, N. J.

THE group of symptoms which accompanied each of the following cases was sufficient for me to make out the condition found at the operation. In my limited experience careful clinical study and frequent examinations are sufficient to clear up the diagnosis in surgical disease of the kidney, in the majority of cases, without the use of instruments to explore the ureter or pelvis of the kidney. I believe that in the hands of men unaccustomed to their use, the latter will do more harm than a clean incision down to the kidney for the purpose of ascertaining its condition. If a disease of the kidney exists which demands surgical intervention and one is not sure of the character of the lesion, he should cut down and see what it is and proceed according to the finding. If one is in doubt as to the presence or condition of the other kidney, he should do as Edebohls advises—look at it. Then one who has experience and common sense will know how to proceed. A man whose sense of touch is at all cultivated can with a finger in the female bladder feel the weak spurt of urine from the mouth of the ureter, and so get some evidence that there is a kidney above.

I have seen but one case in an adult, and that on the post-mortem table, in which but a single kidney existed. This kidney was almost twice the size of a normal one. I have examined the bodies of several new-born or prematurely born babes in which no other cause of death could be found than that one kidney had become entirely cystic from some accident to or defect in the development of the ureter, while the other kidney was normal. I believe that sometimes such cases go on to adult life, and the cystic kidney is entirely absorbed, while the good kidney grows larger in order to keep up with its work. A patient suffers little or no inconvenience from the removal of a kidney that has been disabled for some time, for the reason that the healthy kidney has been in training. As the diseased kidney has slowly fallen off in its capacity for work, the good kidney has taken it up and has been undergoing a compensatory hypertrophy; so that when the grand crisis of nephrectomy comes, the healthy organ takes upon itself the entire burden, and the patient is better off than he was before the operation.

The incision I prefer is one that parallels the last rib; and if the wound thus made binds the hand or interferes with free manipulation, it should be enlarged in whatever direction the surgeon sees fit.

My cases have been as follows:

Case I.—Man, aged thirty-five years, in previous good health. While running across the mill-yard he fell into a shallow ditch. He felt something give way, and immediately there was a sense of fulness in the bladder with a desire to urinate. He was taken home, and four hours afterward was examined by Dr. E. H. Rogers, who found great tenderness over the right kidney and a marked fulness over the bladder. The urine was passed frequently and in small quantities, deeply stained with blood. He was kept quiet; ice-bags were applied to the back, and ergot, gallic acid, etc., administered. This was kept up for three weeks. The patient grew steadily worse, and no symptom was relieved. When I saw him the man was in a state of collapse from bleeding. I advised an exploratory incision and nephrectomy if necessary. The incision was made parallel to the spinal muscles and the kidney brought out. No break in the kidney capsule was found, but the organ had a bluish, bruised look, with some distention of its pelvis. As I was confident that this was the source of bleeding, I removed it. In addition to a looped ligature I put a large catch forceps on the stump to insure against bleeding. I would not do this again, as it made the patient very uncomfortable. This man died after twenty-four hours. Upon slitting open the kidney I found a tear in the substance of the organ, from which came the loss of blood. Its pelvis was filled with old grumous-looking clots as well as fresh blood. A post-mortem examination showed the left kidney to be normal. The bladder was over-distended with blood clots, which I would have removed if the man had lived. This man died of a stillicidium of blood from the torn kidney. The bladder no doubt filled with blood at the time of the accident, and the back pressure must have been great enough to stop any large flow, and so allowed the man to die by inches. His symptoms were by no means severe enough at first to suggest even an exploration of the kidney. The absence of any tumor, due to the peculiar character of the injury—a wound of the kidney without any break in the capsule—was evidence against any serious lesion. There was nothing to do but wait during the first week after the accident. The lesson taught by this case is, that when a man after an injury of this kind continues to pass bloody urine for four or five days, and there is other evidence that he is still losing blood, an incision should be made at once and the bleeding controlled.

Case II.—Man, farmer, aged thirty-four years. He was sent to St. Francis' Hospital, Trenton, N. J., by Dr. Van Neste, of Hopewell, N. J. He had for several years suffered from the passing of stones from the kidney, with all the classical symptoms. During the previous six months he had been passing quantities of blood with his urine. This loss had reduced him to a thin, waxen, listless wreck, completely bedridden. He was dying because he was losing more blood than he could make.

Ten weeks before I saw him, a surgeon had opened his bladder above the pubes in a vain search for the source of bleeding, and a fistula still remained. His pain was always referred to the right kidney, and there was a great deal of tenderness in that region. The kidney could not be felt. I advised exploration. An incision alongside the last rib gave easy access to a kidney that externally looked normal. Palpation disclosed a very suspicious lump in the parenchyma of the organ. Under the circumstances I thought removal the best course—this was in 1894. On cutting into this lump, a sac, an inch and a half in diameter, was opened. This was packed with hundreds of stones, each the size of a millet seed. The wound was closed without drainage, and the man made a quick and perfect recovery. He is still well and attending to business. I have sometimes felt a twinge in my surgical conscience for the removal of this kidney, but have come to the conclusion that it was the proper thing to do. I might have cut into the sac and removed the stones, but this would involve danger from several causes: First, the danger of not removing all the stones; they were very small, and a few might easily have been left; second, of not removing the cause of bleeding, which was fast killing the man; third, of leaving a fistula; fourth, of an abscess of the kidney. The man would not have lived for a secondary nephrectomy. Above all, "*Finis coronat opus:*" the man has been well since the operation.

Case III.—Woman, aged twenty-eight years. She had been sick for a year or more, complaining of great pain in the region of the left kidney and below. Her body showed that she was a big-boned and had been a muscular woman. She was then very thin, pale, and bedridden. The urine was loaded with pus. No bacteriological examination was made. A large fluctuating tumor was found in the left flank and back, extending to the iliac crest. A diagnosis of perinephric abscess due to rupture of a kidney abscess was reached and operation was advised. Owing to the fluctuating mass a longitudinal incision was first made. This gave vent to about a quart of thin, ichorous pus. The kidney was bound firmly down by old adhesions, and as the first incision did not allow of ready access a second one was made along the border of the last rib. This made removal of the organ much easier. A great deal of force was used to break up the adhesions, but the kidney was finally brought out. It was found to be tuberculous, enlarged, and nodulated. An incision was made into a nodule, and cheesy pus found. The ureter was isolated and tied off separately, and the kidney removed. The wound and pus sac were irrigated and packed with gauze, and the wound was loosely sutured. For a few days only the urine was blood-stained and contained some pus. This cleared up very quickly. She recovered well from the operation, but a discharging sinus remained. In the course of about two months this discharge grew so copious that it began to tell on the health of the woman. She was again etherized and about three inches of the ureter was excised. The sac and sinus were well scraped, and the wound was packed and left open. After three weeks this had entirely closed and she left the hospital in good health. She is now working hard as a domestic, and does not miss her kidney.

Case IV.—Man, aged twenty-five years; a strong, sturdy Italian. About an hour and a half before he came to St. Francis' Hospital, he had fallen a distance of three feet on to the end of a railroad tie. He struck on his back in the region of the right kidney. He was brought to the hospital in a carriage, but walked upstairs to the ward alone. He was put to bed, and in a few minutes the resident physician noticed that he grew pale, restless, yawning, thirsty, and had a rapid, small pulse, as if a sudden severe hemorrhage had occurred. I happened to be in the hospital at the time, and was called. I found a vague, ill-defined, compressible tumor in the right lumbar region, with great tenderness. His urine was drawn and found to be bloody. A diagnosis of ruptured kidney was made. The man was quickly prepared and sent to the operating-room. An incision along the last rib was made. Before the kidney was reached at least a quart of loose blood clot was turned out. Loose lying in this mass was the lower end of the kidney stripped of its capsule. The remainder of the kidney was brought out as rapidly as possible; it was still attached to its blood-vessels, and bleeding. The pedicle was tied with a looped ligature including everything, and the kidney was removed. The cavity made by removal of the kidney and blood clot was dried and the wound closed, leaving a small piece of gauze for drainage. The kidney looked as if there had been an explosion from the inside, it was so torn. Besides the piece that was completely separated there were two large rents from which blood had been pouring. Embedded in the cortex immediately beneath the capsule was a stone about the size of a small cherry. This man made an uninterrupted recovery, and when I last heard of him was working hard in a grocery store.

Case V.—Child, male, aged two years. He was brought to my office, supposed to be suffering from worms. The child was of normal size and appeared to be well nourished, with no cachexia. A tumor could be felt on the right side, extending from the lower border of the ribs to the anterior superior spinous process of the ilium. It was freely movable and not at all sensitive. The child suffered no pain, and was brought to me because the parents had noticed a slight failing. The urine contained no blood but a quantity of albumin. A diagnosis of sarcoma of the kidney was reached, and nephrectomy advised. The operation was done August 10, 1898. An incision was made one-half inch from the lower border of the last rib, commencing at the lumbar muscles. This incision had to be carried almost to the umbilicus before the tumor could be delivered. Of course the peritoneal cavity had to be entered, and the kidney was found to be as distinctly an intraperitoneal organ as is the ovary. Its pedicle was formed of a mesonephron surrounding ureter, artery, etc. There were a few adhesions, which were easily broken down. There were no glands noticeably involved. The pedicle was secured by a crossed ligature including everything, and the kidney was removed by a few snips of the scissors. There was practically no bleeding. The peritoneum, muscles, and skin were closed in layers. A strip of gauze was left behind the peritoneum for drainage. This was a mistake, as it left a small sinus difficult to heal. The albumin disappeared from the urine, and the child left the hospital in three weeks after an uninterrupted recovery from the operation. The tumor weighed little short of three pounds, and was a sarcoma which had destroyed almost all the kidney. When I left Trenton in December, 1898, the child was well to all external appearances and felt well. I have since heard that in March, 1899, it died either of an abscess caused by the pedicle ligature or of a return of the growth; very likely the latter. In spite of this I would advise removal of sarcoma of the kidney, no matter at what age it occurred.

Case VI.—Man, aged thirty-one years. This man came to me first in 1887. He had suffered pain during urination "since he was born." He had often to stand on his neck and shoulders with his feet and pelvis elevated before he could pass water. I found a large stone in his bladder, which I removed by lateral lithotomy in October, 1887. The stone was ham-shaped. This relief made a new man of him, and for eight years he worked comfortably at his trade of dish-making. He then began to have attacks of heavy pain in the region of the right kidney. These attacks sometimes lasted for days. They would always commence while he was on his back in bed. During these times it was impossible for him to have a stool, owing to the severe lumbar pain it gave him to strain. This pain no doubt was caused by the dense adhesions found during the operation. He often brought me a sand that he passed with stool. This was uric acid. His urine always contained pus, and after an attack of pain he would pass clear pus. The kidney could be felt at times, and there was a small spot of extreme tenderness at its lower border. This condition continued until life once more became unbearable to him. I sent him to St. Francis' Hospital for a week, during which time a careful study of his symptoms was made and a diagnosis of pus kidney reached. A nephrectomy was advised and consented to. An incision was made parallel to the last rib, and, as the occasion demanded, extended down two inches at a right angle from its outer end. The kidney was reached easily, but a great deal of care had to be taken in enucleating it on account of dense adhesions at its lower border. Several of these had to be tied and cut. During these manipulations the intestine could be seen beneath the thin peritoneum. The ureter was isolated; the vessels were tied with a single ligature after being stripped of all superfluous tissue, and the kidney was removed. A quantity of pus oozed up from the cut ureter, but a probe passed through it into the bladder disclosed no obstruction. It was then fastened to the lower angle of the wound with the idea of flushing it out through the bladder and urethra during convalescence. The lumbar muscles, which were cut partly across, were united, and the cavity of the wound was wiped dry. The wound was then loosely closed and a small piece of gauze left in for drainage. The kidney removed was a fan-shaped collection of abscesses emptying into the pelvis, a typical surgical kidney. He recovered well from the operation, but at last account the open mouth of the ureter was still leaking pus. The chances are that a ureterectomy will have to be done before he is well.

This condition occurred after the lateral lithotomy, but not as a consequence of it. I am inclined to believe that a concurrent specific urethritis was the cause of the pyonephrosis. After the bladder stone was removed he gained in health and strength for several years before he had symptoms of any trouble with his kidney. I could never fathom the significance of the intestinal "sand" found in this case. I have seen the same "sand" in a case in which adhesions had formed between the gall bladder and adjacent intestines.

A Case of Cerebro-Spinal Meningitis due to the Coli Bacillus.—Orazio d'Allocco reports a case in which the spinal fluid removed by Quincke's method was found to contain the coli bacillus.—*La Riforma Medica*, February 14, 1900.

The Night Air of New England in the Treatment of Consumption.—C. S. Millet reports on several cases of tuberculosis treated by sleeping in the open air. The patient takes his own temperature at 9 A.M., 1, 4, and 8 P.M. The rule is, rest in bed during the day long enough to keep the temperature below 99.5° F., or better 99°. The patient keeps a record of the hours spent in the house, and must give a good reason for this time. He is to eat all he can at the three ordinary meals, avoiding pastry and confectionery. A cold sponge bath in the morning and another bath at about 90° F. at bed-time are advised. The nose and throat are carefully looked after and any necessary treatment is given. The patient sleeps in the open air, the one caution being to keep warm. During the cooler months some woollen nightgowns and sheets should be used. Almost the only medicines taken are nux vomica and an occasional laxative.—*Maryland Medical Journal*, January, 1900.

MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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CARE OF THE INSANE.

THE measures taken for the care of the pauper insane in New York State, although far more humane and rational since the enactment of the "State Care Act" of 1889, are nevertheless susceptible of still greater improvement. In accordance with the provisions of the above-mentioned act, the care of the dependent insane devolves upon the State of New York, and in order to simplify arrangements tending to reach this end in the most satisfactory manner possible, the State was divided into eleven districts, in each of which was placed a State hospital for the reception of patients. The object of this plan is both obvious and excellent, viz., that the inmates may be easily kept in touch with their friends, who are naturally desirous to receive from time to time information as to their condition. With the exception of a somewhat serious drawback this arrangement is said to work admirably. No fault can be found with the care and treatment of the patients when located in the hospitals.

The weak spot in the system is pointed out in the *Albany Medical Annals* for December, 1899, which describes the situation thus: "No statutory requirement exists as to the management of the patient during the process of commitment, and pending transfer to the hospital. In some counties, notably New York, Kings, and Erie, the local authorities have provided so-called 'detention' or 'reception' buildings or wards in connection with existing general hospitals, where the patient's claims as an invalid receive full consideration. Throughout the rest of the State the insane patient is cared for by friends as best they can, or placed in a jail or some convenient receptacle. The hardship of this is at once apparent, and in the more active cases where exhaustion is rapid, consignment to a jail or other 'lock-up' results not only to the detriment of the patient's recovery, but even of his life."

All this is very true, and attention is further drawn to the fact that in those general hospitals in which such reception wards have been established the results have been highly instructive. This has been especially the case at Bellevue Hospital in New York City, where in many instances patients have received so much benefit that they have been discharged as practically cured. The authorities of Albany Hospital, fully recognizing the desirability of introducing reception wards for the insane in general hospitals throughout the State, resolved if possible to cause to be erected a pavilion for the insane in connection with their own institution. The matter was placed before the board of supervisors of Albany County, and in the February number of the *Annals* the announcement was made that the board had declared its willingness to meet the wishes of the projectors of the movement. An appropriation of $18,000 has been set aside for the erection of the pavilion, and plans are now under consideration.

There are undoubtedly many mild cases of insanity for which the treatment provided in the State institutions is unnecessary. A clearer discrimination is needed between acute and chronic cases. If reception wards were established for the insane in general hospitals it would be a comparatively easy matter to determine quickly which patients required a lengthy course of treatment, and the fact of thus being enabled to distinguish between the different degrees of madness, and to treat accordingly, would be at once an act of humanity, and doubtless in the long run a saving to the general public. The partial irresponsibility of those given over to the alcohol or drug habit is now generally allowed, and the necessity of prompt emergency treatment for this unfortunate class cannot be ignored. Drug or alcohol habitués refuse to enter a hospital for the insane, but the majority of them would gladly avail themselves of the opportunity afforded of temporary treatment and care in a special ward of a general hospital. On the whole, therefore, the public-spirited plan about to be inaugurated at Albany Hospital will commend itself as one worthy of imitation by similar institutions not only in New York State but in all parts of the civilized world.

MEDICAL EDUCATION IN THE UNITED STATES.

So far as the number of schools of medicine is concerned, the United States will compare favorably with any country in the world. Excluding graduate schools there are, according to a monograph on professional education written by Mr. James Russell Parsons, Jr., 156 schools of medicine, 5,735 instructors, and 24,119 students. A foreigner reading this statement, and unacquainted with the facts of the case, would come to the conclusion that medical education in this country was in a particularly healthy condition. If, however, he were of a curious disposition, and were to dive more deeply into the matter, his opinions would assuredly undergo a radical change. In saying this there is no intention to disparage the efforts made in the country generally to improve the standard of medical education, or even to assert that these efforts have not been attended with a fair measure of success. The defect in the present system is the apparently needless multiplication of standards, and until effective means have been introduced to bring about some sort of uniformity in the standards, medical education will stand on no solid foundation. Mr. Parsons is of the opinion that a uniform standard for admission to practice throughout the United States is impracticable at present, owing to varying conditions as to density of population, educational advantages, and general development, and recommends that, instead of the adoption of a separate standard for almost each political division, two, or at most three, standards should answer for all.

The existing easy-going methods of granting degrees in medicine prevailing in many States has the effect of flooding the market with medical men, with correspondingly disastrous competitive results. For example, quoting again from Mr. Parsons' monograph, the ratio of physicians to population is one to less than six hundred in the United States, while in foreign countries it varies from one to about eleven hundred in the British Isles to one to about eighty-five hundred in Russia. We are said to have in proportion to our population four times as many physicians as France, five times as many as Germany, and six times as many as Italy. There are more medical schools in the United States alone than in countries whose total population is six times as great, and yet few of these medical schools in the United States have endowments corresponding to those so lavishly made to other educational institutions or in any way proportioned to their needs. Fortunately a change would now seem to be indicated in the attitude of philanthropists toward medical schools. In New York the advanced requirements for license have been accompanied by extraordinary growth in the property of medical schools, especially in Greater New York. Indeed, without wishing to exalt unduly the accomplishments of the regents of the University of the State of New York, the fact must be recorded that owing to the foresight of this body professional education in New York State now stands on a higher plane than in any other State in the Union, and emphasizes the need of similar councils of education in the other political divisions.

FLEAS OF RATS AND MICE AS CONVEYERS OF PLAGUE INFECTION TO MAN.

WHILE evidence is rapidly accumulating to show that rats are the chief factors in the importation of plague into a country, opinions are at variance as to the danger to be apprehended to man from the fleas of rats and mice. Much has been written in support of the theory that it is possible for a human being to become infected by the plague germ through the agency of fleas which may have infested these vermin, but no satisfactory proofs on this point have been as yet produced. The fact has been demonstrated that fleas taken from a plague-stricken rat are capable of inoculating healthy rats or mice with the plague bacilli, but it must be borne in mind that there is a distinct difference between the flea of a man and that met with on rats and mice. Dr. Bruno Galli-Valerio, of Lausanne, in an article first published in the *Centralblatt für Bakteriologie*, etc., and reproduced in the "Public Health Reports" of the United States Marine-Hospital service of February 16, 1900, distinguishes these fleas as follows: "The flea of man (Pulex irritans) has an ovoid body, reddish-brown in color, and is without a comb upon the head or prothorax. The flea which most commonly infests rats (Typhlopsylla musculi) has a thin body, is yellowish in color, with spines upon each side of the inferior border of the head, and a comb upon the prothorax. Upon the mouse and marmot we also find the Pulex pasciatus, but it presents upon the prothorax a comb of eighteen points and has only been found, as I remember, in Holland and in Halle, and I myself have found it once in Milan." Therefore Dr. Galli-Valerio does not consider it as proven that the fleas of rats and mice may transmit the plague to man.

PURE FOOD LEGISLATION.

AT the present moment there are two bills before Congress whose aim is to prevent the adulteration of food products. The first of these is H. R. 4,618, introduced December 18, 1899, by Mr. Babcock, and the second is H. R. 6,246, introduced January 15, 1900, by Mr. Brosius.

Mr. Babcock's bill provides for the appointment of a food commissioner within the Department of Agriculture. The food commissioner shall, with the approval of the Secretary of Agriculture, appoint a chief chemist, who on his own responsibility shall appoint such chemists and other employees as shall be needed. The food commissioner shall make the requisite rules and regulations for the proper conduct of his bureau. The bill further defines the term "food," and indicates in a general way what shall be considered as adulterations. Section 8 provides "That the food commissioner may call upon the Association of Official Agricultural Chemists to determine the standard of any food products within the meaning of this act, and when so determined, such shall remain the standard before all courts." This is a curious provision, throwing much responsibility on a body which, though called "official," is simply a private association of persons holding official positions in different States. It apparently gives this body the power to determine the wholesomeness or otherwise of certain food products, a function that in no proper sense is within the province of a chemist. The clinical physician alone is competent to judge of matters of this kind, and it is to be regretted that chemists so often overstep the proper confines of their science and presume to offer opinions on subjects beyond their proper scope. We cannot too strongly commend to their attention the old saying: "*Ne sutor supra crepidam.*" Section 11 permits manufacturers, etc., of "compound mixed or imitation foods" to "certify, under oath," that they are "not deleterious or injurious to health," and on further payment of $10 permits the same to be registered by the Secretary of Agriculture. This is certainly an extraordinary provision. The other sections of the act relate to regulations necessary to its proper administration, and appear to us to be wise and judicious. The last section of the bill provides that the expenditures necessary to the carrying out of the act shall not exceed $100,000 in any one year.

We believe that the passage of this act with the omission of Sections 8 and 11 will be the beginning of a movement that in time will secure to the American public a reasonable guarantee as to the quality of the foods they consume. It must be remembered that Congress has power to legislate only in connection with interstate and foreign commerce, and that the various State governments must enact supplementary measures before the people will be properly safeguarded. We will consider the second or "Brosius" bill later.

THE STATUS OF THE ACTING ASSISTANT SURGEONS OF THE UNITED STATES ARMY.

THE civil surgeons whose aid it was found necessary to enlist during our war with Spain would appear to be extremely dissatisfied with the manner in which they have been treated, and are, moreover, bent upon ventilating their wrongs, with the view of having removed the disabilities from which this somewhat anomalous class of army doctors suffer. A mass-meeting of acting assistant surgeons was held at the armory of the Seventh Regiment in New York on December 5, 1899, at which one hundred and fifty of these gentlemen were represented in person, by proxy, or by letter. At this meeting a permanent organization was formed and a constitution and by-laws were adopted. The constitution reads as follows: "The object of the association shall be to maintain the patriotic and professional *esprit de corps* and *camaraderie* of the men who during the war between the United States and Spain held the position of acting assistant surgeon in the United States army, and to secure their rights and to protect their interests of every kind, especially those requiring legislation by the Congress of the United States."

The grievances under which the acting assistant surgeon now labors, in the opinion of the members of the organization, are that although an acting assistant surgeon is expected to fulfil in every respect the duties incumbent on the regular army surgeon, yet he is debarred from sharing in the privileges and emoluments accorded to the latter. He does not rank as an officer. When an acting assistant surgeon is wounded or killed in action or stricken down by disease while on duty, no provision is made for his care or support in the event of such occurrences. If sick while on duty, his pay is immediately stopped, and no provision is made for feeding him, for sheltering him, for giving him medical attention, or for bestowing on his dead body any of the care accorded to the military dead; and lastly, an acting assistant surgeon is not eligible to receive a medal for "conspicuous bravery in the field."

It is also stated that there is a lamentable lack of harmonious feeling between the regular army surgeon and the contract surgeon. The lines therefore of the civil surgeon who volunteers his services in the time of war do not seem to be cast in pleasant places, and the inducements offered are not sufficiently attractive to render his position one to be ardently desired. The old contract system might be with advantage, if not entirely abolished, at least considerably modified. It would appear but reasonable that during the time that an acting assistant surgeon serves in the army, performing to the best of his ability all the duties required of a regular army surgeon, he should be entitled as far as is possible to the same privileges and emoluments. If perchance this country should be suddenly plunged into a large war, the services of civil surgeons would necessarily be again requisitioned. Would it not be better policy to place the status of these men on a satisfactory footing than to continue an out-of-date and unpopular system?

News of the Week.

Crowded Professions in Cuba. — The Cuban cabinet has decided to adopt the recommendations of Señor Barreiro, secretary of public instruction, for the reorganization of the School of Engineers, in order that young men may be able to adopt some other profession than law and medicine, both of which are overcrowded. The Spaniards founded an engineering school, but when they found that the graduates were competing with Spanish engineers the school was neglected to such an extent that it became valueless. It will now be raised to a high standard of efficiency.

A French Institute for the Study of Tuberculosis.—The Société Lyonnaise des Tuberculeux Indigents has undertaken to build an institute for the study of phthisio-therapy, which it proposes to make an annex of the free sanatorium which it is about to open at Hauteville. It is now suggested that the undertaking be made a national one, and with this end in view a bill has been introduced into the French Senate making an annual grant of 15,000 francs to further the work of the institute.

The Anglo-American Nursing-Home in Rome.— Efforts have been making for some time to establish in Rome a nursing-home, in which persons of British or American nationality who have the misfortune to fall ill in the Eternal City can be received. The scheme met with opposition in certain quarters, but *The British Medical Journal* announces that all difficulties have now been successfully overcome. A *villino* excellently adapted for the purpose was found in the Via Nomentana, a little way outside the Porta Pia. The building is charmingly situated, standing well back from the road, in about half an acre of ground. Round about it are pretty villas, each isolated in its own ample garden, and there is no fear of the surrounding open spaces being built over. The house has twenty-seven rooms, and can conveniently accommodate six or eight patients, who have the use of several comfortable day-rooms. The walls and ceilings are artistically painted, and all the rooms have a cheerful outlook. On the roof is a terrace commanding an extensive view of the Campagna, with the whole range of the Alban and Sabine hills in the distance.

Ordinary patients pay an inclusive charge of twenty francs a day, but two beds are set apart for patients who cannot afford more than half the usual rate, and two are entirely free. The home, which was opened in the early part of January, is at present partly dependent on subscriptions, but it is hoped that it will soon be self-supporting. Miss Gibbons, who was formerly matron of the Tewkesbury Cottage Hospital, has accepted the post of directress, without salary. Patients can be sent in by any medical practitioner in Rome, and remain under his charge while in the home.

Transactions of the International Medical Congress.—The secretary-general of the Thirteenth International Medical Congress writes to Dr. Jacobs, secretary of the American National Committee, that, as there has been some misunderstanding about the sectional arrangements, it should be known that every member may join as many sections as he pleases for a single subscription, but that the expense will prevent every member receiving a copy of the whole twenty-four volumes of the Transactions of the Congress, as it is intended to issue a volume of the work of each section. Each member of the Congress will receive therefore (1) a volume containing a general summary of the work of the Congress, (2) a volume containing a full report of the general sessions of the Congress, (3) a volume containing the work of the section to which he chooses to affiliate himself. If a member has joined several sections he will receive the Transactions of the section which he has placed first on his form of application for membership. Members of the Congress who wish to receive the whole set of transactions should communicate with M. Masson, the publisher, 120 Boulevard St. Germain, Paris. The greater the number of volumes ordered by any congressist the less will be the price of each volume.

The Samuel D. Gross Prize of the Philadelphia Academy of Surgery.—The conditions annexed by the testator are that this prize of $1,000 "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations, the candidates for the prize to be American citizens." It is expressly stipulated that the competitor who receives the prize shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross library of the Philadelphia Academy of Surgery, and that on the title-page it shall be stated that to the essay was awarded the Samuel D. Gross prize of the Philadelphia Academy of Surgery. The essays, which must be written by a single author, in the English language, should be sent to the "Trustees of the Samuel D. Gross prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 219 South Thirteenth Street, Philadelphia," on or before October 1, 1901. Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. None of the essays received on January 1, 1900, was deemed by the trustees worthy of the prize.

The American Academy of Medicine.—The twenty-fifth annual meeting of this society will be held at The Shelburne, Atlantic City, on Saturday, June 2d, and Monday, June 4th, just preceding the meeting of the American Medical Association. The president is Dr. G. Hudson Makuen, of Philadelphia. The subject of the annual symposium is "The Medical Aspects of the Home."

Philadelphia Neurological Society.—At a stated meeting held February 26th, Dr. A. P. Francine presented two cases of tabes dorsalis in negroes—husband and wife. The symptoms had appeared first in the husband, who admitted a history of syphilis, and in whom there was a remote admixture of white blood, while the wife presented evidences of considerable admixture. Dr. C. W. Burr presented a case of lesion of the spinal cord following injury to the neck. The patient was a woman presenting right hemiplegia, with a tendency to contractures and easily induced and persistent patellar clonus, and impaired thermal sensibility. The symptoms had developed in the sequence of a fall. Dr. Wharton Sinkler presented two cases of paralysis agitans. In one the tremor was violent and confined to the right hand, while the face was mobile. The other was of long standing, the symptoms developing many months after an injury. The patient exhibited marked propulsion and retropulsion, and was able to walk better over obstacles than upon the level. He could perform few movements deliberately, but upon sudden impulse and under emotional strain he was able to do much better. A deformity of the spine had been discovered and an operation had been performed, the statement being made that a fracture of a transverse process of the second lumbar vertebra had been found. The patient thought the symptoms had been stationary subsequent to the operation, but the evidence pointed to the fact that they had progressed. Dr. Joseph Sailer presented a case of paralysis of the left upper extremity with astereognosis. The patient had had several convulsive seizures, with transitory loss of consciousness, and he presented physical evidence of valvular disease of the heart. The lesion was thought to be situated in the arm centre in the right cerebral hemisphere, and to be of vascular origin, but the discovery of bilateral neuro-retinitis raised the question of a new growth. Dr. Henry J. Berkley read a paper on "The Pathological Findings in a Case of General Cutaneous and Sensory Anæsthesia." The patient was a middle-aged woman who had been under observation for some ten years, and presented not only widespread cutaneous anæsthesia, but also abolition of all of the special senses. Post-mortem examination disclosed intense thickening of the vessels generally, with diminution in calibre, and slight degeneration in various parts of the nervous system. Dr. Berkley exhibited a specimen of false porencephaly in a rather unusual location. The patient had been a medium-grade imbecile, without symptoms of focal disease; but upon post-mortem examination a deficiency in the brain structure was found on the median and inferior aspect of one hemisphere. More careful investigation showed this to be due to an extravasation of blood from a ruptured vessel. Dr. C. W. Burr presented a case of general cutaneous anæsthesia, with partial loss of painful sensibility. The patient was a man of low intelligence, who presented, besides, symptoms suggestive of hysteria. Dr. W. G. Spiller made a brief report of a case in which there was bilateral optic neuritis, with abolition of the function of the remaining cerebral nerves upon one side.

University of Pennsylvania, Class of '75.—An effort is being made to secure a reunion of the University of Pennsylvania, medical class of '75, at the coming commencement in June. Every member of this class is requested to send his address and a brief account of his doings since graduation to Dr. Charles W. Dulles, 4101 Walnut Street, Philadelphia.

College of Physicians of Philadelphia.—A stated meeting was held on March 7th. Dr. Frederick A. Packard read a report of a case of ostitis deformans (Paget's disease). Dr. John H. Musser read a paper entitled "The Antitoxin Treatment of Diphtheria," in which he reported a series of cases treated by this means without a death, and some of which it was thought would have terminated fatally if other measures had been used instead. Dr. Edward P. Davis read a paper entitled "The Differential Diagnosis of Ectopic Gestation, with a Report of Cases." Dr. W. W. Keen exhibited a new kind of material for sutures and ligatures made of celluloid, and which commends itself on account of its cheapness and its susceptibility of sterilization by all of the easily employed methods. Dr. Keen also exhibited the specimen from a case of ligation of the abdominal aorta. The vessel was tied just below the diaphragm with several strands of silk, and the patient survived for forty-eight days, death resulting from hemorrhage due to cutting through of the ligatures. On post-mortem examination the condition was found to be a false aneurism.

Pathological Society of Philadelphia.—At a stated meeting, held March 8th, Dr. A. O. J. Kelly read a communication on "Tumors of the Vermiform Appendix," and exhibited sections of endothelioma and carcinoma of this organ. He related that among nearly eight hundred vermiform appendages examined systematically following operation, in four only were new growths found, and none of these had been suspected during life. Three were carcinomatous and one was an endothelioma. Dr. C. H. Frazier presented a communication entitled "Vermiform Appendix Containing Oxyures Vermiculares." The patient had presented symptoms of appendicitis, and after removal the appendix was found to contain a considerable number of living seat-worms. Dr. G. G. Davis reported a case in which a segment of tape-worm was found. in a removed appendix. Drs. De F. Willard and W. G. Spiller reported a case of cyst of the inguinal region, and presented numerous foreign bodies removed therefrom. Some doubt existed as to the nature of the cyst, but it was thought to represent a collection of so-called free bodies, such as form in cavities lined by endothelium, although the possibility of its being a dermoid cyst was considered. Drs. Blackwood and Dr. W. G. Spiller reported a case of cerebro-spinal syphilis, and presented the specimens, which exhibited a marked degree of arteritis and cavities in the substance of the brain. Dr. D. J. McCarthy presented the brain from a case of adiposis dolorosa, exhibiting a tumor of the pituitary body obstructing the orifices of the ventricles and causing considerable internal hydrocephalus. The patient had presented no symptoms of acromegaly.

The Medical Club of Philadelphia tendered a reception on March 8th to Dr. Charles G. Stockton, of Buffalo.

The Boer Army Surgeons.—It is stated that two-thirds of the surgeons in the Boer army are either Germans, or Afrikanders educated in Germany. Two of the Germans, Drs. Hohls and Coster, have been killed while assisting the wounded on the battlefield.

An Example for Philanthropists to Follow.—A philanthropist of Palermo, Signor Ignazio Florio, recently founded a dispensary for diseases of the eye, in which all the poor are treated without cost. But this is done at the expense of the institution and not of the attending ophthalmologists, each of whom receives regular fees for the cases treated at the same rate as if they were cases in private practice.

An Epidemic of Typhoid Fever is prevailing at Milton, Pa., over one hundred cases being believed to exist, and the physicians are unable to check the spread of the disease. Among the deaths are those of Dr. Clark and Dr. Sticker. The epidemic is attributed to the city's water supply, which is derived from the Susquehanna River.

Faith Cure and Keeley Cure.—Our attention has been called to a palpable error of statement made by a correspondent (Medical Record, December 23, 1899, p. 949) referring to cases of insanity following the so-styled Keeley cure for alcoholism. It should read "faith cure" instead of "Keeley cure." We say this in justice to the alleged claims of the latter, although we are free to confess that neither mention is entitled to any scientific consideration.

The New York Medical League.—The report of the committee on charities and legislation of the Manhattan section of this society was presented at the last annual meeting. We learn from this that the League was active in securing the passage of the dispensary law by the legislature. It was also instrumental in preventing the grant of a certificate of incorporation of the Home for Patients with Incurable Cancer and of the Emanuel Hospital.

Mania a Sero.—A severe epidemic of a new form of insanity appears to be setting in. With *mania a potu* medical practitioners are already sufficiently familiar; now we are beginning to make acquaintance with *mania a sero*. This remarkable affection does not attack the patient but the physician, and the symptoms are particularly severe in those who themselves make the serum. The victims of seromania suffer from extraordinary delusions, under the influence of which they appear bereft of the power of judgment, and mistake their own fancies for facts. It is only on this hypothesis that one can explain the amazing statements made in all good faith by men whose scientific training should have made them capable of seeing things as they really are.—*The Practitioner.*

Typhoid Fever at Ladysmith.—Mr. Treves reports that he entered Ladysmith on March 2d and found the health conditions in the town most deplorable, the number of cases of typhoid fever being eight hundred.

"Bibliographia Medica."—This is the title of a successor to the *Index Medicus*, published in Paris under the direction of Drs. Potain and Richet and the editorial management of Dr. Marcel Baudouin. The work will appear the 15th of each month, and the subscription price is 60 francs ($12) outside of France.

Gratitude was shown in a substantial manner to Dr. Linder, the house surgeon of the Society of the Hebrew Orphan Asylum of Brooklyn, at a recent meeting. A purse was voted him as a testimonial of faithful work during a recent epidemic of diphtheria. That his work was probably also efficient would appear from the fact that though twenty-three cases were treated, there were no deaths.

The Louisiana State Medical Society.—The twenty-first annual meeting of this society will be held at the Tulane University Medical School, New Orleans, on April 19th, 20th, and 21st, under the presidency of Dr. W. G. Owen, of White Castle. The work of the meeting will be distributed over fifteen sections. In the section on diseases of children the subject for discussion will be "Measles and Smallpox in Children."

The Orange Practitioners' Society was organized on March 2d, at Orange, N. J., with a membership of twenty. A constitution and by-laws were adopted and the following officers were elected: *President*, M. Herbert Simmons; *Vice-President*, Edgar Calvin Seibert; *Secretary and Treasurer*, Walter M. Dodge; *Executive Committee*, Arthur W. Bingham, Francis E. Knowles, and Thomas N. Gray. The society will meet on the first Friday in each month at the residences of its members.

A Sicilian Sanatorium for Consumptives.—Signor Ignazio Florio, a wealthy merchant of Palermo, has recently built a sanatorium for consumptives which is said to be a model of sanitary perfection. It is on the shore to the north of Palermo, and faces south, Monte Pellegrino protecting it at the back from the north winds. The building is constructed of fireproof material, with iron and concrete flooring. The corners of the rooms are rounded, there are no mouldings and no projecting decorations, and the walls are smooth and painted. The patients' rooms all face the sea, and each has its own bathroom and toilet arrangements. The laundry and disinfecting-plant and the chemical and bacteriological laboratories are housed in separate buildings. The drainage system has been constructed with particular care, and excrementitious matter is sterilized before being discharged into the sea. The sanatorium is under the medical direction of Dr. Vincenzo Cervello, of Palermo, who has a staff of assistants. The sanatorium is for those who can afford to pay for luxury, but seventy-five per cent. of the net profits will be devoted to the maintenance of other sanatoria for the poor.

A Medical Society Dispensary.—The Society of Russian Physicians in Moscow manages a dispensary in which 26,240 patients were treated in 1899.

A History that Repeats Itself.—Four-year-old Matilda Neiman contracted diphtheria. A Christian scientist visited her. The house was not placarded. People came and went. Matilda died. Coroner Loyd investigated. Verdict, neglect. There are other cases in that neighborhood now.—*The Stylus.*

Mütter Lectureship of the College of Physicians of Philadelphia.—The next course of ten lectures instituted by the late Prof. Thomas Dent Mütter, M.D., LL.D., on some point or points in surgical pathology, will be delivered in the winter of 1902–1903 before the College of Physicians of Philadelphia. The compensation is $600. The appointment is open to the profession at large. Applications, stating in full subjects of proposed lectures, must be made before October 1, 1900, to the committee on the Mütter Museum, John H. Brinton, M.D., chairman, northeast corner of Thirteenth and Locust streets, Philadelphia, Pa.

The Plague.—It is curious to note the senseless panic that seems to seize even physicians whenever plague is mentioned. Last week in San Francisco a Chinaman died, and somebody suggested that the cause of his death might have been pest. Immediately a cordon was placed around Chinatown, and a quarantine was maintained for several days until the health authorities found that the case was probably not one of plague. In the mean time cooks and other servants in hotels and private houses were kept from their work, and the community was duly scared.—A Japanese steamer is held in quarantine at the Diamond Head station near Port Townsend, about seventy miles from Vancouver, because of a death from plague which occurred on board during the voyage. It is said that several cases of alleged beri-beri on Pacific steamers have been found to be of the plague.—Reports from Honolulu, dated March 2d, state that sporadic cases of plague continue to occur there and on other islands of the group. The executive council in Hawaii has been authorized to expend $300,000 in furthering the effort to stamp out the plague there.—In Calcutta the disease is increasing, there having been four hundred and eleven deaths from the disease there during the first week in March.—From Cape Town a dispatch states that a case of plague occurred on a vessel arrived there from Rosario and Buenos Ayres. From the latter city a telegram, dated March 7th, announced that a number of cases of what is supposed to be the bubonic plague have been officially reported. Urgent measures are being adopted to prevent the spread of the disease.—Three new cases of the plague were reported in Sydney, N. S. W., on March 11th.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending March 10, 1900. March 2d.—Medical Director J. C. Wise commissioned medical director from February 7, 1900. Medical Inspector E. Z. Dorr commissioned medical inspector from February 7, 1900. Surgeon R. P. Crandall commissioned surgeon from September 24, 1899. Assistant Surgeon J. T. Kennedy appointed assistant surgeon. March 7th.—Medical Inspector G. E. H. Harmon detached from the *Baltimore* and ordered to the *Oregon*. Surgeon F. B. Stephenson detached from the *Oregon* and ordered to the *Baltimore*. Assistant Surgeon W. B. Grove detached from the *Brooklyn* and ordered to the *Baltimore*. Assistant Surgeon H. H. Haas detached from the *Brooklyn* and ordered to such other duty as the commander-in-chief of the Asiatic station may assign. March 8th.—Passed Assistant Surgeon J. C. Rosenbleuth detached from the naval recruiting rendezvous, New Orleans, La., and ordered home and to wait orders. Assistant Surgeon F. E. McCullogh detached from the *Nero* when put out of commission and ordered to temporary duty on the *Independence*. Pharmacist I. N. Hurd ordered to additional duty on the *Massasoit*, Key West, Fla.

Obituary Notes.—DR. FREDERICK WILLIAM HECKER died at Spring City, Pa., on March 3d, at the age of seventy-one years. He was graduated from the medical department of the University of Pennsylvania in 1849. He was commissioned assistant surgeon in the Fifth Pennsylvania Cavalry in 1862, and in a little while was made surgeon in charge of the One Hundred and Sixty-fifth Pennsylvania Infantry.

DR. WILLIAM L. SMITH died suddenly at York, Pa., on March 4th, at the age of sixty-four years. He was a graduate of the medical department of the University of Pennsylvania, and he served through the civil war, having charge of the division hospitals of Generals Kearney and Geary during the campaign of the Peninsula of Virginia.

DR. OLIVER PAYSON HUBBARD died at his home in this city on March 9th, at the age of ninety-one years. He was born at Pomfret, Conn., and studied at Hamilton College and at Yale. He was graduated in arts from Yale College in 1828, and became the assistant of the elder Professor Silliman. He received his medical degree from the Medical College of the State of South Carolina in 1837. He was for many years professor of chemistry and pharmacy at Dartmouth College, and was retired as professor emeritus in 1883. He was for many years corresponding secretary of the New York Academy of Sciences.

DR. AARON EDGERTON PECK died at his home in Brooklyn on March 8th, at the age of sixty-five years. He was a graduate of the College of Physicians and Surgeons in this city in the class of 1855.

DR. WILLIAM GLATZMAYER died at his home in Newark, N. J., on March 6th, at the age of forty-two years. He was born in Brooklyn, and was graduated from the medical department of the University of New York in 1885. He was an alderman in Newark, having been elected in 1898.

DR. ISRAEL PRIOR died at his home in North Stamford, Conn., on March 6th, after a prolonged illness, at the age of fifty-eight years. He was graduated from the Bellevue Hospital Medical College in 1865, and began practice in Illinois, but later removed to North Stamford.

Progress of Medical Science.

Medical News, March 10, 1900.

Milk Inspection by the New York Board of Health.—Herman Betz makes a brief statement of the routine milk inspection in New York City. The milk inspector is appointed from the head of the list after passing a successful civil-service examination. He is on duty technically all the time, for he may be called upon at any hour, Sundays included. The relations between milk dealer and milk inspector are far more cordial than would be supposed, for the department of health is always fair. The inspector spends from 9 A.M. to 4 P.M. in actual inspections, after which a carefully detailed report is written out and handed in promptly to the chief inspector. The inspector carries with him a satchel containing suitable instruments and utensils. The samples of milk are taken to the laboratory of the department and examined. The analysis consists of the following factors: Water, per cent.; total solids, per cent.; fat, per cent.; solids, not fat, per cent.; per cent. low in solids; per cent. low in fat; borax, present or absent; salicylic acid, present or absent; formaldehyde, present or absent; reaction, acid or alkaline. Since 1896 the department has required every milk-dealer to take out a permit. There is an arrangement by means of which information from the various boards of health of the States from which milk is shipped to New York is sent to the New York board, concerning any contagious or infectious disease in those sections from which the milk comes. This is often of the greatest service in preventing the spread of disease.

A Case of Brain Tumor, with Exhibition of Specimen.—Hugh T. Patrick reports this case. The patient was a man thirty-five years old. He had several apoplectoid attacks which were followed by impairment of the use of the right arm. He had most of the mental symptoms of general paresis. His pupils were equal and normal in every respect. On account of the distinctly focal character of the paresis of the right arm, particularly, the author believed this a case other than general paresis. Active syphilitic treatment improved the patient considerably, especially as to his mental condition. The diagnosis lay between general paresis and brain syphilis. The former was excluded because he grew no worse, and because the symptoms of paresis had cleared up considerably under specific treatment. After his death, the brain was examined, revealing a growth of the nature of a glioma which was most intimately associated with the brain substance itself.

Observations on a Spirillum Occurring in False Membrane on the Tonsil.—Charles F. Craig, before describing the case that he reports, enumerates the spirilla which have been found associated with man. They are: Spirillum choleræ Asiaticæ; spirillum Obermeieri; spirillum of Finkler and Prior; spirillum sputigeneum of Miller; spirillum dentium of Arnt; spirillum or vibrio nasale of Weibel; spirillum of Miller. The case which Craig reports is that of a young man who complained of difficulty in swallowing and soreness of the throat on the right side. On examination the right tonsil was seen to be enlarged, slightly reddened, and covered with a thick, dirty white membrane occupying the posterior part and extending to the surrounding mucous membrane of the fauces. Cultures were taken from the membrane and a spirillum was obtained, the chief points of which were its large size, extreme activity, decolorization by Gram, and its occurrence in almost pure cultures in a false membrane of which it formed a considerable part, and in the crypts of the diseased tonsil. The case is of further interest because of the resemblance of the false membrane to that of diphtheria, and as showing the value of a microscopical examination of the exudate in all tonsillar affections.

Surgery of the Epiphyses.—Charles L. Scudder declares that many of the epiphyseal separations are mistaken for fractures in the neighborhood of the epiphyses. The Roentgen ray is revealing with a great degree of accuracy the lesions after traumatism to joints. The author gives great praise to John Poland's book upon the traumatic separation of the epiphyses, published in 1898. In conclusion, he reports four cases of surgery of the epiphyses.

Recent Methods in Cardiac Therapeutics by Baths and Exercises.—By Thomas E. Satterthwaite. See Medical Record, vol. lvii., p. 255.

A Unique Case in Obstetrics.—By Frederick H. Parker. See Medical Record, vol. lvii., p. 212.

Boston Medical and Surgical Journal, March 8, 1900.

The Gastro-Intestinal Tract in Nervous Diseases.—F. Savary Pearce holds that there are three classes of disease in which the nervous system is more or less intimately influenced by gastro-intestinal disorder and usually of a toxic nature: 1. (*a*) Neurasthenic states, general or in localized areas of distribution; (*b*) when organic changes are present in the nerve cells. 2. Cases when long-continued gastro-enteritis causes organic change in the mucosa and gastro-intestinal glands. 3. A mixed class of cases in which neurasthenia or organic nervous diseases are associated *pari passu* with disorders of digestion of a functional or organic nature.

A Method of Determining the Digestive Power of Gastric Juice as well as the Absorptive Power of the Stomach.—A. E. Austin describes his method and submits a table of experiments, by which we find these peculiar combinations: We may have good absorption, good digestive power, and deficient motility, or we may have another combination of poor absorption, fair digestive power, and deficient motility. These three factors once determined, in connection with the determination of the amount of rennin, make up an analysis which apparently affords us about all that chemical examination offers in the analysis of the stomach contents.

Remarks on the Influence of Technique upon the Results of Closure of Wounds of the Abdominal Wall.—Charles P. Noble prefers tier sutures to through-and-through sutures, and uses silkworm gut of a light weight as a buried suture, observing rigid asepsis, tying the sutures without tension, making the knot with three ties and cutting the ends off short. He describes his method of closing wounds, washing the wound repeatedly with salt solutions as layer after layer is closed. He uses the permanganate of potassium and oxalic acid method of disinfecting the hands, and wears rubber gloves.

Two Cases of Thomsen's Disease, and One of Transient Myotonia, Occurring in One Family.—S. A. Lord reports these cases from the neurological department of the Massachusetts General Hospital.

Abstract of Paper on "Further Experience of the Operative Treatment of Anteflexion."—W. L. Burrage reviews his notes of ninety-two cases of operation performed for anteflexion.

Journal of American Med. Association, March 10, 1900.

Some Points in the Diagnosis of Traumatic Injuries of the Central Nervous System.—J. T. Eskridge calls attention to the fact that damages are sometimes recovered from corporations for the effects of disease existing many years before the occurrence of the accident on which suit is brought. For this reason the railroad surgeon should make systematic examination of the injured as soon after the accident as possible. Persons who are severely injured are anxious for treatment and communicative, and a carefully gleaned history will often reveal that the subject had been hysterical, neurasthenic, or a sufferer from intrapelvic trouble prior to the injury. It must be borne in mind that the presence of one positive sign of organic trouble is of more importance for diagnosis of an organic lesion, than the presence of many symptoms, functional in character, in justifying us in excluding organic disease.

Treatment in Compound, Compound Comminuted, and Non-Union or Ununited Fractures.—C. D. Evans describes a contrivance for the treatment of fractures, especially ununited fracture. He reports a case of fracture of the lower third of the leg successfully treated by this means. The only material used by the writer to secure bony apposition is catgut No. 3, and the splint is formed from what is known as "band iron," which can be found at any tinshop and easily bent and moulded. Great stress is laid upon aseptic dressing of the wounds.

Treatment of Minor Traumatisms.—R. Harvey Reed insists upon the importance of handling the smallest minor injury with the same precaution as though it were a major one. He sums up the rules for the successful treatment of this class of traumatisms as follows: (1) Strict observance of surgical cleanliness; (2) preservation of normal blood supply; (3) perfect coaptation when possible; (4) simplicity and efficiency of dressings; (5) the use of chemicals which will destroy infective germs but will not irritate or disturb cell reproduction.

A Contribution to the Surgery of the Common Bile Duct.—John E. Summers reports a case of choledochenterostomy. The patient, a young woman aged eighteen years, reports herself as being in perfect health, having gained eleven and one-half pounds since the operation. The author says that, so far as he has been able to discover, this is the only reported American case of an anastomosis between the common bile duct and the bowel, although some of the latest text-books mention that such an operation may be done.

Hysterical Lethargy, with Report of Cases.—G. W. McCaskey says that after eliminating chronic auto-toxæmic processes in cases of somnolence or stupor, there still remain a large number which, so far as we know, are not toxic in their origin. Their nature is often obscure, although they can for the most part be regarded as either hysterical or epileptic in character. The writer reports several cases of hysterical origin. The treatment of these cases, aside from electricity and other forms of stimulation to the hysterogenic zone, is that of the hysterical state which forms its background.

Nervous Depression as a Sequel of Influenza.—B. J. Byrne calls attention especially to two features of this depression which he does not think are found associated with any other disease—namely, the subnormal temperature and the reduced pulse rate. In the cases of which he has kept records the temperature ran from 97° to 95° F., and the pulse from 60 to 48, for weeks and months. The medical treatment, consisting of strychnine in full doses (gr. $\frac{1}{20}$ of the sulphate three times a day), was somewhat unsatisfactory. The best results were derived from absolute rest.

Treatment of a Common Cold.—Frank Woodbury thinks that the "neurotic element" in a common cold has been too largely ignored in the plans of treatment usually followed. With the view of acting directly on this neurotic element he has for the last two years used the following combination: Pulv. morphinæ comp., gr. xx.; acetanilidi, gr. vi.; sodii bromidi, gr. x. This is divided into twelve capsules, of which one is taken every half-hour for two hours, then one every two hours. The writer has found that this will usually break up a cold in a few hours.

Dangerous Pulmonary Hemorrhage in Tuberculosis and its Management.—Norman Bridge says that in a severe hemorrhage the measures to be resorted to should have for their purpose the immediate lessening of the blood pressure. To this end the patient should keep as still as possible and avoid taking deep breaths. The bowels should be kept open and the clothing be loose. Of all measures, the writer thinks that morphine, preferably with a proportionate admixture of atropine, administered hypodermically, gives the most valuable results.

Insanity and the Turkish Bath.—Charles H. Shepard thinks that among the constitutional agencies in the treatment of the insane the bath should stand high, and that of all baths the Turkish bath is preeminent. The author says that while few asylums in this country have Turkish baths, much has been done in this way in Great Britain and Ireland to the great improvement in the statistics of cures, and also in the death rate.

An Intestinal Anastomosis in a Case of Tuberculous Fecal Fistula of Twenty Years' Standing.—In this case, reported by Jacob Frank, the anastomosis was performed with a one-inch Frank's decalcified bone coupler. In spite of an extremely severe condition very good union took place within a comparatively short time.

Description of a Case of Oral Surgery.—G. V. I. Brown reports this case, and submits photographs showing the extreme degree of disfigurement resulting from a burn, as also the extraordinary cosmetic improvement following operative interference.

Hygiene of Public Schools.—C. F. Ulrich considers this subject under the heads of ventilation, light, water supply, playgrounds, and prophylactic measures against contagious and infectious diseases.

New York Medical Journal, March 10, 1900.

Results of Hot-Air Treatment in Rheumatism and Gout.—L. A. Coffin describes the apparatus most commonly used in this country. It has been employed in the various forms of chronic rheumatism, tuberculous joint inflammations, sprains, synovitis, tendosynovitis, neuralgia, and club-foot. Various clinical histories from the experience of others are given, and the author cites two personal cases. He thinks that the superheated air acts by producing a profuse sweating of the part, carrying off immediately many waste products resulting from increased activity about the joint. It also increases cell activity and secondarily stimulates the general system.

The Direct Examination of the Larynx in Children.—Thorner figures various forms of lingual depressors which have been devised for this purpose. Difficulty in examination may arise from subjective causes due to the age of the patient, or may be due to the anatomical conditions present in the infantile larynx. He does not think that any of the instruments or methods described can be considered perfect, but they are an advance over our previous helplessness with this class of patients. The paper considered as a whole is an interesting *résumé* of the history of this special procedure in laryngology.

Some Home-Made and Homely Appliances.—J. Leverett commends the use of large manila-paper envelopes for the reception of all infected dressings, etc. The whole can then be burned. As a substitute for the Kelly obstetric pad he employs a circular tube of canvas containing the inner tube of a bicycle tire which can be inflated with the ordinary pump. To the canvas can be attached by a hook-and-eye device an ordinary rubber sheet. The whole can be deflated after use and packed in a small pocket.

Perineal Lacerations in Country Practice.—H. H. Wilson commends double episeotomy and the immediate repair of slight lacerations. Deep complete lacerations should wait for the secondary operation.

Six Cases of Chronic Heart Disease Successfully Treated by the Schott Method.—Histories of the cases are given by V. Neesen, who includes a description of the method and a diagrammatic plan of the Schott exercises.

Report of a Case of Double or Twin Uvula.—The case occurred in the practice of L. S. Somers, the patient being a woman aged twenty-five years. The author adds some remarks upon abnormalities of the uvula and their relation to other lesions of the upper air tract and to the system at large.

Shock and its Surgical Significance.—By J. H. Rishmiller. A continued article.

Philadelphia Medical Journal, March 10, 1900.

Arteriosclerosis.—Joseph Eichberg gives the etiology, symptomatology, and treatment of this affection. The main causes mentioned are physical overwork, mental strain, poisons—lead, tobacco, and possibly alcohol—and overeating combined with a sedentary life. The treatment consists in the removal of the cause as far as may be possible, the application of the Schott method, and the administration as needed of the nitrites and iodide of sodium.

A Case of Gastrotomy for a Foreign Body in the Stomach.—George G. Hopkins describes the case of a dime-museum performer from whose stomach he removed a collection of miscellaneous metal articles. See MEDICAL RECORD, vol. lvii., p. 109.

The Surgical Use of Celluloid Thread.—W. W. Keen and Randle C. Rosenberger describe a number of experiments demonstrating the value of this suture and ligature material devised by Pagenstecher.

Double Fracture of the Clavicle. Gunshot Wound of the Lower Portion of the Spine, Producing Paralysis of the Area Supplied by the Fifth Sacral Nerve.—W. H. Hudson reports cases of these injuries.

A New and Simple Breast Binder for Post-Partum Use.—Joseph Brown Cooke describes and pictures an improvement on the Murphy binder.

Some Old Certificates of Proficiency in Medicine.—Francis R. Packard makes a contribution to the history of medicine in North America.

Selection from the Lane Lectures.—A portion of a lecture on diseases of the arteries, by T. Clifford Allbutt at Cooper College in 1898.

The Lancet, March 3, 1900.

The Treatment of Some Forms of Appendicitis at Plombières without Operation.—Skene Keith states that at the spa mentioned, chronic appendicitis is treated by daily baths, the patient lying covered to the neck in water at 35° C. Baths last for forty minutes. After the first few baths and for the last ten minutes of the later ones, a feather-like douche of warmer water is applied to the region of the appendix. Care must be taken to regulate the force of this douche. After the bath the patient rests for half an hour or so. The cases of appendicitis best adapted to the treatment are those due in part at least to some general condition.

On the Relation of Blood to the Lymphatic Vessels.—C. H. Leaf illustrates by diagrams the various ways a vein can communicate with a lymphatic. These communications allow malignant cells to pass from one set of vessels to the other in either direction. Hence in sarcoma and carcinoma alike the veins should be looked upon as possible channels of contagion.

A Case of Suppression of Urine of Sixty Hours' Duration Treated by Operation.—The patient seen by F. Jaffrey was a man, aged fifty-three years, supposed to be suffering from hydronephrosis. Operation showed the pelvis of the kidney full of blood clot. Secretion of urine began two hours after the operation was finished.

A Case of Leprosy.—The case described by J. D. Gimlette occurred in an Eurasian, aged twenty-seven years. The symptoms were obscure at the outset, the case being confounded with infective rheumatism, peripheral neuritis, and finally tertiary syphilis. Bacilli of leprosy were finally found.

Hallux Valgus and Hallux Varus.—J. Jackson Clarke defines these terms and gives their anatomical relations. For the former he advises complete exsection of the head of the metatarsal bone. He believes that every case is curable.

A Contribution to the Surgery of the Kidney.—L. W. Bickle gives histories of nephrectomy during the third month of pregnancy with recovery, followed by delivery at full term, and of nephro-lithotomy.

The Anatomy and Pathology of the Rarer Forms of Hernia.—By B. G. A. Moynihan. The third of the Arris and Gale lectures.

Tuberculous Disease of the Kidney; its Etiology, Pathology, and Surgical Treatment.—By D. Newman. A continued article.

Rabies.—By J. R. Bradford; a lecture delivered at the University of London.

The Medical Press and Circular, February 28, 1900.

Antral Catarrh and Suppuration.—J. G. Turner says the causes of antral suppuration are to be found in extension from neighboring sinuses and the nose. Third molars, acting as foreign bodies, may start antral suppuration. For transillumination the lamp must be placed centrally in the mouth and both sides compared as to (1) illumination of pupil; (2) appreciation of light by the patient; (3) amount of light coming through around the lower margin of the orbit; (4) amount coming through the cheek. Chronic cases are difficult of cure.

Radical Cure of Hernia.—P. G. Lodge records a case of epiplocele of six years' duration. An eight-inch incision was made over the tumor. A pound of adherent omentum was removed. The free edge was hemmed with catgut. An undescended testicle was at the same time removed. The muscular structures were stitched to Poupart's ligament. The limb was immobilized by poro-plastic felt down the front of the body and thigh. A complete cure resulted.

Tuberculous Trochanteric Disease.—J. Basil Hall bases a paper upon four cases reported. The deposit of tubercle is inside the line of junction between the trochanter and the bone, in the base of the neck of the femur rather than in the trochanter. In each case there seems to have been an ostitis round an old tuberculous sequestrum.

Vaginal Pessary in Uterine Erosion.—Alexander Duke presents a note on the use of the pessary as a help in the treatment of uterine erosion, and finds it an important factor of speedy cure.

Chronic Prostatitis. — H. Delagrammatica gives clinical notes of four cases of chronic prostatitis, each presenting points of interest.

The Dilatations and Diverticula of the Œsophagus.—By John Knott; a continued article.

Deutsche med. Wochenschrift, Feb. 15 and 22, 1900.

Cancer of the Large Intestine.—I. Boas discusses under this title the symptomatology and treatment of malignant disease of the colon. As regards subjective symptoms the cases fall into four classes: (1) those in which local signs are absent for a long time or throughout, the progressive cachexia being the only thing to arouse suspicion; (2) those in which the local symptoms are indefinite; (3) those of deep-seated stenosing carcinoma in which colicky pains are accompanied by tenesmus and strangury, as frequently seen in cases of rectal cancer; (4) cases in which symptoms of ileus appear in the midst of apparent health or after prodromes of not alarming character. Of greater value than the subjective symptoms is the presence of a palpable tumor. Contrary to the teaching of the text-books the tumor is not always movable. A movable tumor may temporarily escape the most careful palpation, and repeated examinations are therefore necessary. The occurrence of stricture is a symptom of the greatest value. Vomiting, hæmatemesis, constipation, diarrhœa, the shape of the formed dejections, and the presence of blood and pus in the stools, are signs, taken alone, of little positive value. The results of operative treatment have hitherto not been particularly encouraging, but with the possibility of earlier diagnosis will come that of earlier operation, and the prognosis will then be improved.

The Surgical Treatment of Renal Tuberculosis.—F. König says that two forms of renal tuberculosis must be recognized: (1) tuberculosis of the gland substance not communicating with the pelvis, and (2) the pyelitic form. The diagnosis of the first form is often impossible, but that of the second is usually quite easy even without the demonstration of tubercle bacilli. It is, however, not always possible to assure ourselves of the soundness of the other kidney. Resection of the kidney is scarcely ever to be thought of, and cystotomy also very seldom, in cases of renal tuberculosis, extirpation of the diseased organ being the only certain operation for the relief of this condition. This operation is indicated as a life-prolonging measure in a number of cases even when the other kidney is slightly affected and when the bladder, prostate, and testes are likewise diseased.

A Case of Sharply Circumscribed Cancer of the Stomach.—Herhold reports the case of a man who consulted him for the relief of severe gastric symptoms. Palpation revealed the presence of a hard movable tumor of the stomach. On operation this was found to be attached by a broad base to the mucous membrane of the stomach. The stomach was markedly contracted owing to the nominal quantity of food the man had taken for months previously. The growth was removed and the man made a good recovery, having gained remarkably in weight and strength in the four months which had elapsed between the operation and the date of the report. The tumor was confined to the mucous membrane, the muscular and serous tunics being absolutely free.

The Oliver-Cardarelli Symptom in Cases of Mediastinal Tumor. — Max Auerbach reports two cases of tumor of the mediastinum, one of enlarged mediastinal glands due to metastasis from gastric carcinoma, the other of cancer of the lung with metastases of the bronchial glands. In both of these tracheal tugging, a symptom alleged to be pathognomonic of aneurism of the arch of the aorta, was present.

Vaccination Technique.—Flachs covers the place of vaccination with sterilized gauze fixed by means of adhesive plaster, and covers all with a bandage. The child is bathed every day, and the bandage is changed after the bath. At the end of a week the gauze is renewed, being then spread with boric-acid ointment. By this method the production of a conspicuous scar is usually prevented.

Absorption and Elimination of the Iron of Iron Somatose in the Animal Organism.—W. Nathan describes the results of a number of experiments made by feeding this substance to mice, from which he concludes that it is actually absorbed when introduced into the intestinal canal.

Actual Dilatation of the Heart.—By Hans Herz. A continued article.

Berliner klinische Wochenschrift, February 19, 1900.

Auto-Intoxication.—C. A. Ewald discusses the question in the light of recent literature and clinical experience, devoting especial attention to the poisonous effects of the urine. He is inclined to think that the matter has been carried to too great a refinement of discussion in these later days, and that the modes of actual auto-intoxication are far fewer than is generally supposed. Many instances adduced as causative of disease are really the result of the latter.

Cæsarean Section.—According to H. Freund, perforation of the head of a living child is an unjustifiable procedure when there is no danger to the life of the mother, and when the surroundings are in the general sense favorable for the successful issue of a grave surgical operation. He does not consider the dangers of the operation greater than those of a complicated delivery, an ovariotomy, or an abdominal section with removal of the adnexa.

Observations on the Paper of H. Salomon on Brain-Pressure Symptoms in Typhus.—E. Stadelmann differs from Salomon, whose paper was published in No. 6 of the current volume of the *Wochenschrift*, and states that he does not approve of lumbar puncture in the condition named, his clinical experience having convinced him of its futility.

The Care of the Navel of the Newly Born.—A. Martin advises the application of a ligature of sterilized silk and then section of the cord with any form of a hot wire or similar device. Bleeding is thus permanently checked. The eschar is covered with antiseptic gauze and the cord dressed in the usual manner.

Nature's Methods of Protection against Infection.—By P. Baumgarten. A continued article.

Münchener medicinische Wochenschrift, Feb. 13, 1900.

The Application of Gelatin for Checking Cholæmic Hemorrhages after Operations on the Biliary System, besides Remarks on Poppert's Waterproof Drainage of the Gall Bladder.—Hans Kehr has had excellent results from the use of gelatin in several cases of cholæmic hemorrhage. The technique is very simple. Into 500 c.c. of a seven-per-cent. solution of sodium chloride he puts 10 gm. of white gelatin. The mixture is sterilized, and 200 c.c. at 38° C. is injected subcutaneously into the patient. He is positive that cystectomy combined with cysticotomy and drainage of the hepatic duct will prove superior to cystotomy with its numerous modifications, and also to waterproof drainage proposed by Poppert and two years previously by the author himself. This drainage consists in the insertion of a long rubber tube into the incised gall bladder, the tube being wrapped about with a great deal of gauze in order to protect the abdominal cavity from infection by the bile which has passed through the tube. The tube is snugly fastened into the incision by suturing the wound right up to the tube. This method is also applied to the drainage of the hepatic duct. Kehr believes that in order to obtain a permanent cure for the patient the surgeon, in the majority of cases, should not only drain or excise the gall bladder, but also lay great stress on the careful palpation and sounding of the bile ducts.

Critical Remarks on the Rosin Method for the Determination of the Reducing Power of Urine, etc.—L. Spiegel and G. Peritz criticise adversely the method devised by Rosin, which consists in pouring into an Erlenmeyer flask of 100 c.c. capacity 25 c.c. of urine diluted five times but still having a slight yellow tint. To the urine is added 1 c.c. of officinal caustic potash. Then liquid paraffin is poured over the mixture till three times its depth, and the whole is carefully heated almost to boiling. Care must be taken to exclude the air, and to hinder boiling, by means of which bubbles would rise to the surface and establish a communication with the outside air. Into the heated liquid there is poured through a burette whose tube is long enough to reach below the paraffin layer, 1 c.c. of methylene blue solution, 1:3,000, and the fluid is further heated over a wire net. After some seconds the blue color entirely disappears. Then by means of another burette there is added to the liquid, which is still being heated, but not boiled, sufficient 1:100 normal permanganate solution to cause the blue color to return, that is, till the fluid assumes a bluish-green shimmer.

A Contribution to the Etiology and Therapy of Episcleritis Periodica Fugax.—W. Stöltzing cites a case of this kind, and speaks later of the therapy and etiology of the affection. Fuchs says the therapy is for the most part without results, although quinine and sodium salicylate are the most effective. The author himself in the reported case has found potassium iodide to exert a very favorable influence. He also believes that there is no foundation for believing in a syphilitic etiology of the disease from the results of the iodide therapy, since all other symptoms of this affection fail, and since when the iodide is stopped the episcleritis always recurs soon. Syphilitic phenomena, if dispersed by potassium iodide so perfectly and quickly, are not accustomed to return in this manner.

Studies on the Inflammation of Serous Membranes.—R. Heinz states that his researches have led to the same results as those reached by Graser as well as those of some recent work done under Ziegler's direction. Endothelium prevents serous membranes from adhering together. Adhesion occurs when the endothelium is lost from any cause. This fact is not surprising. It is well known that when layers of uncovered connective tissue are laid together, they very soon grow together. In order that this may not happen, the serous cavities, the lymph spaces, the brain and spinal-cord cavities are covered with endothelium. Whenever the endothelium is destroyed by an injurious agent, the connective-tissue layers lying underneath adhere together.

On Intermittent Claudication.—Erb speaks of Grassmann's article on this subject in Ziemssen's *Festschrift*, in which the author gives an account of an interesting case observed by himself. Erb then calls attention to the fact that he himself, almost a year and a half ago, published a rather comprehensive article on the same subject in the *Deutsche Zeitschrift für Nervenheilkunde*, Band xiii. He makes this note in order that it may not be thought that no attention had been paid to this subject before the appearance of Grassmann's article.

On Total Stenosis of the Pylorus after Corrosion by Lye.—A. Hadenfeldt reports a case of this kind in a child six and three-quarter years old, and thinks that whenever corrosive poisons are swallowed, a stomach lesion should be thought of as well as the œsophageal trouble, and in case of intestinal disturbances that cannot be explained by the existence of the stricture of the œsophagus alone, stenosis of the pylorus should be considered. Relief should be afforded as soon as possible, to save the patient's strength.

An Improvement on the Intra-Uterine Dilating Sound of Doléris.—E. Toff describes his new instrument, which has the advantage of being separable into parts and so admits of being thoroughly cleaned and sterilized. Its arms are curved at a more obtuse angle than is the instrument of Doléris, which also is advantageous in its cleansing.

Epileptiform Attacks in Convalescence from Abdominal Typhoid.—F. Mühlig gives the history of a patient, a man aged twenty-three years. He speaks of the following points as noteworthy: the rapid succession of the attacks, the long duration of each, and the fact that the convulsions occurred only in one day and then never returned.

Hydrorrhœa Ovarialis Intermittens.—By Max Nassauer. A continued article.

Wiener klinische Wochenschrift, February 15, 1900.

On Malta Fever.—Alfred Brunner, in giving a careful description of this disease, says that according to Hughes the most striking characteristic of this disease is the long duration of the fever. Among three hundred and seventy-two cases, the fever lasted in the great majority from forty to seventy days, although Hughes had two cases in which the fever lasted over two years. The same author speaks of four principal types of the disease: (1) The malignant type, in which hyperpyrexia obtains, the temperature always rising above 41° C., and death following in a few days; (2) the indolent type; (3) the intermittent type; (4) the irregular type. Prognosis as to life is very good. As to the diagnosis, if the case presents absence of diarrhœa, a clear sensorium, absence of roseola and epistaxis, a moderate splenic tumor, and no or little headache, then it is easily differentiated from typhoid. It must also be diagnosticated from malaria. Serum diagnosis is valuable in this disease. The therapy of Malta fever is very limited. Symptomatic treatment is in order.

Landry's Paralysis with Especial Reference to its Bacteriology and Histology.—Julius Kapper carefully reviews a case of Landry's paralysis in which a bacteriological examination of urine and blood made in life, as well as the autopsy four hours after death, and the pathologico-histological examination of the central nervous system and peripheral nerves, gave a perfectly negative result. An auto-intoxication must be regarded as an etiological factor in this disease. This apparently originates in the intestine and would be accounted for by an increased putrefactive process. Thus would it be explained, if, on the one hand, in spite of apoplectiform clinical symptoms the post-mortem findings were negative, or, on the other hand, if we find pathologico-histologically a polyneuritis or myelitis which we regard as being of toxic origin. In the case cited, the presence of the products of intestinal putrefaction in the urine and the transitory improvement after copious alvine evacuation are in favor of the existence of an auto-intoxication. In view of this conception anti-fermentative measures would be indicated.

On Salivary Calculi.—Friedrich Hanszel notes three cases. The first calculus was caused by chronic inflammation of the glandular substance itself with consequent stagnation and inspissation of the secretion; it was not till later that this stone reached the duct through the salivary stream. The second calculus was caused by micro-organisms and was formed in Wharton's duct itself. The third was formed in Wharton's duct and resulted from the long-continued injury of the left sublingual by the mouthpiece of a tobacco pipe.

Vratch, January 29 and February 5, 1900.

Glioma of the Retina.—V. V. Zelenkovski reports a case of this affection in which he made a very careful histological study of the lesion, as a result of which he formulates the following conclusions: 1.

The cylindrical arrangement of a glioma is not fortuitous, but is very probably dependent upon the spherical shape of the retina and pressure exerted by the original cell-nests both upon the normal parts of the retina and one upon another. 2. Glioma of the retina may develop simultaneously from four layers—that of the nerve fibres, the ganglionic, the internal and the external granular. 3. Retinal glioma consists of spider cells with many offshoots, identical with the cells of the neuroglia and the spider cells of the retina and optic nerve, and of ganglion cells of various sizes in the midst of which are others resembling embryonal retinal cells. 4. The possibility of a glioma originating from the layers in which spider cells are ordinarily not encountered, and the presence of these embryonal nerve cells render very probable the view of Greef that a glioma of the retina is developed from neuroglic and ganglionic elements which may remain for a certain time quiescent in any layer of the retina and then take on growth when favorable conditions arise.

Transitory Spinal Paralysis.—L. R. Krever reports two cases of this affection occurring in apparently healthy women. There began quite suddenly, without any apparent cause, a paraplegia of the lower extremities accompanied with painless cramps of the legs, increased patellar reflexes, and disordered vesical and rectal functions. In one case sensation in all its forms disappeared and did not return for a long time, in the other it was preserved from the beginning to the end of the disease. There were no trophic disturbances, and all the severe symptoms disappeared as rapidly as they came on. From the first signs of the affection to complete recovery not more than two months elapsed.

The Origin of So-Called Acute Cataracts.—I. I. Maslennikoff reports a case of cataract occurring suddenly in a woman, twenty-seven years of age, of sound physical condition but suffering from an hysterical attack, and discusses the cases of sudden clouding of the crystalline during convulsions from other causes, a clouding attributed by some to spasm of the ocular muscles.

A Defence of Osteoplasty in Amputations.—S. I. Spasokukotski refers to a former article in which he advocated osteoplastic methods in amputation of the leg, as recommended also by Kocher, and returns to the subject in order to answer sundry objections which had been advanced against this procedure. He reports five cases of amputation illustrative of the advantages of osteoplasty.

The Value of Widal's Serum Diagnosis of Typhoid Fever.—Th. A. Dombrovski reviews at length the literature of this subject and reports several cases in which the test was applied, and concludes that it furnishes one of the most certain of all the evidences of typhoid fever, although it is not strictly pathognomonic.

A Nasal Speculum for Pediatric Practice.—J. I. Katz describes and pictures an instrument to facilitate inspection of the nasal passages in children.

The High Operation for Stone.—By V. I. Lisïavski. A continued article.

Endothelial Neoplasms of the Gastro-Enteric Tract.—By L. V. Soboleff. A continued article.

French Journals.

Milky Ascites with Leucocytes of Lymphatic Origin.—Fernand Widal and Prosper Merklen present the case of an alcoholic, aged fifty years, showing lactescent ascites. This is usually of chylous origin. It may exist without chyle, but the distinction presents great difficulties. A precise study of the leucocytes found in the fluid may show the lymphatic origin, as in the case presented, and give more valuable information than is furnished by the amount of fat present. —*La Presse Médicale*, February 24, 1900.

Botryomycosis.—Charles Lenormant describes a case of botryomycosis situated upon the dorsal surface of the right ring finger in a woman, aged thirty-one years, who had worked in straw in the family of a butcher. The raspberry-like appearance of the tumor, and possible indirect contact with animals, were sufficient for the diagnosis, which was confirmed by finding botryomyces in formative stages.—*Gazette hebdomadaire de Médecine et de Chirurgie*, February 21, 1900.

Observations on Cacodylic Medication.—Paul Dalché gives his personal results of treatment. He prefers pills of cacodylate of sodium, each containing 25 mgm. Various tabulated results are presented. He concludes that the drug is destined to render real service in tuberculosis when conditions of hygiene and therapeusis are favorable. He began with one pill at a dose and gradually increased to two and then three. —*Le Bulletin Médical*, February 24, 1900.

Tuberculous Stricture of the Small Intestine.—Th. Tuffier studies the hypertrophic form of stricture in tuberculous subjects. There are three varieties of stricture, the purely cicatricial, the primarily fibrous, and the hypertrophic. A case of the latter is given with illustrations. Surgical treatment has given thirty-seven operative cures out of forty-five cases.—*La Presse Médicale*, February 21, 1900.

Annals of Surgery, March, 1900.

A New Method of Suture in Operations for Inguinal and Other Forms of Hernia.—L. Freeman exposes the internal ring, ligates and cuts off the sac, which is knotted on itself. The cord being held out of the way, a loop of silkworm gut is passed from without inward through the muscular tissue on the umbilical side of the ring, then carried through Poupart's ligament from within outward. Another loop is similarly inserted near the pubic limits of the opening. A piece of stiff silvered wire long enough to reach the entire length of the inguinal canal is run through the loops, which are pulled tight enough to hold it in place. Another wire is laid along Poupart's ligament between the free ends of the loops, which are firmly tied over it, thus approximating the wires and bunching a quantity of muscular tissue against the ligament. The wires are bent upward at their pubic extremities so as to protrude through the external incision, thus facilitating their removal. The ends of the wires farthest from the pubes must be so placed that they leave the new internal ring neither too large nor too small. The cord is now dropped in place over the line of union, and the aponeurosis of the external oblique united above it, the upturned ends of the wires passing through the external ring. In uniting the skin, the free ends of the loops and the ends of the wires are brought out through the incision between the stitches. In from ten days to two weeks, which are long enough to procure reasonably firm union, the wires are removed by pulling on their protruding ends. This frees the loops, which are likewise readily extracted.

Fracture of the Neck of the Humerus with Dislocation of the Upper Fragment, with a Report of Three Cases Treated by Operation.—B. F. Curtis discusses the literature of this injury, and describes one personal case in which simple resection was done and two other cases in which he followed the method of reduction by open arthrectomy. He believes that when attempts at simple reduction under anæsthesia have failed, operative measures should be resorted to unless contraindicated by the patient's condition. Resection of the head of the bone should be reserved for those cases in which reduction is impossible or would extensively damage the parts. Resection will probably give a better result in fracture of the anatomical neck than of the surgical, but reduction is to be preferred in both. Motion should be begun as soon as the wound has healed.

A Case of Acute Osteomyelitis of the Femur with General Systemic Staphylococcus Aureus Infection, Terminating in Recovery.—A. A. Berg gives a detailed history of the case. Antistreptococcus serum was used, and there was an absence of any metastatic focus of infection. The organism was eliminated by the kidneys, causing acute degeneration of these organs as well as toxin poisoning of other viscera, but the patient finally recovered.

Prolapsus of the Rectum in Children.—C. G. Cumston states that in acute prolapse and invagination of the colon which are irreducible and at the same time present incarceration, gangrene, or intestinal obstruction, immediate resection should be done. Operation at a time of election should also be done in chronic cases which cannot in a reasonably short time be cured by milder therapeutic measures.

Effects of Intracerebral and Subcutaneous Administration of Tetanic Antitoxin in Tetanus, as Observed in Nine Cases.—R. Abbe narrates histories of two mild and seven severe cases. Of the seven seen this last summer, five were subjected to trephining. Three patients lived and two died. Good effects from the serum were noted in five of the nine cases, and four of the five patients recovered.

Report of a Case of Recovery after Gastrectomy for Carcinoma.—J. B. Harvie reports the case of a woman aged forty-six years, the stomach being resected and the œsophagus attached to the duodenum. The patient left the hospital in six weeks in good condition. A detailed report is given of the pathological condition found in the stomach.

Two Cases of Cicatricial Stricture of the Œsophagus Treated by Gastrostomy, the "String" Method, and Permanent Dilatation by Elastic Tubes.—B. F. Curtis reports the cases, one of a boy aged two and one of a girl aged nine years. H. prefers the method first described in 1894 by Stamm. The results in both cases were most satisfactory.

Report of Results Obtained in the Treatment of Ununited Fractures with the Parkhill Clamp.—A. L. Bennett reports nine cases of perfect union out of fourteen cases operated upon. The clamp was described in the *Annals of Surgery* for May, 1898.

Coccygeal Dermoid Fistula.—By R. T. Morris. See MEDICAL RECORD, vol. lvi., p. 531.

Treatment, February 8 and 23, 1900.

On Some Cardiac Affections due to Influenza.—J. L. Bunch has found as sequelæ of influenza increased frequency of cardiac rhythm, the "irritable heart" of Da Costa, the pulsus bigeminus, arrhythmia, and acute cardiac dilatation. Treatment must consist first of all in rest, absolute for a time, and then in the avoidance of any exertion which can throw a strain upon the heart. Later, carefully graded exercises may be used to assist the heart to return to its former condition of functional activity. A diminished intake and an increased output of fluid are recommended. Quinine and strychnine are usually of value.

On the Uses of the Stomach Tube.—Hampson Simpson would employ the stomach tube for diagnostic purposes; for the removal of the contents for clinical examination; for inflating the stomach, and for the detection of stricture at the cardiac orifice, for location and measuring, for transillumination, to ascertain the elasticity of the walls, to investigate the motor function, and with the *x*-rays to determine the size, form, and position of the stomach. As a therapeutic measure it is useful in cases of poisoning; for forced feeding, lavage, to apply electric treatment, for intragastric douching, for "internal massage," and for spasmodic stricture of the œsophagus.

A New Eyelid Forceps, with a Spring Lock that Can be Used on Both Sides.—O. Neustätter describes an instrument which he has found useful in practice.

Foreign Body, Chisel, Embedded in the Naso-Pharynx and Posterior Pharyngeal Wall.—By Cary B. Gamble, Jr., and L. M. Tiffany. See MEDICAL RECORD, vol. lvii., p. 67.

Locating Foreign Bodies in the Eye.—William M. Sweet reports the results of two years' work with the Roentgen rays.

Bulletin of the Johns Hopkins Hospital, February, 1900.

Report upon an Expedition Sent by the Johns Hopkins University to Investigate the Prevalent Diseases in the Philippines.—Simon Flexner and Lewellys F. Barker, in writing of this expedition, speak first of the value of their visit to Japan before proceeding to Manila. Here, they studied beri-beri, dysentery, and the bubonic plague. They first consider the diseases in the Philippines which affect the natives: (*a*) Skin diseases. Of the skin diseases prevailing among the natives, aside from smallpox and other specific exanthemata, are (1) diseases of the scalp, which are very frequent; (2) dhobie itch; (3) an affection probably identical with Aleppo boil. (*b*) Smallpox. (*c*) Leprosy; a definite focus of this disease exists in Luzon. (*d*) Tuberculosis; accurate statistics of this affection could not be obtained. (*e*) Venereal diseases; syphilis does not prevail unduly; chancroids and gonorrhœa are very common. (*f*) Beri-beri.

The chief causes of disability among American land forces are the enteric diseases: (*a*) Dysentery is responsible for the greatest amount of invalidation and the highest mortality. (*b*) Typhoid fever. (*c*) Malarial fevers. (*d*) Tuberculosis. (*e*) Dengue. (*f*) Tropical ulcers. (*g*) Wound infection. The writers conclude with a note on climatological and hygienic conditions existing in the islands.

A Case of Multiple Gangrene in Malarial Fever.—William Osler reports this rare and remarkable case. The patient, a man aged twenty-three years, was admitted to the Johns Hopkins Hospital in November, complaining of sores. Both hands, both feet, the left buttock, and the occiput showed gangrenous areas. Though the history did not suggest malaria, as in the routine examination of the abdomen the spleen was found to be considerably enlarged, the blood was examined, and very large numbers of æstivo-autumnal organisms were found. Large numbers of crescents were present. Cultures taken from the blood proved negative. The eosinophiles were only two per cent.

The patient was given quinine in full doses and began to improve rapidly. The larger sloughs were treated with linseed poultices made with bichloride solution.

Hæmophilia in the Negro.—Walter R. Steiner in reviewing this case states that in the literature only one well-defined case of hæmophilia is mentioned. This patient, a girl aged fourteen years, will consequently make the second on record. Treatment consisted in calcium chloride (gr. xv. t.i.d.) given in Wright's prescription. It is interesting to note that both the cases of hæmophilia were not in patients of pure negro blood. In the family of the second, contrary to the usual statement, both the males and the females seem to have been bleeders, but only one (a male) died from the effects of hemorrhages.

Benjamin Jesty: A Pre-Jennerian Vaccinator.—Thomas McCrae declares that there can be no doubt of Jesty having performed vaccination in 1774. The date of Jenner's first vaccination was 1796, although for many years before he had been making observations regarding it. Jesty was born at Yetminster in Dorset, and was a farmer.

Pediatrics, March 1, 1900.

Report on the Cause and Prevention of Infant Mortality.—Ernst Wende concludes his article, giving milk tests, adulterations, and grounds for condemnation of milk, with prosecution and penalties. He discusses preservatives of milk, condensation, etc., and concludes that the municipality should continue supervision upon the lines of: (1) Continuation of the license system; (2) milk should comply with State standards; (3) sanitary, non-absorbent milk-rooms should be constructed with reference to hygienic rules; (4) wagons should be protected from summer heat; (5) intercourse with houses containing contagious diseases should be prohibited; (6) obligatory cleaning of utensils should follow uniform method; (7) special supervision or abolishment of sale of milk in groceries, etc., is advised; (8) until State and city act in unison milk from unsatisfactory dairies should be interdicted or destroyed at the city line; (9) systematic reports should be mutually made.

Alcoholic Cirrhosis of the Liver in a Baby.—R. Abrahams gives the following case A girl sixteen months old had been ill for two months with greatly distended belly and general anæmic condition. The ascites interfered with walking. Diagnosis by exclusion. The baby had been accustomed to take beer, being allowed a glass a day from early infancy to improve nutrition. Paracentesis gave relief and permitted an enlarged and hard liver to be made out.

Rickets.—Charles Alling Tuttle presents a short paper. He finds the most plausible theory of causation is the so-called inflammatory theory, making the cause primarily a chronic inflammatory condition beginning in the bone-forming tissues. Under proper treatment the prognosis is good. Treatment is prophylactic, medicinal, mechanical, and operative.

Vaccination.—James W. Guest discusses the use of points versus glycerinized lymph, since the re-introduction of which a revolution, he says, has taken place in its favor. The quantity of lymph in the tube is too large for most people, especially children. The advantages are: Greater percentage in taking; it can be kept pure much longer, and one is more apt to get a pure article from the store.

The Thomas Knee Splint.—Henry L. Taylor says this is in effect an ischiatic crutch transmitting the weight of the body to the ground. An illustration shows its adaptability to stages of osteitis of the knee, ankle, and tarsus.

American Journal of the Medical Sciences, March, 1900.

Conclusions Based on Sixty Cases of Fatal Gastro-Intestinal Hemorrhage due to Cirrhosis of the Liver.—R. B. Preble states that fatal gastro-intestinal hemorrhage is an infrequent but not rare complication of cirrhosis of the liver. The cirrhosis is generally atrophic, although it may be hypertrophic. In one-third of the cases the hemorrhage is fatal; in the others, they continue at intervals for varying periods of time—even eleven years. In one-third of the cases, diagnosis can be made at or before the time of the first hemorrhage; in the others, only after months or years. Œsophageal varices are present in eighty per cent. of the cases, and in many of them are seen macroscopical ruptures. Fatal hemorrhages in cases showing no œsophageal varices are probably due to the simultaneous rupture of capillaries of the gastro-intestinal mucous membrane. In only six per cent. of the cases showing œsophageal varices was the cirrhosis typical.

A Case of Traumatic Varix of the Orbit in which Ligation of the Left Common Carotid Artery was Successfully Performed.—Charles A. Oliver reports this case of a man twenty-seven years old. The patient had received a crush of the head at four years of age, and this probably was the beginning of either an aneurismal varix between the petrous and the cavernous portions of the internal carotid artery and the corresponding cavernous sinus, or a varicose aneurism with an intervening sac between the two vascular channels. The situation was well protected in any case, and the growth very slow. A second blow on the same eye produced such painful symptoms that the patient presented himself for treatment. The left common carotid artery was tied. In five months the condition of an absolute secondary glaucoma was present. The fellow-eye continued normal.

The Histology and Histological Diagnosis of Adenomyomata of the Uterus.—John Cooke Hirst describes a case with this uterine tumor. In the uterus were found embryonal epithelial inclusions from the mucous membrane of Müller's duct. These were situated in the peripheral subserous layer of the myometrium. Adenomata with glands and cysts in scattered arrangement are to be considered as from the mucous membrane as soon as they are provided with cytogenic tissue sheaths around the glands. The formation of subserous adenomyomata from incorporated glands of the uterine mucous membrane is possible.

The Ehrlich Diazo Reaction.—James R. Arneill declares the results of his observations to confirm in most particulars the statements of Ehrlich. To be of value Erhlich's test must be made in accordance with his directions. The pink foam is an important factor. The statistics in cases in which the test has been correctly performed are overwhelmingly convincing as to the value of this reaction in the diagnosis and prognosis of typhoid fever, and the prognosis of diseases such as pneumonia, diphtheria, septicæmia, and especially tuberculosis.

A Case of Tricuspid and Mitral Stenosis with Adherent Pericardium.—T. L. Chadbourne describes this case. The patient was a woman thirty-six years of age when first seen in 1894. She was an epileptic.

The necropsy, held May 2, 1898, showed both the mitral and tricuspid orifices to be so narrow as to admit only the tip of the index finger. There was complete obliterating chronic pericarditis. The probability of a double mitral lesion was entertained from the first examination of the patient, but the true state of the case was not discovered till the post-mortem.

Gangrenous Dermatitis Complicating Typhoid Fever.—B. Franklin Stahl writes that bacteriological examination of this affection showed cultures of staphylococcus pyogenes albus and aureus, no other bacteria being found. In the reported cases, the trunk was the most frequent seat of the disease. Three of the ten cases resulted fatally.

A Critical Summary of the Literature on Retro-Peritoneal Sarcoma.—By J. Dutton Steele. See Medical Record, vol. lvii., p. 281.

The Practitioner, March, 1900.

The Pathology of Pneumonia and Pneumococcal Infections.—J. W. Washbourn says lobular pneumonia may be caused by several kinds of organisms; the most frequent are the pneumococcus, the streptococcus pyogenes, and the influenza bacillus. We should distinguish pneumonias by the cause and not by the anatomical effect, but imperfect methods make such classification impossible. Pneumococcal affections are here alone discussed. In lobar pneumonia the pneumococcus enters by inhalation. In severe cases they gain access to the circulation. Pneumonia is therefore a septicæmia, the lung inflammation being a local attempt to shut in the cocci from the circulation. In lobar pneumonia the cocci, probably by means of the lymphatics, pass through the whole of the lobe; in lobular they are localized to individual lobules. The discovery of large numbers of capsulated diplococci in the sputum is almost pathognomonic of pneumonia. More frequent bacteriological examination and classification of the different types of pneumococcal infections together will mark an advance.

The Treatment of Acute Pneumonia.—R. W. Philip says that the key is to be found in the recognition of pneumonia as a continued fever, and he prefers the name "pneumonic fever." The local lesions are analogous to the intestinal lesions of typhoid. The heart and circulation should be guarded. The diplococcus has yielded a rational basis for treatment, but the mortality has not yet been materially reduced. Attempts to destroy the organism have not been successful. Attempts to neutralize the toxic products are more promising. First of all, an abundant supply of fresh air and sunshine should be given and the strength husbanded. In most cases after the first two or three days alcohol will be useful. Cardiac tonics are called for when the circulation shows signs of embarrassment. Pain should be relieved quickly by poultices, fomentations, or morphine. Oxygen should not be ordered when the sick-chamber has become vitiated and stifling. Antipyretics are rarely needed. Open-air measures are to be adopted early in convalescence. Prophylaxis should follow the same lines as laid down for tuberculosis.

The So-Called "Ether Pneumonia."—J. Frederick W. Silk says the term is misleading and to some extent incorrect. There is no evidence that lobar or croupous pneumonia occurs after ether with greater frequency than might be expected from the normal rate of incidence of the disease. Other potent causes are at work, and it must be looked upon as a coincidence. Pneumonia after ether inhalation does not differ from the ordinary type. On the other hand, catarrhal pulmonary affections are prone to follow ether inhalations. Prophylaxis is important, and care should be exercised in administering ether to those with marked tendency to pulmonary complaints.

The Treatment of Pneumonia.—Julius Dreschfeld discusses croupous pneumonia in the adult. Weak and elderly persons should avoid the sick-room. The serum treatment is quoted from Washbourn. Older methods are reviewed. The object should be to enable the body to resist the toxic effects and to guard against threatening symptoms. We must guard from the onset against heart failure. If a diabetic develops pneumonia, the diabetic diet must be stopped and large doses of alkalies given. If a patient develops pleural effusion, one may wait till the pneumonia has subsided before paracentesis, unless there is much fluid or much dyspnœa.

Dust Pneumonia.—Alfred Hillier says that since pneumococci are constant in the sputum of normal individuals it is not improbable that the dust storms of sub-tropical countries may be capable of exciting inflammation, and act as a contributory cause, just as do exposure, alcoholism, trauma, etc. Osler speaks of chronic interstitial pneumonia due to the dust of certain occupations. Pneumococci may be inhaled with the dust.

The Diplococcus Pneumoniæ.—J. W. H. Eyre studies the morphology, biology, and pathogenesis of the diplococcus, with staining-methods, conditions of growth, action of germicides, media, vitality in cultures, resistant forms, rate of growth, pathogenic effects on animals, virulent types, post-mortem appearances, inoculation methods, etc. A table gives the susceptibility of animals.

Medicine, March, 1900.

The Operative Treatment of Fracture of the Patella; A Clinical Lecture Delivered October 20, 1899.—Charles Greene Cumston states that the first step in the operation for fracture of the patella is the opening of the joint and freeing the fragments of bone. There are various methods of making the cutaneous incision, certain conditions, however, being necessary for a proper incision. It should give plenty of space and freely expose the joint. The flap should be well supplied with blood at its base, and the latter should be broad in proportion to the flap's height. The cutaneous incision should be as far away as possible from the cicatrix in the bone in old fractures. He believes the proper course in case of a recently fractured patella is to wire it subcutaneously. Asepsis should be perfect.

The Nature of Neurasthenia: A Study of the Recent Literature.—Rosalie M. Ladova concludes from her researches on this subject that nerve exhaustion, fatigue, primarily a simple detention of reflex tonus, becomes only secondarily a chemical phenomenon — defective nutrition. Any purely mechanical stimulation of any of the peripheral nerves determines first increased tension of the general tone, an increase in energy, heightened intensity in the activity of all the organs, and later on augmentation in the combustion process. The nature of fatigue is primarily dynamic, and the primary source of vital energy is not in the nutrition, but in the centripetal nerve irritability.

The Intestinal Neuroses.—William J. Rothwell, after reviewing those neuroses which are functional disturbances, touches on their treatment. For peristaltic restlessness, in addition to general treatment, arsenic and methylene blue are especially valuable. In enterospasm sedatives and antispasmodics must take the place of purgatives; opium or codeine by the mouth; warm cataplasms on the abdomen, and soothing enemata at intervals. In obstinate cases, injections of warm oil are excellent. Enteralgia is amenable to treatment by anodynes.

A Laryngo-Hyoidectomy for Carcinoma, with the Report of a Case.—Jacob Frank states that the chief indication for complete or partial excision of the larynx has been carcinoma. In this case, which he reports, as soon as carcinoma was diagnosticated he advised laryngectomy. The patient was at date of writing—a few months after the operation—able to take solids and liquids by the mouth. The speech is intelligible, but a hoarse monotone. Recurrence is, however, likely.

A Case of Oculomotor Paresis following Indirect Violence.—C. A. Veasy reports the case of a man thirty years old. From the symptoms there was a paresis of the right oculomotor nerve following an injury to the left temple, and affecting those muscles supplied by the inferior division of the nerve to a greater extent than those supplied by the superior division, as some movement of the lid and of the superior rectus remained at the time of the first examination.

Prevention of Tuberculosis.—Charles J. Whalen believes the best means of prevention of tuberculosis to be the destruction of the sputum and the removal of those affected who are too poor to receive the necessary care at home to an isolation hospital which should be provided by the State.

A Case of Ulcerative Endocarditis, with Aneurism of a Sinus of Valsalva; and a Case Simulating Ulcerative Endocarditis.—By Augustus A. Eshner. See MEDICAL RECORD, vol. lvi., p. 525.

Deutsche Aerzte-Zeitung, February 15, 1900.

Vaporization of the Uterus.—H. Fuchs reviews the literature of the subject, giving Snegiureff the credit of being the first to show the hæmostatic effect of vaporization. Later this was applied to uterine hemorrhages, particularly those of the climacteric. The observations and methods of Pincus, Pawlik, Pet'ha, Baruch, von Weiss, Dührssen, and Flatau are related at length.

Upon the Disinfecting Power of Aluminum Acetate.—Aufrecht tabulates his experiments with the antiseptic properties of alsol, liquor Burow, and carbolic acid upon anthrax bacilli, streptococcus pyogenes, staphylococcus aureus, gonococci, tubercle and diphtheria bacilli. He concludes that the antiseptic effect of aluminum acetate is enhanced by the addition of tartaric acid.

Resorption of Medicines.—Gustav Wendt states that the method of administration with various drugs has a great influence upon their usefulness to the economy.

Upon the Occurrence of Inguinal Hernia.—By Graser. A continued article.

Zeit. fur klin. Med., Nos. 3 and 4, Vol. xxxix., 1900.

Observations upon Alimentary, "Spontaneous," and Diabetic Glycosuria, with Special Reference to the Carbohydrate Variations of Febrile and Alcoholic Patients.—J Strauss states that there is a difference between the alimentary glycosuria produced by the ingestion of sugars in predisposed individuals and the glycosuria due to the consumption of starchy foodstuffs. Numerous tables and many series of experimental cases are given upon the subject. He concludes that the alimentary glycosuria e saccharo is to be classified with the diabetic metabolic disturbances. The differences between the glycosuria e saccharo and ex amylo are apparently of a gradual nature. Disturbances of a mild character give rise, under otherwise favorable circumstances, to alimentary saccharine glycosuria, and disturbances of a severer nature diminish the tolerance for carbohydrates.

Chronic Articular Rheumatism and Arthritis Deformans in Childhood.—Axel Johannessen gives at great length the literature upon this subject from 1484 to the present time. Three instances are related with histories, photographs, treatment, macroscopical and microscopical examinations, etc. There are a number of excellent *x*-ray pictures. The first patient presented a chronic history, with pain and swelling in the ankle joint, and a good family history; atrophy set in later, then crepitation on movement. The second case gave a gouty family history, and the disease began acutely as in articular rheumatism; atrophy of muscles and bones occurred later. In the third instance the onset was chronic, atrophy was marked, and the joints were thickened.

Lymphæmia without Swelling of the Lymphatic Glands.—A. Pappenheim narrates an instance in which during an acute leukæmia the blood showed the ordinary typical lymphocytes in large numbers, although, as in all cases of chronic lymphæmia in contradistinction to lymphocytosis, large lymphocytes were not absent. In this case, the mild lymphatic enlargement could not be the primary source of the disease, but was rather the expression of the general infection. The second instance was a pure specimen of lymphæmia without lymphatic enlargements.

The Alkalinity of the Blood in Certain Pathological Conditions. — Burmin experimented with Tscherbakoff's modification of Landois' method of titration. The modification consists of dissolving the tartaric acid in a sulphate-of-sodium solution. The technique, with a tabulation of the various diseases, chronic gastritis, catarrhal icterus, cirrhosis, pneumonia, bronchial asthma, etc., and their results, are given.

Physiological Chemistry of Pentose and Methylpentose.—Suleiman Bey says that xylose and arabinose form lactose with the alkaline earthy oxides. Experiments are described showing the separation of pentose as barium dipentosate, and a new method of separating pentose from methyl pentose (rhamnose).

Determination of the Alkalinity of Small Amounts of Blood.—J. Hladik mentions a simple method of determining for clinical purposes the blood alkalinity. As little as 0.1 c.c. of blood may be used. Experiments with fourteen diseases are tabulated.

Analysis of the Irregular Pulse.—K. F. Wenckebach discusses allorhythmia, pulsus paradoxus, pulsus bigeminus, and pulsus alternans.

Finska Läkaresällskapets Handlingar, January, 1900.

Statistics of Venereal Diseases in Finland.—V. Leontjeff presents numerous statistical tables showing the prevalence of venereal diseases in Finland. The statistics are more accurate than they would be in most countries, for the people have an unusual dread of syphilis, and any one even suspected to have this disease is forced by the neighbors to undergo treatment or to secure a certificate of health from a physician. The writer states that syphilis is diminishing in that country and is also growing more benign, but the number of cases of gonorrhœa, on the other hand, is increasing.

Dystocia from Stricture of Bandl's Ring.—C. Hahl reports a case in a woman aged twenty-four years. The os admitted three fingers, but 10 cm. above this was an opening 2 cm. in diameter with thin edges but hard as if ossified. The opening was enlarged as much as possible by means of Tarnier's écarteur, and the fœtus was extracted after cephalotripsy. The woman recovered.

A Fifth Series of a Hundred Laparotomies.—G. Heinricius reports briefly on the fifth hundred laparotomies performed at the gynæcological clinic in Helsingfors. The mortality was four per cent.

Correspondence.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

The relief of Kimberley has been followed since my last communication by two events of the first importance in the progress of the war, the capitulation of Cronje's army and the relief of Ladysmith. Each event has enormous medical significance because of the strain that has been thrown thereby upon the hospital accommodation along all the lines of communication down to both bases, Durban and Cape Town.

The Physical Condition of the Boers, who capitulated at Paardeberg under Gen. Piet Cronje, after a struggle in which they displayed extraordinary resolution and gameness, was on the whole good, the number of sick and wounded being smaller than was expected. The total number of prisoners was just short of five thousand, forty-one hundred being taken in the bed of the Modder River, and six hundred (other accounts give eight hundred) being captured in odd parties during the many attempts to relieve the main force. Two hundred severely wounded were found in the Modder River laager, some of them being in a shocking condition for want of surgical aid. These were carried across the drift by the English bearers, and are by this time in one of the hospitals on the line of communication. At least two hundred more of the prisoners required medical attention, for during the last forty-eight hours of resistance Cronje's army was placed in sore straits. Their laager was in a terribly insanitary condition; dead horses and cattle in various states of decomposition were lying close to the tents, the food supply was mainly putrid, and the insecure shelter was made doubly trying by the cold, wet weather at night-time. There was practically no medical contingent with the force. The prisoners, when they reach the base, will be placed on board ship at Simmonstown—those of them, that is, who do not require hospital attention; and it is the experience of every one throughout this campaign that once a proper hygienic environment is provided health returns, so pure and clean is the air and so balmy the daily temperature.

The Base Hospitals Near Cape Town, *i.e.*, the three general hospitals at Wynberg and the sanitarium at Claremont, were becoming full again by the beginning of March, and it is fortunate that the previous lull in hostilities, due to the English having to wait for reinforcements, had emptied them before the stress of Lord Roberts' movements was felt in them. Sir Redvers Buller's second attempt to relieve Ladysmith, the march that culminated in the futile seizure of Spion Kop, cost the English one thousand and twenty in wounded, and five hundred of these, officers and men, were brought round from Durban to Cape Town by the hospital ships *Spartan* and *Lismore Castle;* but except for their patients and the sufferers from enteric fever contracted at the Modder River camp, the Cape Town hospitals were fairly empty by the time Roberts' casualties after the relief of Kimberley began to arrive. On the whole, the relief of Kimberley and the capture of Cronje's army did not cost the English many lives, but the list of casualties was a long one, and the Royal Army Medical Corps have to work at top pressure to keep level with what is required of them. Roberts had fifty thousand men with him when he entered the Orange Free State, and a large proportion of them were under fire for a week as well as making forced marches, so that it was well that the big base hospitals were ready to receive several hundreds of patients, and it was particularly well that all the arrangements for transport of the sick, which I have already described, were complete.

The Relief of Ladysmith was effected on the evening of Wednesday, February 28th, by Buller's force on the fourth attempt. No doubt the surrender of Cronje the day before had led to the withdrawal of some of the Boer troops, and possibly to the desertion of others, but enough remained to dispute with the English every foot of the way. The Dublin Fusileers and the Inniskillings, two Irish regiments, made some magnificent charges, and lost heavily, but when the relief was actually effected it was done without any severe casualties. But altogether, in his four attempts to join hands with Sir George White, Buller had some three thousand of his men wounded or too ill to fight. This means that an enormous strain has been thrown upon the hospitals in Natal. Even before the relief of Ladysmith this strain was shown by the fact that after the attack on Spion Kop a proportion of the wounded had been conveyed round from Durban to Cape Town. Since then there have been one week's continuous fighting and one week's desultory skirmishing, every day of which added to the total of wounded, while now the sick of Ladysmith have to be cared for. The succor of Ladysmith did not come one moment too soon. The rations of the beleaguered had been reduced to half a pound of meal a day, and the horses and mules were being used to supplement the meat supply. There were many cases of typhoid fever and many more of extreme weakness from emaciation. The whole of Sir George White's fine force, still numbering about nine thousand men, will require some days' rest and feeding before they will be able to assist in any forward movement, and the brigade of cavalry are rendered temporarily useless by the condition of their horses. Enormous preparations were fortunately made both at the fourth general hospital at Mooi River, the big hospital at Pietermaritzburg, the Durban hospitals, and in many private houses to receive the sick from Ladysmith whenever Buller should get there, so that the garrison, so long inactive, will soon be on the aggressive again.

Casualties in the Royal Army Medical Corps.—The deaths of two more officers of the R.A.M.C. are reported. Captain R. H. E. Holt, who entered the medical service of the army eight years ago, died of wounds received in one of the February engagements. Captain G. S. Walker, who was of the same seniority, died of typhoid fever in Ladysmith a week before the siege was raised. Lieutenant Mackenzie, who was wounded at Koodoosberg, having already distinguished himself at Magersfontein, had only joined the R.A.M.C. a few weeks before war broke out.

The Hospital Ship "Princess of Wales" arrived at Southampton, England, on February 25th, and on February 26th was visited by H. R. H. the Princess of Wales. The sick brought back expressed themselves grateful for a pleasant and uneventful passage. Most of them went to Netley Hospital on landing, where they and the other patients were visited by the Queen on the following day. Her Majesty brought to Netley the information of Cronje's surrender, which before her arrival was unknown to the men.

Lieutenant-Colonel Sloggett, R.A.M.C., and Mr. A. D. Fripp, respectively military superintendent and chief civil surgeon to the Imperial Yeomanry Hospital, arrived at Cape Town on February 28th. The Imperial Yeomanry Hospital is, I learn, to be placed at Deelfontein, a place some thirty miles south of De Aar Junction. Now that the English are sure of their lines of communication, the tendency there shown to establish hospitals rather nearer the fighting forces will be maintained, and the immensely long transports of the wounded avoided.

A Brave Medical Officer.—I send you a story of how an officer of the R.A.M.C. with Buller's force was wounded:

Captain ———, R.A.M.C., was wounded on January 23d near Colenso at a distance of one hundred yards while he was bending over in the act of dressing a wounded man. The wound of entrance was through the right rectus abdominis muscle, one inch below the costal margin and one and a half inches from the median line. The wound of exit was one inch above and one inch behind the centre of the right iliac crest. The symptoms were *nil* throughout, although it was difficult to suppose that the ascending colon escaped perforation. This officer watched himself carefully for symptoms which he believed must inevitably arise. He knew where the entrance wound was almost directly, but did not localize the position of the exit wound for two hours afterward. He tried to finish the dressing of the wounded man, but became giddy and had to lie down. He then remained perfectly still on his back for twelve hours, suffering much from the constrained position but nothing from his wound, and refused to take some water offered to him by the Boers. Two other men close by, who were also shot through the abdomen, did drink, although strongly advised by him not to do so, and soon began to suffer very much, one vomiting constantly. The captain had eaten only a little porridge for breakfast ten hours before, and took nothing by the mouth for forty-eight hours afterward. On the 31st he was convalescent, and he had no abdominal symptoms throughout.

The pluck which led a man in the agony of an abdominal wound to attempt completing his ministration upon another wounded man cannot be too highly commended. It will also be noted that the medical knowledge of Captain ——— probably saved his life; for had he moved much, or been made to vomit by drinking unwholesome water, the risks of peritonitis would have been incalculably increased.

THE CLIMATE OF NASSAU, N. P.

To the Editor of the Medical Record.

Sir: Nassau, the capital of the Bahamas, situated on the island of New Providence, has received of late very little notice, either in regard to the health-giving qualities of its wonderful climate or the opportunities one can enjoy for sport and recreation. I have been impressed more especially with the facility with which invalids recover from grippe and bronchial troubles, contracted in northern latitudes. Patients have come here suffering from colds and laryngitis, recovering from some of the more severe lung affections, like pneumonia, pleurisy, etc., and, after resting for a few days in rooms where the temperature is always from 70° to 73° F., their coughs leave them, the secretions are lessened, and they begin to enjoy sitting out of doors in the soft, balmy air, and, with proper precautions toward evening, gain rapidly in health and strength.

There is some humidity at all times, but clothes do not feel damp, and I have yet to see mould gather on boots or books, as it does at some of the Northern seaside resorts.

No rain falls through the winter months, and each day is a repetition of the one just passed—balmy breezes and cloud-flecked skies.

Tuberculous cases, either of lungs or larynx, and of an advanced type, do not seem to improve very rapidly, and I should not advise patients with the disease far advanced to come here. I consider it an ideal place for early nephritic disease; the skin is kept by gentle exercise in a moist condition, so helpful to impaired kidneys, and by care and a complete change of clothing on coming in from wheeling or golf, one avoids driving the blood back upon the internal organs, and obtains all the benefits of summer in home latitudes.

The changes of temperature are not sudden; the lowest point reached during my stay here thus far has been in January, when it was 62° F. at 6 A.M., and at that time New York was suffering from a cold storm and a temperature of 12° above zero. The usual daily range is from 70° to 73°, the highest having been 78.°

Judging from a visit here some years ago and my stay this winter, I feel no hesitancy in saying that Nassau combines all the qualities that go to make up an ideal resort for those who wish to escape the rigors of our northern winter, and also for convalescents who desire a climate which admits of constant out-of-door life. William E. Bullard, M.D.

Nassau, N. P., Bahamas, February 20, 1900.

CHLORAL AS A RELAXANT.

To the Editor of the Medical Record.

Sir: The treatment of strangulated hernia in your number of February 17th recalls some memories. While I believe in the operative treatment of hernia under favorable conditions, whether strangulated or not, there are times when it will be agreeable to patient and physician alike to avoid operation, if practicable. At such times chloral may be useful.

In the interior of Montana, twenty odd years ago, I was sole medical attendant with a detachment of troops in the field. A lieutenant of the line was ruptured. I failed to reduce the hernia by taxis under chloroform. I decided to try the effect of a large dose of chloral before undertaking operation with such assistance as the lieutenant's brother officers might render. I placed the officer on his back upon a cot, hips elevated, and gave as much chloral as I considered safe, and went about preparations for operation. Under the profound sleep induced the hernia was spontaneously reduced.

Many years later, at a remote frontier post, a civilian was brought to the hospital with a strangulated inguinal hernia. I failed to reduce it under chloroform, and proposed immediate operation. The patient begged for further time and trial. As night was approaching, and the symptoms were not yet alarming, I consented to postponement until the following morning. I treated the case in the same way as that of the lieutenant. I visited the patient before retiring for the night, and found him asleep in the position I had left him, and the hernia was reduced.

Having no failures to offset these cases, they seem to me suggestive.

S. S. Turner,
Acting Assistant Surgeon, U.S.A.

Chicago, March 8, 1900.

THE WORK DONE BY THE MARINE-HOSPITAL CORPS IN HAVANA.

To the Editor of the Medical Record.

Sir: A recent visit to Havana gave me the opportunity of inspecting the excellent sanitary work that is being done by Drs. Guitéras, Dudley, and their associate of the Marine-Hospital corps. These gentlemen deserve the greatest praise for their energetic methods and their efforts not only to check and uproot disease, but to protect the United States, and their ceaseless and successful labor is fully in accord with the spirit of reform inaugurated by the American authorities in the island of Cuba. Handicapped as they were and are by the criminal neglect of the Spaniards and the carelessness of the Cubans, they work with a rare will and intelligence that bid fair to reduce greatly the danger at our very doors that has menaced us for so long. The results already attained by this little body of medical men in a few months form a strong argument for placing every American port under the control of this branch of the national government, and will insure the uniform harmony of action which has become a necessity.

I may be pardoned for referring to the plan followed by the Marine-Hospital corps:

1. This branch of the service has the inspection of incoming vessels from foreign ports and from such home ports as are known to be infected. Two medical officers are assigned to this duty. The vessel enters the port flying the quarantine flag, and is immediately boarded by the medical officer, who makes a careful inspection of the ship, its crew, and passengers. The condition of the baggage is also carefully inspected, and if there has been or is a case of sickness of a contagious or infectious nature, the vessel is kept in quarantine at the Mariel quarantine station, ten miles distant. There the passengers are landed, and the vessel returns for disinfection of everything. Since the appearance of plague in Portugal and Spain, especially precautionary measures have been taken with the inspection of these vessels, and the entire crew and passengers pass through the hands of three different medical officers, who work independently of each other. Of course all of the necessary guards are placed on board to watch baggage and prevent people from leaving the vessel, or people from shore boarding the vessel.

2. Vessels leaving Havana for ports in the United States, or for other ports in Cuba, are invariably inspected by the medical officer in the same careful way, and he gives the vessel its necessary bill of health. It must be readily seen that in a harbor of this size, where the shipping commerce is so active, quite a large corps of medical officers is necessary, with quite a number of boats. There are at present five boats for the use of these officers.

3. The third department at this station is devoted exclusively to the inspection of passengers leaving here for the United States, and for certain ports in the island of Cuba. This inspection is carried out at this office by Dr. Menocal. A passenger going to any port in the United States is advised to present himself at this office for a certificate of health. He is examined for vaccination. If he has been successfully vaccinated and is in good health, a certificate is issued. If not, he or she is vaccinated and then allowed to proceed. In 1897 and 1898, when smallpox was widespread in the city, the officers were obliged to be much more exacting in regard to immunity to smallpox. Then a passenger was required to show recent and successful marks of vaccination. The vaccination marks that proved to be over four years old were considered insufficient, and at that time they vaccinated the passenger and held him for five days. He then presented himself at the local office, and if the operation was unsuccessful, he was revaccinated and then allowed to proceed. This year there has really been no smallpox, and it has been unnecessary to enforce so severe a regulation. The great value of the inspection of passengers by the service is manifest during the quarantine months from April 1st to November 1st. As is known, the different southern States have different regulations regarding non-immunes to yellow fever, and the Marine corps, while carrying out its own regulations, tries to co-operate with the various State boards of health. Passenger traffic between Havana and Florida demands the greatest vigilance on its part. During this quarantine period non-immunes to yellow fever are not allowed to go from Havana direct to Florida. The voyage from Havana to Florida ports is very short, and an individual who has been exposed to yellow fever could arrive in Florida two or three days before the completion of the period of incubation of the disease. Such passengers as are allowed to go are obliged to prove to us their immunity. A proof of having had a previous attack of the disease or proof to the effect that the individual has resided in an infected focus continuously for ten years is accepted. The greatest care has to be exercised in the consideration of various certificates of immunity presented by passengers. There is at the Havana office a record of thousands of names of people who are registered there as immunes to yellow fever. All baggage for the States is carefully inspected and disinfected by this service. Baggage for the southern States is disinfected on the barge *Protector*, and then sent on board the vessel. Baggage for ports north of the southern boundary line of Maryland is disinfected by the shore plant.

4. The disinfection of vessels for ports in the United States during quarantine period by the barge *Protector*, which is equipped with hot chamber, steam boilers, apparatus for bichloride spraying and formaldehyde disinfection. In the southern States disinfection and detention are required of all vessels. It has been possible to help the shipping interests a great deal, and time and a large outlay of money have been saved by disinfecting these vessels in Havana, when bound for southern ports in the United States. A vessel is disinfected by the *Protector*, and immediately on completion of disinfection, that is, after the sulphur has been in the hold for the required period, the vessel is given her bill of health and allowed to proceed, and she makes up her detention time on the voyage. A vessel going from Havana to a certain port can save one to three days' detention time. For instance, a vessel arriving at her destination three days out of Havana simply has to be detained two days at her port of arrival; whereas if she had gone directly to the port, and had been disinfected at the port of arrival, she would be detained five days after her disinfection.

5. Under this heading comes the inspection of cargoes (this is especially important during the quarantine period); character of cargoes inspected; method of packing; and certain prohibited material is of course not allowed.

6. Inspection of ballast. Vessels carrying ballast from Havana are required to carry either water ballast taken outside the harbor, or to carry rock ballast of a

hard and flinty character, which must be non-porous, so that disinfection can easily be carried out.

7. The inspection of all express matter, and the disinfection of such express packages as require it.

8. Under this heading comes the general sanitary supervision of the harbor; and the Marine-Hospital corps keep themselves informed as to the sanitary condition of vessels while in port, the different wharves, and, in fact, the entire bay.

9. Medical assistance given to American merchant vessels while in port. While this department has no hospital in Havana, the American masters invariably call on this service for medical assistance, and it has always furnished medical aid.

In addition to all this work it must be understood that there is a large amount of baggage to be handled during the year, and a regular baggage system has been established not unlike that of the railroads, with a baggage master, clerks, and checking system.

ALLAN McLANE HAMILTON, M.D.

Surgical Suggestions.

A Saponic Lubricant for catheters, etc.:

℞ White castile soap, powdered	℥ i.
Water	fl ℥ iij.
Mucilage of chondrus crispus	fl ℥ iij.
Formalin (forty per cent.)	♏ x.
Thymol	gr. v.
Oil of thyme	♏ v.
Alcohol	♏ xv.

Mode of preparation: Heat the soap and water, and stir until a homogeneous slime is formed; then add the three ounces of mucilage (made of the strength of one ounce of chondrus crispus to the pint of water). When cool, pour in the formalin, then the thymol and oil of thyme mixed with the alcohol; stir, strain, and keep in a covered vessel until all air bubbles have vanished. The result is an opalescent, slimy substance, of the consistence of honey, which should be put up at once in two-ounce collapsible tubes and sterilized.—GOULEY, *New York Medical Journal*, November 4th.

Hot Vapor as a Hæmostatic.—Among the disadvantages is the possibility of sloughing being produced. In parenchymatous bleeding the method is of surprising efficacy. Vapor under pressure has, however, little effect when the bleeding vessels have a decided calibre. Benefit is also secured from the asepsis and heat.—TECCHERELLI and BONFANTI.

Erosions of the Cervix Uteri.—It will be recognized from what I have said that I do not consider erosions the innocent or simple affairs which many I am sure do. I believe that they have a marked influence upon the nervous system of delicate women, and that something should be done for their relief. In order to attain better results than I can by applications, and in many cases by attention to the general health, I am more and more inclined to treat these cases by operation.—F. H. DAVENPORT, *Boston Medical and Surgical Journal*, October 12th.

Epistaxis.—If the bleeding is from far back and of a persistent character, plugging will be required. For this I use long strips of iodoform gauze which have been soaked in a mixture of peroxide of hydrogen and an antiseptic oil (containing menthol, eucalyptus, thymol, and camphor in liquid vaseline). The oil is somewhat hæmostatic, and prevents the gauze from sticking to the parts and setting up bleeding again when it is removed a day or so later. By putting the oil and peroxide in a small wineglass and soaking the gauze therein, the mixture is readily effected. To introduce take the nasal forceps and, carrying one end of the gauze far back, gradually fill the entire nostril. —GEORGE L. RICHARDS, *International Journal of Surgery*, October.

Hip-Joint Tuberculosis.—It is a rare thing nowadays to have a fatal septic arthritis follow resection, the former bugbear of the operation, the mortality having changed from sixty per cent. to less than three per cent.—MCARTHUR.

The treatment of hip disease is practically a purely mechanical problem; operative treatment is not demanded by more than one per cent. of cases that are subjected to even moderately effective mechanical treatment. We are of the opinion that operative treatment should be resorted to only as a life-saving measure, because the best results of operative treatment are inferior to the poorest results of mechanical treatment. —JOHN RIDLON.

Treatment of Fractures of the Patella.—Dr. Will H. Means (*Columbus Medical Journal*, July 5th) offers the following conclusions to an interesting article: (1) The results of the non-operative treatment are unsatisfactory both as to long confinement and functional disability. (2) The methods of maintaining apposition of the fragments by external appliances are unsatisfactory and unscientific. (3) In open arthrotomy the fragments can be carefully approximated and sutured in such a manner as will maintain apposition and, ultimately, bony union. (4) The operative method saves months of confinement, and gives permanent results. (5) The buried suture material should be absorbable, such as catgut or kangaroo tendon. (6) The field of operation should be continuously irrigated with a hot salt solution during the manipulation, and the incision closed without drainage. (7) The massage treatment begun at an early date is an important factor in restoring functional activity of the joint.

First-Aid Packages.—In a paper read by Dr. N. Senn at the American Surgical Association meeting held June 7, 1899, the following conclusions are formulated: (1) First-aid packages are indispensable on the battlefield in modern warfare. (2) The first-aid dressing must be sufficiently compact and light to be carried in the skirt of the uniform, or on the inner surface of the cartridge or sword belt, to be of no inconvenience to the soldier or in conflict with military regulations. (3) The Esmarch triangular bandage is of great value in the school of instruction, but in the first-aid package it is inferior to the gauze bandage. (4) The first-aid package must contain in a waxed aseptic envelope an antiseptic powder, such as borosalicylic powder, two sterilized safety pins wrapped in tinfoil, and between this package and the outside impermeable cover, two strips of adhesive plaster one inch wide and eight inches long. (5) The first-aid dressing must be applied as soon as possible after the receipt of the injury, a part of the field-service which can be safely entrusted to competent hospital-corps men. (6) The first-aid dressing, if employed behind the firing line, should be applied without removal of the clothing over the injured part and fastened to the surface of the skin with strips of rubber adhesive plaster, the bandage being applied over and not under the clothing. (7) The first-aid dressing must be dry and should remain so by dispensing with an impermeable cover over it, so as not to interfere with free evaporation of the wound-secretion. (8) The first-aid dressing should not be disturbed unnecessarily, but any defects should be corrected at the first dressing-station.

New Instruments.

A MIRROR-TEST FOR SIMULATED BLINDNESS.

By PERCY FRIDENBERG, M.D.,

ASSISTANT SURGEON, NEW YORK EYE AND EAR INFIRMARY, ETC.

One might paraphrase a well-known epigram to indicate that we are able to detect some frauds all of the time, and all frauds some of the time, but not all frauds all the time, and it is rather to supplement than to supplant the various methods for the determination of visual acuity in cases of alleged blindness that a new and simple apparatus is presented.

In a recent publication[1] the writer took occasion to point out that in almost all instances of simulation the claim of monocular amblyopia only is made, as this condition is so much more easily feigned than loss or deterioration of vision in both eyes. The great majority of detection tests aim to secure an admission of binocular vision or else to induce a physiological act inseparable from it, such as accommodation, convergence, or fixation; the former without the subject's knowledge, the latter independent of his will. The theoretical basis of such tests is that we are unaware of, or rather habitually overlook, the fact that we receive a double sensory impression from each object in our field of vision, which, falling on corresponding points of either retina, are translated by the cerebral centres into their real significance and are seen as one image.

The principle upon which the writer has proceeded is the corollary of this fact, for it is true, conversely, that when the image of an object falls on the retina of one eye only, as by reflection from a mirorr, we do not detect the absence of binocular vision, and fail to refer our sensory impression to its proper source so as to recognize which eye is being used. An instrument was devised to present the mirrored image of a test-card to the subject of examination in such a way that it can be seen by one eye only at a time, allowing a quantitative determination to be made of the vision of either eye without giving any clew as to which eye is being tested.

The test-cards are attached, one at each temple, to a spectacle frame in which, if necessary, glasses can be placed for the correction of ametropia, facing a small mirror which slides on a horizontal arm so as to allow its distance from the eye to be regulated. The mirror, which has a lateral adjustment to correspond with the inter-pupillary distance, is mounted on a short bar, hinging on the slide, and can be presented to either eye in succession by revolving the carrier through an arc of 180°. The lateral tilt of the mirror is indicated by a pointer on a horizontal scale. When the pointer is at 90° the mirror is at right angles to the line of vision of the corresponding eye, so that the latter sees its own reflected image. The test-card on this side, however, is not normal to the plane of the mirror, and its image is reflected only into the opposite eye, which the subject presumes to be unconcerned in the visual act, as this eye is nowhere in evidence. A slight tilting of the mirror to the temporal side, bringing the pointer to 95° or 100°, is sufficient to reverse the optical conditions, so that the test-card is approximately normal to the mirror, and its image is now reflected into the eye of the same side only.

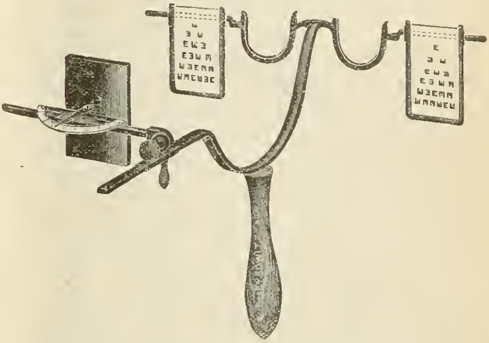
By switching the mirror-carrier over to the opposite side of the frame a similar double test can be applied to the other eye; or this can be accomplished without bringing the mirror over, by giving it a nasal tilt, bringing the pointer to 70° and to 60–65° respectively; so that in all eight variations can be rapidly obtained.

The following table indicates the various possible combinations:

Mirror before O. D.:
1. At 95 degrees right card is seen by right eye.
2. " 90 " " " " " " left "
3. " 70 " left " " " " right "
4. " 60 " " " " " " left "

Mirror before O.S.:
1. At 95 degrees left card is seen by left eye.
2. " 90 " " " " " " right "
3. " 70 " right " " " " left "
4. " 60 " " " " " " right "

In practice, the test is made with the mirror before the admittedly sound eye, but in the second position. If the card is read at this angle, it must be by calling into play the other eye which the malingerer does not even see, but whose action is demonstrated by having him close it. He will then be convinced, by seeing nothing, that the sound eye which he believed he was using was in no way concerned in vision. As a control test, the mirror is brought before the simulating eye, again in the second position, so that the card and this eye are seen by the subject, who naturally thinks that the mirrored eye is the one which receives the visual impression, whereas, in fact, it is seen by the sound eye which is nowhere visible. If it is now stated, as will most probably be the case, that the image cannot be seen, deliberate falsehood at least is made evident. The test is simple, rapid, and accurate, offers no clew to the simulant, and enables us to make a quantitative determination of vision. Another advantage lies in the fact that the instrument demonstrates itself and can be handed around to the members of a class, commission, or jury to prove the conditions found, without the necessity of going into any theoretical explanation of the optical principles involved.



Note.—As the mirror gives a reversed image, the characters must be printed backward, or face both ways, as A, O, V, Y, T, etc.; or the "illiterate" type is used. It should be remembered that the actual testing distance is twice the distance of the mirror from the eye. When the mirror is twelve inches off, the characters subtend a visual angle corresponding to a distance of twenty-four inches. The instrument may be used for distant vision by placing the patient with his back toward a test-card twenty feet away, and having him read in the mirror as before. For this test the apparatus should be firmly fastened to a suitable stand.

Periosteal flaps should be secured, if for no other reason, to prevent the disagreeable complication of skin-puckering in the stump.

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[1] Ophthalmic Record, January, 1899.

Society Reports.

THE PRACTITIONERS' SOCIETY.

One Hundred and Fifty-third Meeting, Held Friday, February 2, 1900.

A. ALEXANDER SMITH, M.D., PRESIDENT, IN THE CHAIR.

A Case of Partial Laryngeal Paralysis.—This case was presented by DR. BEVERLEY ROBINSON. E. J. H——, male, twenty-nine years old, single, American, an electrician, came under observation November 24, 1899. He had tonsillitis three years ago, with a membranous exudate on the tonsils. His illness at that time was slight; he was not confined to his bed and was about in a few days. Hoarseness began four months later. During two and a half years it was not continuous. During a period of two months, for example, he had a good voice, and then, without apparent cause, he would lose his voice in about two months and regain it without obvious reason. Since last spring the patient had been continuously hoarse. During the past few weeks, occasionally and for a short time, the voice was much improved, but was never entirely natural. Until the patient came under Dr. Robinson's care he had had no general or local treatment. On October 31, 1899, he went to Saranac Lake. He stayed there one month, walking, skating, shooting, etc. His general health was good until last spring; since last spring he had been tired from overwork. He lost ten pounds in weight in six months. There were no fever, no cough, and very little sputa; no hemorrhage, no soreness of throat, no dysphagia, no dyspnœa. The patient was not nervous. He had had no syphilis. There was no localized swelling in the neck. On November 24, 1899, a physical examination of the chest showed doubtful signs of phthisis at the right apex. The larynx showed congestion and slight general infiltration. The right vocal cord moved well in phonation. The left vocal cord was covered by the epiglottis which inclined toward the right. No growth could be seen. The urine was normal. The blood examination showed a slight secondary anæmia, probably, which might, however, be a simple anæmia or chlorosis. Careful examination of the sputum on two occasions showed no tubercle bacilli. Treatment consisted of emulsion of cod-liver oil and creosote internally, with the use of a perforated zinc inhaler with creosote and alcohol. Local applications were made to the larynx of glycerite of borax and later of tincture of chloride of iron and glycerin, with a stimulating liniment to the neck. His present condition was as follows: The larynx showed very slight congestion in parts; the epiglottis was rather anæmic than otherwise; it had returned to the median line. The left vocal cord could now be seen. During phonation it approximated the median line, although sluggishly. The abduction of the left vocal cord was less active than the right. Physical examination of the chest showed little or nothing abnormal. The diagnosis at present was partial paralysis of the adductors and abductors of the left vocal cord. The causation was obscure. If it was a post-diphtheritic paralysis it should not be, probably, unilateral, and would not affect the abductor muscles of the larynx. If it was due to thoracic growth, without other signs, it should cause paralysis of the abductor muscles and not affect the adductor muscles. No doubt later a positive diagnosis as to causation might be made. The patient's general health was now thoroughly good.

The case reported might possibly be one of primary tuberculosis of the larynx, which was now in its incipient stage. The paralysis of the muscles on the left side might be explained rationally, in part by so-called functional disturbance, in part by tuberculous infiltration. If ulceration should occur bacilli might be found.

In connection with the above case, Dr. Robinson read the following letter from Dr. Frederic E. Sondern concerning the new culture method for the rapid growth of tubercle bacilli:

"Dr. W. Hesse published the method in the *Zeitschrift für Hygiene*, etc., in the fall of last year (1899). The essential element in the agar-agar culture medium is Nährstoff Heyden, an albuminoid product. The claims for the method are a rapid growth of tubercle bacilli in from five to six hours or more, and a retarded growth of many if not most of the contaminating bacteria contained in the specimens of sputum, etc., under examination. In this way he claims that a decided increase in the number of tubercle bacilli can be demonstrated when a specimen of tuberculous sputum is planted, which on usual microscopical examination shows but very few isolated bacilli. He records some failures when the sputum contains many contaminating organisms which at times overgrow the small colonies of tubercle bacilli in a very short time.

"For somewhat more than two months I have been applying the Hesse culture method to every specimen of sputum, urine, or other fluid sent to me for examination, which might possibly contain tubercle bacilli, and have for the present arrived at the following conclusions: (1) As yet the culture method has never revealed tubercle bacilli in specimens inwhich they could not be found by some other method of examination, excluding animal inoculation. (2) Not infrequently the rapid growth of contaminating bacteria ruined the culture attempt. This applies alike to sputum, urine, and other fluids. (3) Numerous specimens were encountered, however, especially of urine and tuberculous serous fluids, in which the usual examination revealed so few bacilli not always absolutely characteristic, while the Hesse culture method produced pictures justifying an undoubted diagnosis.

"Continued use of the method will demonstrate its practicability as well as its limitations much more firmly."

DR. J. W. BRANNAN asked Dr. Robinson if he had tried the tuberculin test.

DR. ROBINSON said he had not. He thought the suggestion a good one.

DR. BRANNAN said that his experience with paralysis of the vocal cords was principally confined to cases in which the disability followed intubation, and in which the tube had been left in for weeks or months. In those cases the paralysis was probably the result of pressure; the abductors were usually affected.

DR. F. P. KINNICUTT said he thought the tuberculin test would prove decisive, so far as the presence of tuberculosis was concerned. The occurrence of tuberculous laryngitis without previous implication of the lungs was exceedingly rare, and in such instances the lungs became involved sooner or later. Dr. Kinnicutt said that during the past ten years he had seen two or three cases in which the tuberculous process in the larynx preceded the lung trouble, so far as the absence of physical signs permitted one to judge; in two of the cases the laryngeal symptoms preceded the pulmonary symptoms by several months.

DR. ROBINSON, in reply to a question, said that no temperature elevation had ever been found. The man had lost about ten pounds in weight during the past six months.

DR. ANDREW H. SMITH, after an examination of the man's larynx, said he did not think the picture presented was one of laryngeal phthisis, although the general appearance of the patient, together with his loss of weight, pointed to a tuberculous trouble somewhere in the body.

Dr. Kinnicutt said it was entirely possible to have tuberculosis of the larynx without any elevation of temperature. The speaker said he had noted this fact even in cases in which the tuberculous process in the larynx was well advanced.

Dr. V. P. Gibney asked whether, in a case of tuberculosis of the larynx followed by pulmonary tuberculosis, the process extended by continuity or by general infection.

Dr. Kinnicutt thought that the most rational explanation was in an extension to the lungs through an inhalation infection.

Dr. T. Mitchell Prudden said he thought the explanation by Dr. Kinnicutt was probably the correct one. When these cases came to autopsy it was very difficult to make out how the infection had spread.

Dr. Gibney inquired whether the possibility of pulmonary infection could be averted by any surgical measures.

Dr. Kinnicutt replied that abroad a very radical method had been employed of scooping out these lesions in the larynx.

Dr. Robinson said that cases of primary laryngeal tuberculosis were so rare that the question of the mode of extension of the process to the lungs was still unsettled. In regard to treatment, tracheotomy had been tried in some cases, in order to help such a diseased larynx by putting it at rest. The method referred to by Dr. Kinnicutt, namely, scooping out the lesions, could not, in the speaker's opinion, be done thoroughly enough to bring about a cure. Personally, he relied upon local applications to relieve these patients. The most severe symptom of which they complained was pain on deglutition; this came on only after the epiglottis had become affected, and fortunately it was rare. After its onset, feeding was best accomplished through a nasal tube, into which the food could be introduced through a funnel.

Dr. Gibney said that in tuberculous foci in bones the tuberculous tissues had been found as far as one-quarter of an inch from the surface, and often very extensive excavations were necessary to eradicate the disease.

Exhibition of a Pair of Cystic Kidneys and a Cystic Liver.—These were shown by Dr. George L. Peabody, with the following history: The patient from whose body these kidneys were removed was a woman, forty-four years of age, a dressmaker by occupation. She entered the New York Hospital on December 26, 1899. She had had in early life scarlet fever, measles, and whooping-cough. Six years ago she had malaria. There was no history of other illness except that she had an attack of bronchitis two years ago. She used coffee and red wine in moderation, but no other form of alcohol. She said that she was easily fatigued all last summer, and that this sense of fatigue had gradually become a continuing condition of great weakness. There had been no headache or vertigo, and she had noticed no œdema. For several weeks past she had had cough and moderate dyspnœa. There had been no change in the quantity of her urine, but it had a bad odor, and she thought her kidneys were diseased. Her appetite was poor; her bowels were constipated, and her weakness was extreme. She was unable to stand. On admission to the hospital her respiration was 32; pulse, 106; temperature normal. She was fairly well nourished, but her color was bad. She presented a subicteric hue in her skin and conjunctivæ. Her tongue was dry, cracked, and coated. The apex beat of the heart was a little farther out than normal. The liver and spleen seemed both increased in size. There was a little œdema of both legs. Ophthalmoscopic examination revealed an absence of retinitis. She lived only a day and a half after entering the hospital. During that time her urine was twice examined. It was acid; specific gravity, 1.011; it contained from 0.75 to 1 gm. of albumin to the litre; no sugar; a thick sediment of pus, and no casts. She passed an average of twenty-two ounces a day. She was restless and very weak, unable to take other food than milk, of which she took between three and four pints a day. She died exhausted, in spite of active stimulation, early in the morning of December 28th.

The autopsy was made by Drs. G. P. Biggs and L. A. Conner, the pathologists to the hospital. The kidneys were both enlarged, weighing 468 and 472 gm. respectively. The kidneys preserved their usual shape, but owing to many projecting cysts they presented somewhat the appearance of bunches of grapes. On section both organs were seen to be composed of a multitude of cysts which varied in diameter from 1 mm. to 2.5 cm. These were most abundant in the peripheral parts. The usual topography of the kidneys was entirely lost, and in only a few places could anything resembling kidney tissue be recognized by the naked eye. Several of the larger cyst cavities contained thick, grumous pus. Some contained thick, brown, gelatinous material, which was coagulated by formalin six per cent. Some contained grayish-white, thin translucent material, which was not much changed by formalin. The pelves were small and somewhat compressed by cystic kidney tissue. The ureters and blood-vessels were normal. The liver showed numerous cysts varying in size from 2 mm. to 1 cm. These were seen on the surface and deep in the liver tissue. The weight of the liver was 1,770 gm. The heart showed slight hypertrophy of both ventricles. The lungs showed emphysema. Microscopical examination showed many microscopic cysts in the cortex and medulla of the kidneys, and very advanced interstitial changes with numerous microscopic abscesses. The small cysts in the sections were all lined by epithelium of the tubes, which had undergone a varying amount of change. Numerous microscopic cysts were seen in liver sections, all lined by epithelium of the gall ducts, which had also undergone a varying amount of change in form. The liver also contained microscopic abscesses; but in general its structure was not abnormal.

Dr. Peabody called attention to the fact of the possibility of a woman attaining middle life with a fair degree of health in spite of the fact that her kidneys must have been congenitally cystic to an extent probably unusual.

Dr. Prudden said that a similar lesion in the human kidney and in the kidney of the pig had been shown at the New York Pathological Society some years ago. The condition of the liver in the case reported by Dr. Peabody was certainly a rare one, and was especially interesting in its association with the kidney lesion.

Dr. Andrew H. Smith inquired what the woman's condition of health had been earlier in life.

Dr. Peabody replied that she had had all the diseases of childhood—scarlet fever, measles, etc. Six years ago she had malaria and two years ago bronchitis. During the summer preceding her death she was easily fatigued, and this symptom grew more pronounced in the autumn and winter.

Dr. Smith asked whether such a condition of good health in early life would be consistent with the idea that the condition of the liver and kidneys was congenital.

Dr. Peabody, in reply to Dr. Smith, said the microscope showed that in spite of the extensive degeneration there was still a good deal of kidney tissue left which was able to functionate, and this was proved by the fact that she passed considerable quantities of urine. The theory was that this condition of cystic degeneration was present at birth and increased as time went on.

Dr. Prudden said he thought such a condition of the kidneys might exist in spite of the absence of symptoms.

Dr. Brannan asked Dr. Peabody whether he regarded the presence of these degenerative conditions in the liver as well as the kidneys as associated with one another, or merely accidental.

Dr. Peabody replied that to him the condition was quite an unusual one. Certain degrees of cystic degeneration of the kidney were quite common, but he had never before seen the liver similarly affected. Probably in the case he had reported the condition of the liver and kidneys was dependent upon the same unknown cause.

Some Lines of Progress and Drift in Pathology.—This paper was read by Dr. T. Mitchell Prudden (see p. 397).

Dr. Brannan said the general practitioners of the present day appreciated very much what the pathologists were doing for them in clinical microscopy. That branch of medical science had advanced to such a degree that men who were engaged in general work could hardly keep pace with it.

Dr. Charles McBurney said he had been extremely interested in listening to Dr. Prudden's paper, which contained a *résumé* of what had recently been achieved in the field of pathology. The agreeable manner in which the scientific facts were set forth did not detract from their interest, and the speaker expressed the hope that Dr. Prudden would some day find the time to elaborate further many of the points which he had merely touched upon in his paper.

Dr. Robinson said that in view of the rapid strides made in pathology and chemical analysis during recent years, it was hardly possible for a man who was engaged at clinical work to become sufficiently expert in the use of the microscope, the various staining-fluids, etc., so that he could rely solely upon his own opinion in the diagnosis of an important case in which such examinations were necessary. The speaker said he thought that in cases in which a microscopical examination was deemed important, the aid of a skilled pathologist should be called in, and in all hospitals this work should be delegated to a competent man.

Dr. Andrew H. Smith said he had greatly enjoyed the poetic flow of Dr. Prudden's words. To follow in the same strain, the speaker said that, in his opinion, the "chalkiest" of all the "chalk eggs" upon which pathology was "brooding" was the conception of an intermediate process between the noxa and its action upon the tissues, a process termed "inflammation." The speaker said that whenever he found an egg on which a name was pencilled ending in "itis" he was inclined to look upon it as "chalk," and to throw it out of the nest. It seemed to him that the cause which produced disease grappled directly with the tissues, and not through a more or less imaginary process called inflammation. Conditions which were utterly different had been forced into seeming relationship by including them under this common designation, as, for example, keratitis and peritonitis. It was time that we addressed ourselves to the study of the morbific agent on the one hand and the reparative process on the other, without mixing them up with a hypothetical *tertium quid*, which was only a sickly survival of what was rapidly becoming obsolete.

A Case of Trichinosis in which the Diagnosis was Suggested by Examination of the Blood.—This case was reported by Dr. F. P. Kinnicutt, and confirmed by the discovery of the parasite in the muscle.

Dr. Brannan asked if the fæces were examined.

Dr. Kinnicutt replied that they were not; that it was not considered necessary, as the diagnosis was confirmed on the day following the patient's admission to hospital. The patient was an American. He had been in the habit of eating pork, always cooked, two or three times weekly. Dr. Kinnicutt said it had been shown that living trichinæ might exist in partially cooked pork; it was not necessary that it should be raw. In reply to a question by Dr. McBurney, as to what finally became of the trichinæ in the tissues, Dr. Kinnicutt said that they became encapsulated and gave rise to no further trouble. A man might enjoy very good health, in spite of the fact that his muscles contained many of these encapsulated parasites.

Dr. Peabody said he had seen these parasites in the muscles in the course of dissection.

Dr. W. Gilman Thompson said the case reported by Dr. Kinnicutt emphasized the value of a differential blood-count at the bedside as an aid to diagnosis. This subject was still in its infancy, but from the present outlook much might be expected from it in the future. The mere existence of a leucocytosis might be sometimes misleading, but a careful blood-count, although a very laborious process, certainly ought to be made in cases of this nature. Dr. Thompson said that another interesting point was the relation of cause and effect. Why should the eosinophilic cells be so increased by this irritant in the system, and should the production of these cells be regarded as a pathological process? The speaker said he was under the impression that the eosinophiles were also increased in the presence of certain other intestinal parasites.

Dr. Kinnicutt said that an increase in the eosinophilic cells had been noted in various pathological conditions. Chief among these were bronchial asthma, spleno-myelogenous leukæmia, and certain affections of the skin, pemphigus, psoriasis, prurigo, and chronic eczema. Concerning the nature of the eosinophilic granules and the origin of the cells containing them, varied views were held. The view most generally held was that they were developed from the polymorphonuclear neutrophiles by a kind of ripening process. Brown was led to believe, from his study of cases of trichinosis, that the transformation occurred in the muscles.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 1, 1900.

William H. Thomson, M.D., President.

The discussion on cancer, begun at the last meeting was continued at the present one.

Cancer of the Larynx.—Dr. D. Bryson Delavan took up the consideration of this topic. He said that the most common, as well as the most dangerous, form of cancer of the larynx was epithelioma. The consideration of the surgical management of carcinoma would include all that could be said about the radical treatment of excision of the larynx in general. The responsibility of determining the possible malignity of a given case might fall upon any practitioner, and hence the great importance of this subject. During the past ten years much attention had been devoted to laryngeal carcinoma, though it must be confessed that little progress had resulted, except as to its surgical treatment. Thus far no successful system of toxic treatment had been suggested for carcinoma of the larynx. The attempted cure of these cases by endolaryngeal methods had been practically conceded to be a failure, notwithstanding the few comparatively successful cases of Fraenkel and others to the contrary. No one should attempt the radical operation for laryngeal cancer until one had thoroughly mastered the subject.

Diagnosis.—The beginnings of intra-laryngeal carcinoma were usually too trifling to attract attention. A small area of infiltration first developed, and this might become diffuse, or more commonly the site of a small outgrowth, often papillomatous in appearance. Soon, too, highly suggestive signs were liable to present themselves, viz., (1) sudden, sharp pain, and (2) distinct loss of motion on the affected side of the larynx. The pain was distinct from that observed in other affections of the larynx, or in ordinary sore throat. The loss of motion of the affected side was due to infiltration of the muscles controlling the arytenoid cartilages. In a doubtful case care should be taken at once to exclude tuberculosis by exhaustive examinations of the lungs and of the patient's sputa, and syphilis should be excluded by the therapeutic test. It had been generally recommended that as soon as the growth became sufficiently developed to admit of a fragment being removed, this should be done, and the diagnosis established by microscopical examination; but instances innumerable were on record in which, with every sign of malignity clinically, the result of the microscopical examination had been negative, or directly misleading. A notable example of this was the result of Virchow's examination in the case of the late Emperor Frederick. If there was one principle which had long been established with regard to epithelioma, it was that irritation of such a tumor tended to accelerate its growth, and was, therefore, directly harmful. This was particularly true of epithelioma of the larynx, and hence the wisdom of not being too eager to remove a fragment of a suspected growth for microscopical examination. One could rely fairly on three signs, viz., (1) continued hoarseness without other obvious cause; (2) a characteristically sharp and sudden pain, and (3) loss of motion on the affected side. Removal of a fragment of the growth was difficult of accomplishment, and was painful and harmful to the patient.

Treatment.—While a fair number of cases of extirpation of the larynx had resulted in prolonging life in comparative comfort, it was universally conceded that the best results had been obtained in cases in which an early diagnosis had allowed of the removal of a moderate portion of the larynx, and, at the same time, total excision of the disease.

Dr. Delavan then presented a gentleman upon whom Dr. Curtis had successfully operated some time previously.

Dr. B. Farquhar Curtis said that this man had been operated upon by him three years ago next June. The packing had been removed very soon after operation, and the patient had been allowed to swallow within twenty-four hours, this having been accomplished by placing him in such a position that his head hung far back. His voice had begun to return about one year ago, and was now fairly good.

Cancer of the Gastro-Intestinal Tract; Diagnosis and Treatment.—Dr. B. Farquhar Curtis read this paper which will appear in a future issue.

Cancer of the Stomach.—He said that some recent statistics showed that over twenty per cent. of all cancers occurred in the stomach. Among men suffering from cancer, nearly one-third had cancer of the stomach; in women, only about thirteen per cent. were similarly affected. In 1896 a large number of cases of operations on the stomach by expert German surgeons had been collected, and the mortality from one hundred and seventy-three of these had been thirty-one per cent., as against seventy to eighty per cent. at the time when the operation had been first introduced. Three of the cases had been followed for four years, and had been well up to that time; four cases had remained well for over five years, and at least three cases had remained well for eight years. This showed the ability of the operation to cure cancer radically. About two-thirds of the cases could be carried through the severe operations with success. The reduction in mortality was partly due to the improvement in technique, and partly to the earlier diagnosis of these cases. The chief gain in the future would probably arise from the diagnosis being made still earlier. This same factor should increase the number of cures. All cases of cancer could be divided into two classes—(1) cases with a perceptible tumor, and (2) cases without any perceptible tumor. Quite a number of cases of cancer of the stomach came to the surgeon simply with a tumor, and with an entire absence of all symptoms. Not uncommonly the tumor was detected accidentally. The points of importance to the surgeon were the size of the tumor, its mobility, its location, and the previous history. The very large tumors had been formerly considered to be inoperable, but as patients had survived two years or more after the extirpation of these large tumors, this opinion could no longer be held. The location of the tumor was usually at the pylorus, though it might be farther to the left. There were some cases on record in which a supposed tumor of the cæcum had proved to be a tumor of the pylorus displaced in that direction. It was quite important in making the diagnosis in these cases to exclude gall stones. Probably the majority of patients presented themselves either with a tumor which was adherent under the liver or ribs, so that it was practically concealed, or with a very small tumor. The symptoms formerly laid down—vomiting, hæmatemesis, and pain—should be set aside as of no value in making the diagnosis of cancer. Perceptible distention of the stomach was not very common in malignant disease; hence a true dilatation of the stomach would be a point in favor of a benign stenosis of the pylorus.

Chemical Diagnostic Tests.—The chemical examination of the stomach contents had become the modern means of making the diagnosis. Authorities were not yet agreed concerning the value of some of these points, and yet, in most cases, reliance must be placed on them. The first thing was to give a test-meal, and determine the presence or absence of hydrochloric acid. About all that could be said about the absence of hydrochloric acid from the stomach was that it raised suspicions of the presence of cancer. The presence of lactic acid had also been noted, and it had been maintained by some observers as absolutely diagnostic of cancer of the stomach. An important element in this diagnostic study was the digestion of albumin. Owing to the great atrophy of the gastric glands in these cases the digestion of albumin was usually quite defective. The study of the motor insufficiency of the stomach was also of significance. In most cases there was great motor insufficiency of the stomach, this organ not emptying itself even though there was no stenosis of the pylorus, and the cancer was situated on the anterior or posterior wall. It should be remembered that hyperacidity of the gastric juice was the rule in cases of benign stenosis of the pylorus. If there was no stenosis and the hydrochloric acid was diminished it would be necessary to study the motility of the stomach. The advantages of studying the washings from the stomach had been emphasized by many physicians. Microscopical examination of the stomach contents included a search for a certain bacillus resembling a baseball-bat in appearance. This organism probably belonged to the fermentation forms, and was said to be a positive sign of the presence of cancer of the stomach. Hemmeter maintained that it was proper to operate in a case in which there were rapid emaciation, absence of hydrochloric acid, presence of lactic acid, reduction of albumin digestion, and the presence of the bacillus just mentioned, even in the absence of tumor, provided no benefit followed appropriate medical treatment for a period of several weeks.

Indications for Operation.—The first indication for operation, Dr. Curtis said, was the presence of a tumor. The second indication would be obstinate vomiting. A third would be a dilated stomach. In nine-tenths of the cases the dilatation would be the result of stenosis of the pylorus, and in the remaining ones it would be due to enteroptosis. He was inclined to think the repeated vomiting of blood should be considered as an indication for operative intervention. Severe and frequently recurring pain in the stomach, resisting lavage and appropriate diet, would seem to warrant an exploratory incision, although doubtless some of these cases were dependent upon a neurosis. Even here, however, the operation had been known to effect a cure. At the present day, the surgeon was able to say not merely that an exploratory operation would do no harm, but that it would probably do good, even in the event of there being no malignant disease present.

Gastric Ulcer Predisposes to Cancer.—Dr. Curtis said that he believed there was very considerable danger of gastric ulcers being converted into cancer. A very large number of cases of carcinoma of the stomach gave a history of prolonged stomach difficulty, probably dependent upon ulcer.

Selection of the Operation.—It was not true, at the present time, that a tumor should not be removed simply because of its large size; nor should adhesions limit the operation, because these adhesions were often inflammatory, and portions of organs involved in these adhesions had often been removed successfully. A fairly long survival had been known to follow the removal of glands found to be cancerous at the time of their extirpation. Of course, very large and extensive involvement of the glands contraindicated the removal of the tumor, but here a gastro-enterostomy could be done. It should not be attempted, however, unless there was decided stenosis. Gastro-enterostomy, done for the relief of the pain of carcinoma of the stomach, was an illusion, as it only cleaned the stomach and supplied proper drainage, whereas the pain was really due to involvement of the retroperitoneal glands. The longest survival after gastro-enterostomy recorded had been two years and a quarter; the average time was less than six months. This operation was capable, however, of giving very marked relief from the distressing vomiting when stenosis was present.

Intestinal Carcinoma.—The speaker said that carcinoma of the intestine was generally annular in form and spread very slowly. Both of these facts could be explained by the arrangement of the lymphatics in the bowel.

Arrangement of the Lymphatics.—The lymphatics were in two groups, submucous and subserous. These two systems did not connect, but both passed through the lymphatic glands at the mesenteric attachment, and then passed into the second tier of these glands—the ones usually spoken of as the mesenteric glands. The lymphatics next passed into the retroperitoneal glands. In this way the body was protected by three lines of defences. From these considerations it followed that even after carcinoma had lasted for years and a tumor of considerable size had been formed, there was a chance for a cure. A specimen was exhibited showing very beautifully this arrangement of the lymphatic glands.

Pathology.—Carcinoma of the intestine usually began its growth in the mucous membrane, and spread circularly around the bowel. As soon as this had occurred, fibrous tissue began to form at the base, and then contracting, choked off the blood supply, and led to the formation of an ulcer in the centre. On the edges the process spread slowly, but not along the line of the lymphatics. This resulted in a stricture, which, although in reality fibrous, had its origin in carcinoma. The tendency to produce metastases or glandular invasion was very slow, so that the process might go on for years without giving any symptoms except those merely the result of mechanical obstruction of the bowel. In these cases often no special difficulty was experienced until a seed or other substance suddenly blocked up the already narrowed lumen of the bowel, thus giving rise to what appeared to be an attack of acute intestinal obstruction.

Symptoms.—These patients were usually constipated, and suffered at times from attacks of subacute intestinal obstruction. Sometimes there would be "ribbon stools" or pill-like stools, like the discharges from the bowel of a goat.

Prognosis.—In eighteen cases at Czerny's clinic the mortality from operation had been fifty per cent. Of the recoveries, one patient had remained well for ten years; four were known to have remained well for periods varying from one to three years and a half after operation. The mortality was high because many of the cases had been operated upon during the period of acute obstruction, and also because, in some instances, tumors had been very large, necessitating very severe and prolonged operations.

Treatment.—The palliative operations were colostomy and anastomosis. The latter consisted in making a communication between the bowel above and below the stricture, leaving the tumor in place. It was, however, a most useful operation in suitable cases because it established, so to speak, an internal anus. The operation of "exclusion" of the intestine had been lately introduced. This consisted in uniting the ends of the healthy bowel, and closing one end of the loop in which the tumor existed and opening the other upon the skin. This admitted of the discharge of the contents later on without causing any obstruction. Colostomy was of the greatest value when the cancer had caused obstruction. He favored resort to this operation earlier than was commonly done.

Treatment of Inoperable Cancerous Tumors.—DR. WILLIAM B. COLEY read this paper. He said that during the last few years several methods of treatment for inoperable cancer had been advocated. He had tried the method of administering thyroid extract in a few cases, but with negative results. The treatment by injections of alcohol gave little chance of success. The same was true, he thought, of cataphoresis. The results of his treatment by the use of the mixed toxins of erysipelas and of the bacillus prodigiosus still continued to be satisfactory. He preferred to make use of the mixed unfiltered toxins made from cultures in the same medium, and sterilized by heat. The injections should be made directly into the tumor whenever possible. The initial dose should be rarely more than half a minim. When the injections were given at a point remote from the tumor much larger doses could be tolerated. If no improvement was observed after three or four weeks of this treatment it was seldom advantageous to continue it. If improvement occurred, the use of the toxins should be persisted in until the tumor had entirely disappeared, or until it was evident that the toxins had lost their controlling influence. The question of harm from long-continued injections was a very important one. It had been proved that moderate doses could be administered twice a week for a period of two years and a half without doing harm. In another of his cases the treatment had been continued for four years, and the patient, a physician, was now in perfect health, at the end of six years from beginning the treatment. The action of the toxins, he thought, could be explained only on the parasitic theory of the origin of cancer. In the majority of his cases both the clinical and the microscopical diagnosis had been confirmed by expert pathologists and clinicians.

Results.—Of the total number of cases treated, eighty-four were round-celled sarcoma, twenty-one spindle-celled, and nine melanotic sarcoma. Of the round-celled variety forty, or less than half, showed more or less improvement, and in three the treatment had been successful. On the other hand, of the twenty-one spindle-celled sarcomata, ten had disappeared entirely, and all of the remainder had shown marked improvement.

Risks.—He believed that under proper precautions the risk from this treatment was very slight. He had employed it in upward of two hundred and thirty cases, with only two deaths, and these latter had occurred about four years ago. It should not be forgotten that this method was recommended only for inoperable cases. He recommended that it be used as an adjunct to operative measures, the toxins being administered immediately after operation instead of waiting for a recurrence.

Dr. R. H. M. Sell referred to a case which had come under his care in 1873. Eighteen other physicians had seen this case, and all of them had made a diagnosis of cancer of the stomach, but to this he had taken exception. The patient had been almost exsanguinated at the time. The post-mortem had revealed the presence of cicatrices and fresh ulcerations in the œsophagus, and the same condition in the duodenum.

Dr. Thomas H. Manley asked Dr. Delavan if it was not true that life was as much prolonged and as much relief was afforded by tracheotomy alone as by the removal of a part or all of the larynx in carcinoma of this organ. He also called attention to the frequency with which hæmatemesis in young persons was due to gastric ulcer, and maintained that tumors in the posterior wall of the stomach near the cardiac end were absolutely inoperable.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 26, 1900.

George B. Fowler, M.D., President.

The Physiological Properties of the Suprarenal Extract.—Dr. B. Moore, professor of physiology at Yale, discussed the physiological properties of the suprarenal extract. He said that Addison, by most painstaking post-mortem examinations of the suprarenal gland, had found that, in the disease bearing his name, there were certain constant changes in this gland. He found nervous and muscular changes associated with a very low blood pressure. This lowering of the blood pressure was all the more remarkable when viewed in connection with experiments on injecting the suprarenal extract into animals. In 1855, Brown-Séquard had begun a series of experiments on the removal of one or both glands in animals. He found that the removal of one gland often proved fatal, and that the extirpation of both glands was rapidly followed by death in every instance. These results had been very much disputed, and his experiments had been repeated by dozens of experimenters. Schaffer had suggested that the cases in which other experimenters had not observed death after the removal of both suprarenal glands could be explained by supposing that there had been present accessory glands in those instances. About ten or more years ago some experiments had been conducted on the effect of injecting the suprarenal extract subcutaneously. With large doses there had been profound disturbances of the nervous system—tremors, clonic spasms, and paralysis of the extremities. The results from administering the gland by the mouth had been vague and, for the most part, negative. Dr. Oliver, who had been using suprarenal extract clinically in persons having a low arterial pressure, had suggested to Professor Schaffer to try the intravenous injection of the gland. The speaker said that he had been in Professor Schaffer's laboratory at the time these experiments had been made, and had noted that the intravenous administration of even a fraction of a milligram was sufficient to double or treble the blood pressure. It should be remembered that there were comparatively few substances which had any very marked effect on the blood pressure. If the vagi nerves were intact, there would be, accompanying this augmented blood pressure, a hyperactivity of the vagi nerves. If these nerves had been cut, the blood pressure would rise still more markedly, and the heart action would be more powerful. Of course, such a rise of blood pressure might be produced in three ways, viz., (1) by the action on the heart muscle; (2) by stimulation of the vasomotor system, whereby all the arterioles of the body would be constricted; and (3) by direct action of the suprarenal extract on the coats of the arterioles. Experiment had shown that it was by this direct stimulation that the suprarenal extract acted, and it was this direct peripheral action that made this drug so valuable a hæmostatic.

The Active Principle.—The speaker said that he had investigated the chemical nature of the substances contained in this gland, which gave rise to the effects just noted. The active principle was a substance which was not changed even by a ten-per-cent. solution of sulphuric acid, but minute traces of alkalies destroyed it very rapidly. At one time he had thought it might be a reduced pyridin, as nicotine and various other substances reduced from pyridin produced an effect very similar to that observed from the suprarenal extract, except that the action was not on the muscular coat of the arterioles, but upon certain ganglion cells. The characteristic odor of pyridin could be obtained by heating the suprarenal extract with alkalies. The most active form was obtained by throwing down all the proteids. With this substance he had secured distinct effects from one milligram per kilogram of body weight. In a great many cases after both glands had been removed from animals, the latter had died very quickly, apparently from surgical shock. An attempt had been made to eliminate this possible source of error by injecting bacilli, and causing a slow degeneration of the gland—an artificial Addison's disease, so to speak.

Mode of Action.—Two theories had been put forward as to the mode of action of the suprarenal gland. One of these was, that the gland formed a substance having a useful function in the human system, *i.e.*, altering the tonicity of the arterioles and of the muscular tissue all over the body. The other theory was, that the effects noted after removal of the gland were the result of auto-intoxication, a substance of a poisonous nature being normally removed by the suprarenal gland. In support of this view it was urged that the blood from the animals from which the suprarenal gland had been removed possessed unusual toxicity.

Note on the Preservation of Aqueous Solutions of the Extract of the Suprarenal Capsule.—Dr. Lucien Howe, of Buffalo, sent a communication with this title. He said that great variations were noted in the different preparations found on the market. His plan was to rub half a drachm of the extract with sufficient distilled water to make a paste. This was placed in a capsule and heated at 160° F. for fifteen or twenty minutes, and the amount of water lost by evaporation was replaced by sterilized water, so that the resulting product still measured one fluid ounce. A little boric acid was then added to this solution. Under ordinary conditions, this solution kept well for several weeks in well-corked bottles. Three other methods of preservation were mentioned. The first of these was by putting up the extract in the form of the so-called ophthalmic discs. The powder was rubbed up into a paste with water, and then sufficient mucilage was added to make the mass cohere into small wafers. Solutions of the extract could also be preserved by formalin, in the strength of one in ten thousand parts. Both of these preparations had the disadvantage of being more or less irritating. The extract also kept apparently indefinitely in a thirty-five-per-cent. glycerin solution, but this preparation was also somewhat irritating.

Suprarenal Therapy.—Dr. W. H. Bates began his paper on this subject with the assertion that in spite of the almost infinitesimal dose needed to produce a recognizable physiological effect, suprarenal extract was not poisonous, its effect was not cumulative, and it had no direct effect on the nervous system. It was not an anæsthetic. Out of the two thousand cases in which the suprarenal extract had been seen to constrict the blood-vessels, in not a single instance had the expected subsequent dilatation of the blood-vessels been observed. All inflamed tissues were benefited by the application of this extract. The effects obtained by the local use of the extract could be obtained, though to a less degree, by the internal administration of this remedy. He had seen congestion of the eye, ear, and throat, larynx, and thyroid gland become decidedly less within three minutes after swallowing five grains of the suprarenal extract. He had controlled nasal hemorrhage in a "bleeder" by syringing the nose with a solution of suprarenal extract, after peroxide of hydrogen, tampons, and other means had failed to check the bleeding. This extract was not an objectionable hæmostatic like iron. Secondary hemorrhage was lessened by the suprarenal extract. The hæmostatic effect was temporary, and it might be necessary, therefore, to use it every two hours for a number of hours. The preparation used must have been freshly prepared to be efficient. He had known the aqueous extract to spoil in one hour.

Effect on the Heart.—It was not uncommon for enough of the suprarenal extract, when instilled into the eye, to be absorbed to increase perceptibly the tonicity of the heart in persons affected with cardiac disease. A number of sphygmographic tracings were shown in this connection. The internal administration of the suprarenal extract did not affect the normal heart or the normal blood pressure, but an intermittent pulse would become regular, and a weak pulse stronger. The author's conclusions were: (1) The aqueous extract of the suprarenal gland, when used locally, was the most powerful astringent and hæmostatic known; (2) congestions of other organs besides the eye were relieved by the internal administration of the extract; (3) it was useful in all forms of inflammation and in all parts of the body; and (4) it was the strongest known stimulant of the heart.

The Treatment of Diseases of the Nose and Throat with the Suprarenal Extract.—Dr. H. L. Swain, of New Haven, read this paper. He said that the extract would not noticeably affect the vessels in which there was not a well-developed muscular coat, or the palsied vessels met with in long-standing and extreme inflammation. On the other hand, the suprarenal extract would always contract the turbinal swellings, and open up the nasal passages. The blood-vessels in these bodies were surrounded by extremely well-developed muscular coats. When cocaine was used, either before or after the suprarenal extract, the greatest possible contraction of the mucous membrane was made possible. Perhaps the most valuable property of the extract in nose and throat work was that it could be used freely, and could be swallowed by the patient without harm. Tolerance was not established, and no drug habit was induced. In hay fever and hypertrophic rhinitis this remedy proved of signal value, when used locally, but he had not been able to observe from the internal administration of the extract the results reported by some other observers. Patients with hyperæsthetic rhinitis were made very comfortable by a thorough spraying once daily with the suprarenal extract. It had also proved quite useful in certain asthmatic attacks arising from nasal pressure. It was useful in conjunction with other measures in aborting or controlling an acute cold in the head. But perhaps the most important field for this remedy was as a hæmostatic in nasal surgery. Whenever there was any removal of tissue, he always made use of it. He had often employed the suprarenal extract and cocaine at the same time, or in immediate succession. Even in the most bloody operations the result was excellent. He could not say conscientiously that he had observed secondary hemorrhage more frequently since using the suprarenal extract than before. For most purposes the freshly made aqueous solution was sufficiently aseptic, but it would be very convenient if some enterprising drug firm would undertake to supply the profession with hermetically sealed glass tubes containing an absolutely sterile solution of the suprarenal extract. He had been disappointed with his results from the internal administration of the suprarenal extract in cases of hay fever. He had used it with the greatest satisfaction in all forms of tonsillitis, and had been able in this way in some instances not only to give patients with quinsy sore throat much comfort, but to enable them to take more nourishment. In acute dry congestions of the naso-pharynx which followed a cold in certain states of the system the suprarenal extract seemed to be especially grateful to the patient. Acute œdema of the glottis reacts most favorably to this agent.

Treatment of Asthma with the Suprarenal Extract.—Dr. Solomon Solis Cohen, of Philadelphia, read a paper on this subject. At the outset he expressed the opinion that asthma was a morbid condition, symptomatic in its nature, and associated with varying and various pathological processes and physical states. It was a distinctly paroxysmal disorder. In certain cases the paroxysm was often the direct result of spasm of the bronchi, both muscular and vasomotor. Abnormal states of the upper respiratory passages and underlying diathetic conditions were responsible in many cases. He had not found the suprarenal exract uniformly beneficial in asthma, as might be anticipated from the varied pathology of this disorder. This remedy had been most serviceable in cases of asthma exhibiting vasomotor ataxia of the relaxing variety, and in those subjects liable to develop urticaria or known to be extremely sensitive to slight changes in climate. The remedy had been chiefly useful in averting the paroxysms and preventing their recurrence. It had rarely cut short the attack, but had proved serviceable by virtue of its ability to remove from the patient the fear and apprehension of the occurrence of the paroxysm. When given internally, it acted well, but the dose must be pushed until some physiological effect is observed. He wished to state emphatically that suprarenal extract was not a specific for asthma.

The Treatment of Hay Fever with the Suprarenal Extract.—Dr. H. Beaman Douglass, who read this paper, was more enthusiastic than the last speaker regarding the effect of this extract in hay fever, declaring that, in his opinion, one was justified in speaking of it as a specific in this disorder. Under the continued administration of this remedy the patient would be in comparative comfort during the remainder of the attack. The cases yielding to it had been benefited equally well by the local and by the internal use of the extract. Some individuals, when taking this substance by the mouth, experienced vertigo or nervous excitement, and observed an increased action of the heart. Naturally, the best results had been achieved in the simple cases, in which the symptoms had been those of nasal and laryngeal inflammation, together with conjunctival involvement. In the cases in which asthma had occurred later as a complication, the asthmatic tendency was certainly diminished or wholly checked by the use of the suprarenal extract. In nasal cases, not accompanied by much congestion, not so much benefit was observed. Cases dependent upon gouty or rheumatic diatheses seemed to be benefited, but in the cases in which the elasticity of the blood-vessels had been diminished by atheroma or by interstitial nephritis, the extract had had little or no effect. The speaker recommended a combination of local and internal treatment. The local administration was best carried out by spraying the parts with a freshly prepared aqueous solution of the extract. Internally it should be given in doses of gr. v. at first, at intervals of two hours, the interval being gradually lengthened, but the remedy should be kept up throughout the entire hay-fever season. No other remedy alone was as useful as the suprarenal extract.

The Use of Suprarenal Extract in Laryngitis.—Dr. H. Holbrook Curtis read this paper. He said that he had made extensive local use of the suprarenal extract. His practice had been to spray the larynx with a freshly prepared solution of the extract, of a strength of thirty grains to the ounce. In a recent case he had secured a most gratifying result in the œdematous stage of a tuberculous laryngitis from insufflations of the powdered extract. In relaxed conditions of the vocal cords the use of the extract seemed to be as beneficial as in the more acute congestions of this part. A practical point, worth remembering, was that peroxide of hydrogen rendered the suprarenal extract inert.

The Treatment of Diseases of the Urethra with the Suprarenal Extract.—Dr. J. A. Moore read a paper on this subject, based on an experience extending over three years, and comprising two hundred cases. The blanching of the urethra produced by this remedy, he said, could be readily observed with the endoscope. In his experience the thick, unfiltered solution had acted much better than the filtered solution of the extract more commonly used. He had also found it more potent when allowed to stand for two hours after its preparation, before using it. He ordinarily employed a ten-per-cent. solution, injecting it with a syringe. In the gradual dilatation of strictures the extract was very useful, as it relieved the muscular spasm. The effect of the remedy was quite transient, so that if more than two sounds were to be passed at one sitting, another application of the extract should be made. By its action on muscular tissue the extract would sometimes sensibly increase the calibre of a stricture. In several cases of meatotomy he had administered a twelve-per-cent. solution of the filtered extract, injecting it into the tissues. In four cases of acute gonorrhœa in which there was severe smarting at urination, the injection of the unfiltered solution gave immediate and decided relief. The unfiltered solution had also proved to be a grateful application in most cases of inflammation of the urethra and when there were ulcers in this canal.

General Discussion.—Dr. E. Larue Vansant, of Philadelphia, opened the general discussion. His experience had taught him that the suprarenal extract, when used in diseases of the nose, throat, and ear, acted as a harmless and most potent non-irritating astringent and hæmostatic, and also enhanced the action of the local anæsthetics usually employed. It was well to remember, however, that the relief was local and temporary, and that other treatment must also be employed. A granular condition of the vault of the pharynx, most often seen in people with wide nostrils, proved especially amenable to the local application of the suprarenal extract, followed by some other astringent, such as one of the salts of silver. There could be no doubt about the efficiency of this remedy in cases of hay fever, but its local administration was greatly superior to its internal administration. He did not approve of using the drug by means of a spray, because of the tendency of portions of the solution to be retained in the accessory sinuses, and elsewhere, to undergo decomposition and so lead to sepsis. This form of sepsis might occur even though the solution of the extract had been perfectly fresh and sterile at the time of making the application.

Dr. R. H. Cunningham said that at one time he had made some experiments with various ductless glands, including the suprarenal. After experimenting upon twenty or more dogs, he had at last succeeded in completely removing the right suprarenal gland and partly isolating and ligating the other gland, though not in removing it from the body. He had kept this dog alive for two years, and had then killed him and examined with the microscope the tiny portion of the gland that had been allowed to remain. He had been unable to find any suprarenal gland tissue. From this experiment he had been led to be rather sceptical concerning the inability of dogs at least to live without a suprarenal gland. He had at one time administered a large quantity of the suprarenal extract to an anæsthetized dog, and had kept a manometer in place for a number of hours, but had been unable to observe the slightest effect on the circulation from this enormous dose. This result was in keeping with the statement that had been made here this evening, to the effect that the remedy did not show its effect on the heart of a normal person or animal.

Dr. R. C. Myles said that he had used this remedy quite extensively, and while the results had been extraordinary, he had not yet been able to formulate definitively in his own mind the standing and value of the extract. He had used the powder in the nose for nearly two years, and did not think he had succeeded in tracing any sepsis to its use. The action on the turbinal tissues was definite, though it did not have any special action on hypertrophies. The effect appeared to be more upon the artery, in contradistinction to the effect of cocaine, which was more particularly on the vein. He had had two quite bad hemorrhages following the use of the suprarenal extract, but, on the other hand, he had been able, with this remedy, to do an almost bloodless operation on the nose in persons who were considered to be "bleeders."

Use in Intratympanic Operations.—Dr. Wendell C. Phillips looked upon the extract as a desirable addition to the materia medica of the nose and throat specialist. He had had some experience with it in cases of suppuration of the middle ear, accompanied with necrosis of the ossicles and a good deal of granulation tissue in the tympanum and attic. In these operations the hemorrhage was ordinarily very free and troublesome. During the part six months he had done a number of such operations after having instilled a solution of the suprarenal extract into the ear, and with a surprisingly small amount of hemorrhage. The operations had been thereby greatly simplified and shortened, thus diminishing their danger.

Secondary Hemorrhage More Frequent after the Extract.—DR. F. E. HOPKINS, of Springfield, Mass., said that, in his experience, troublesome hemorrhage had occurred far more frequently after the use of suprarenal extract than after cocaine. It was also well to remember that this hemorrhage was apt to occur several hours afterward, and at a time when the patient might be many miles away, and far from medical aid. It had seemed to him that there had been fewer cases of prostration since using the suprarenal extract in conjunction with cocaine.

Medical Items.

The Normal Tympanic Cavity is Germ-Free.—The investigations of Zaufal, which taught that the healthy tympanic cavity of rabbits contained the same germs as the oral and nasal cavities, were disproved as far as human beings are concerned by Preysing (*Centralblatt für Bakteriologie*, etc., Nos. 18, 19, 1899), who experimented with the contents of the cavity in recent corpses, and who arrived at the following results: (1) That the healthy human tympanic cavity is absolutely germ-free. (2) Even the cavities (which are filled with mucus) of the newly born are germ-free. (3) The serous exudates which depend on general dropsy are likewise free of germs. (4) The germs of typhus can be the direct cause of an otitis media.

Simultaneous Occurrence of Extra- and Intra-Uterine Pregnancy.—Mand (*Münchener med. Wochenschrift*, 1899, No. 37) describes a case of extreme interest. A diagnosis of ruptured extra-uterine pregnancy having been made, the case was operated upon and the diagnosis thus substantiated. The uterus was found to be enlarged and gravid in the third month, and five months later a living child was born. Mand also gives a résumé of similar cases which have been published. Apart from the interest which attaches itself to these cases, they go to point out a danger which may result from the introduction of a uterine sound in examination for extra-uterine gestation.

Electrical Treatment of Gout.—Th. Guilloz recommends the use of galvanism on the gouty parts, as it increases the nourishment of the diseased tissues and at the same time makes it possible to bring urate-dissolving substances to the affected joints, by means of cataphoresis. He places the gouty joint in a solution of two-per-cent. lithium (carbonate?), in which the positive pole is placed while a broad negative electrode is applied to the back or breast. After five to twenty sittings, in which he used a current of 120–200 milliamperes, he noticed not only a cessation of pain and swelling and a certain resumption of movement, but also with simultaneous use of a high-tension alternating current a pronounced improvement in all the bodily functions.

The Permeability of the Skin in Warm-Blooded Animals.—Vogel (*Virchow's Archiv*, Bd. 156, 1899, p. 566) gives an interesting and important description regarding the power of certain substances in different solutions to permeate the healthy skin. The results varied much. Thus the skin was found not to absorb a one-per-cent. watery solution of potassium cyanide even if the solution were acidified; neither did it allow to pass through it the following: Illuminating gas, alcoholic and watery solutions of chloral hydrate, vapor of ether at 18° C., vapor of chloroform at the temperature of room, watery solution of strychnine nitrate, watery solution of physostigmine salicylate. On the other hand it was permeable to prussian blue, sulphuretted hydrogen, ethyl ether, chloral hydrate in ether, ether vapors at high temperature, chloroform, vapor of chloroform at high temperatures, strychnine hydrate in chloroform, physostigmine salicylate in chloroform, and salicylic acid in ointment with water and ether.

Pain.—Pain of a neuralgic or drawing character in the neighborhood of the heart is found as the result of several causes, as a rule, in the following order of frequency: (1) Pain with palpitation of the heart from the accumulation of flatus in the transverse colon just as it turns to descend. Many patients who go to the physician complaining of heart disease suffer only from this condition, due to fermentation in the large bowel. Again, the pain due to gastralgia, or, as it has been called, cardialgia, may be referred to the heart by the patient. (2) Intercostal neuralgia due to debility. In these cases tender spots will often be found, one in the præcordium, another in the outer edge of the scapula, and a third on the vertebral column. These are sometimes called "spots of Valleix." In other cases the pain will be due to spinal trouble, anæmia, or tight lacing of corsets. (3) Pseudo-angina. (4) True angina. (5) Locomotor ataxia.—H. A. HARE, "Practical Diagnosis," page 559.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended March 10, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Arkansas, Searcy	December 25th to February 27th.	40	
Illinois, Aurora	February 17th to March 3d	4	
Chicago	February 24th to March 3d	1	
Kentucky, Covington	February 24th to March 3d	5	
Louisiana, New Orleans	February 24th to March 3d	61	12
Michigan, Detroit	February 17th to March 3d	12	
Ohio, Cleveland	February 24th to March 3d	26	
Pennsylvania, Philadelphia	February 24th to March 3d	3	
Tennessee, Nashville	February 24th to March 3d	1	
Texas, State	February 21st to 28th	142	3
Utah, Salt Lake City	February 24th to March 3d	1	
Virginia, Portsmouth	February 24th to March 3d	3	
Roanoke	February 1st to 28th	7	
Washington, Tacoma	February 18th to 24th	13	
West Virginia, Puckhannon	February 9th	Present.	
Calhoun County	February 9th	Present.	
Camden on the Gauley	February 9th	Present.	
Fayette County	February 9th	Present.	
Gilmer County	February 9th	Present	
Lewis County	February 9th	Present	
Harrison County	February 9th	Present.	
SMALLPOX—FOREIGN.			
Austria, Prague	February 3d to 10th	6	
Belgium, Antwerp	February 3d to 10th	3	1
Ghent	February 3d to 10th	..	2
Canada, Amherstburg	February 24th to March 3d	3	
Quebec	February 15th to 22d	11	
England, London	February 3d to 17th	25	
Gibraltar	February 4th to 11th	1	
Greece, Athens	February 3d to 10th	2	
India, Bombay	January 15th to 30th	..	715
Calcutta	January 13th to 20th	..	7
Madras	January 27th to February 2d	..	3
Mexico, Vera Cruz	February 17th to 24th	..	2
Russia, Moscow	February 3d to 10th	4	1
Odessa	February 3d to 10th	10	2
St. Petersburg	January 27th to February 17th	63	18
Warsaw	January 27th to February 10th	..	5
Spain, Corunna	February 10th to 17th	6	4
Straits Settlements, Singapore	January 13th to 20th	..	1
Turkey, Constantinople	February 5th to 12th	..	1
YELLOW FEVER.			
Brazil, Santos	January 29th	Increasing.	
San Paulo		Increasing.	
Cuba, Havana	February 10th to 17th	9	4
Matanzas	February 10th to 17th	..	1
Mexico, Vera Cruz	February 17th to 24th	..	1
CHOLERA.			
India, Bombay	January 23d to 30th	..	9
Calcutta	January 13th tn 20th	..	21
PLAGUE—UNITED STATES.			
Hawaii, Honolulu	February 10th to 19th	..	5
Kahului	February 13th	3	
Philippine Islands, Manila	January 13th to 20th	4	3
	Total to date	16	12
PLAGUE—FOREIGN.			
India, Bombay	January 16th to 30th	..	872
Calcutta	January 13th to 20th	..	56

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Original Articles.

NON-MALIGNANT GASTRIC AND DUODENAL ULCERS: WITH ILLUSTRATIVE CASES.

By THOMAS E. SATTERTHWAITE, M.D.,
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The widespread interest that has recently been shown in the matter of gastric ulcer, and especially in its treatment, has made it appear to me opportune to publish this article at this time.

Clinically speaking, the relation between gastric and duodenal ulcers is so close, as to their causation, symptomatology, and treatment, that it is proper to consider them together.

Ulcers of the stomach are comparatively rare in this country. While Brinton[1] believed they were found in five per cent. of all autopsies, and his belief was confirmed by the results of 32,052 autopsies made in Prague, Berlin, Erlangen, and Kiel,[2] where, as in Brinton's cases, gastric scars and open ulcers were very properly classed together, these percentages appear not to apply in the United States, certainly not in this vicinity; for Welch found them in only six cases out of about eight hundred in New York City, and I in not more than five out of seven hundred and fifty-two, according to my private records taken from St. Luke's and the Presbyterian hospitals, between the years 1872 and 1888. Da Costa[3] also holds to the view that gastric ulcers are less common in this country than in England. And Ewald[4] has shown that the liability to this disease appears in some degree to be governed by locality, for in northern Europe and Denmark he found that gastric ulcers were comparatively frequent, the percentage rising to thirteen in Copenhagen, while they were infrequent in parts of Russia and Southern Europe. Indeed, Nolte[4] found the percentage in Munich to be as low as 1.23 per cent. It may, however, turn out in the future that a close search for small scars will show that gastric ulcers are more common than these figures indicate. Gruenfeldt[5] has sustained this idea by having found ninety-two, or twenty per cent., of gastric scars in four hundred and fifty autopsies at Copenhagen; but he examined closely for gastric lesions.

Ulceration of the stomach is sometimes divided into the acute and the chronic; a division, however, that has more pathological than clinical value, because we can never distinguish the two during lifetime, except when the ulcer is felt through the abdominal wall by palpation—a rare occurrence—or exposed in the course of a laparotomy. For the same reason we are usually ignorant as to the size, shape, and special characters of the ulcers, though it is common to call them round, eroding, corrosive, etc. But these ulcers are not always round. They may be oval. They erode, but so do cancerous ulcers. The term corrosive applies to a corrosive liquid, but corrosive liquids as a rule produce erosions that heal readily without leaving any scar. However, it is true that a large number of gastric ulcers have a rounded contour with sharp-cut edges surrounded by a zone of tough fibrous tissue, a puckering of the gastric walls about them, and bands of fibrous tissue radiating outward. This variety has been called the acute; as a rule, however, it is merely a form of the chronic variety. On the other hand, the ulcer which has greatly infiltrated walls and ragged shelving edges forming a sort of inverted cone, the apex being at the peritoneal covering of the stomach, is always a chronic variety. There can hardly be much mistaking such an ulcer, when it is exposed to the eye, though it might be taken for a cancer or sarcoma. Indeed, in microscopic section it might be mistaken for a round-celled sarcoma, because in both sarcoma and gastric ulcer there is a great similarity in the character of the round cells. But if the non-malignant ulcer is brought into view, the peculiar excavated centre should indicate its true character.

In taking up the etiology of gastric ulcers we naturally consider the question of age and sex. Brinton in two hundred and thirty-four cases found that one hundred and sixty were females and seventy-four males, and that the average age in women was twenty-seven years, while in men it was forty-two. These points have some practical value from a diagnostic point of view, for while Goodhart[1] has described a gastric ulcer in a child thirty hours old, and one is related by Eppinger[2] in a man over one hundred years of age, the plain fact remains that in gastric ulcer the disease is one of middle life. The periods of greatest frequency have been regarded as between the ages of twenty and forty, and forty and sixty, with some preponderance in favor of the first-named period. But as these views were derived from post-mortem data, they might be somewhat inaccurate, so far as fixing the date of inception of the ulcer, for this point is obviously not determinable by post-mortem evidences. The ulcer may have existed for many years—ten, fifteen, twenty, or perhaps thirty, or even more before its discovery; that is, if we rely on clinical evidence. But we have nothing better, or as good. In this connection, however, it is important for us to know that both the clinical and pathological data fix the period of greatest frequency of ulcer at from twenty to thirty years of age.

Among the causes that have been assigned are:—mechanical compressions, as by corsets, tight belts, pressure against the stomach by the shoemaker's last; injuries to the stomach, wounds of the organ, as by instruments, or in fact injuries of any kind. Gastric ulceration is a common circumstance in tuberculosis. It is also found in anæmia and menstrual disorders, and disturbances of the circulation such as endocarditis and atheroma. The fact that gastritis, scurvy, diabetes, intermittent fever, burns, typhoid fever, septic processes, etc., and the other conditions named, have been assigned as causes of gastric ulceration, only illustrates how obscure the causative factors are in medical minds. For this reason it is instructive to consider the diseases with which gastric ulcers are actually associated. It is now admitted that miliary tuberculosis of the walls of the stomach is generally believed to be rare, though hemorrhages from these ulcers have been fatal. In one of my cases, in which the patient died of hemorrhage by the bowel, I believe the source of the trouble was a tuberculous ulcer. In another case, also seen by the writer in consultation, in which the patient died of inanition, numerous ulcers supposed to be tuberculous were found in the stomach. This experience, therefore, confirms that of Brinton[1] as derived from the statistics of Jaksch, Dittrich, and Engel, who have held that tuberculosis carries off the patient in from nineteen to twenty per cent. of gastric ulcers. But it has been customary of late to reject all cases from our statistical tables if tubercle bacilli were not found in the ulcers. Naturally this course of action invalidates the older statistics; however, Herman Durck [2] has actually found tubercle bacilli in four out of nine hundred autopsies in Munich, the bacilli being in the gastric ulcers. And Letulle[3] has found one tuberculous ulcer in one hundred and eight autopsies in tuberculous subjects. In these cases cheesy changes, giant cells, and bacilli should be expected in the earlier stages. In fact, evidence that tuberculosis is a cause of gastric ulcer is accumulating rapidly. Indeed, I am inclined to think that if special attention is paid to the matter, it will be found that the stomach is very more often the seat of tuberculous ulcer than we now think; and I am satisfied that the anæmia described in these cases is often due to tuberculosis. But it is quite likely that anæmia alone, or chlorosis, or even a sluggish circulation may be of etiological importance, and that the liability to ulcer is increased by tight lacing or mechanical pressure on the organ. Such conditions could cause a localized necrosis eventuating in ulcer.

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[1] Brinton: "Diseases of the Stomach," 1859, p. 155.

[2] Welch: "American System of Medicine," vol. ii., p. 482.

[3] Da Costa: "Medical Diagnosis," eighth edition, Philadelphia, 1881, p. 576.

[4] Ewald: "Diseases of the Stomach," pp. 391, 392.

[5] Gruenfeldt: Hospitalstid., ix., p. 765 (Ewald).

[1] Goodhart: Trans. Lond. Path. Soc., vol. xxxii., pp. 79–81.

[2] Eppinger: Prager. Vierteljahrschr., Bd. 116, p. 130.

But there are other prominent causes. Lang[4] found a syphilitic history in twenty per cent. of gastric ulcers, Engel [5] in ten per cent.; and Chiari [6] has described two forms of syphilis occurring in the stomach, the localized or gummatous, and the diffuse. In my first five cases, as recorded in my case books, there was some reason to believe that three of the patients were syphilitics. Typhoid may produce ulcers of the stomach, duodenum, and œsophagus. In one of my cases the patient had suffered from typhoid fever fifteen years before, and it is possible that this ulcer had never healed. Septic or any form of bacterial infection is competent to produce infarcts in the stomach. It is in this way that ulcers of the stomach sometimes follow burns, the causation being similar to that of the duodenal ulcer; the septic matter in both cases being carried from the sloughs of dead tissue. The theory that ulcers may be due to circulatory disturbances is based on sound theoretical principles, in so far as such disturbances are competent to produce embolism, thrombosis, or even hemorrhage anywhere in the body, but as a matter of fact it does not appear that the stomach suffers much from this condition of the circulation, probably on account of its excellent collateral circulation. However, Berthold,[7] of Berlin, has reported that of two hundred and ninety-four cases of gastric ulcer, in one hundred and seventy, or fifty-eight per cent., there were disorders of the circulation, chiefly endocarditis and atheroma, and Steiner[1] found even a larger percentage (seventy-one out of one hundred and ten, or sixty-four per cent.). For the reasons given above, however, it is not likely that these views will be sustained by future investigations. In this connection it should be remembered that simple erosions are probably of frequent occurrence, being often caused by the ingestion of foreign substances or improper food, abuse of the stomach tube, etc. In fact, it has been abundantly shown that foreign bodies, such as knives, bits of glass, broken china, etc., may be swallowed with comparative impunity, and if they make wounds they heal readily and usually without scars. But the most important agent in the development of the ulcer is the gastric juice itself. This being heavily charged with hydrochloric acid is a corrosive liquid competent under appropriate conditions to destroy all albuminous substances with which it comes in contact. How, then, can it be secreted as it is with impunity in the human stomach? This is a question still to be answered, but Pavy has offered a possible solution by suggesting that this acid is neutralized by the blood current, which is strongly alkaline during gastric digestion. But even in ordinary health, if there has been any considerable destruction of the gastric tissues below the level of the epithelial cells, the tissue does not appear to be able to withstand the corrosive action of its own juices. And there are periods when the danger is extremely great, and when the epithelial tissues are themselves acted upon by these same juices. It is when the circulation is very feeble, as during the crises in fevers or in periods of profound inanition during the last hours of life, or after death. There is now no blood current, or it is extremely feeble, and there is therefore no alkaline current sufficient to neutralize the hydrochloric acid of the gastric juice. It is then that gastromalacia, or the auto-digestion of the stomach by the gastric juices, takes place. Another theory is that the acid is resisted by the protoplasm of the gastric cells themselves. Gastromalacia is a rapid process and may extend in a few hours from the stomach to the adjacent organs. I have seen a considerable part of the entire stomach destroyed, precisely as if it had been dipped in a corrosive liquid. In infants, this process is especially frequent, and has been attributed in part to the decomposition of the undigested milk. It is a phenomenon of wasting diseases such as tuberculous meningitis. The gastric ulcer varies in size from the head of a pin upward, but the dimensions are usually between one-half an inch and one and a half inches. I have seen it, however, much larger. Ulcers the size of one's hand have been described. But it is easy to be mistaken on this point. In removing the stomach post mortem, or in separating it from its attachments in the course of an operation, the ulcer may be torn, and frequently has been torn so as to appear larger than it really is, or the inexperienced operator may mistake gastromalacia for an ulcer. Of course we should expect that these errors would not be made by persons of experience, but they do occur. The margin of gastric ulcers is almost always somewhat thickened, and the walls are apt to be perpendicular or sharply outlined. The mucous coat in the so-called chronic ulcer, whose base is turned upward, is the most affected. As the ulcer advances in age, there is usually a progressive thickening of the walls caused by fibroid infiltration and by its subsequent contraction, with which there is to a less degree some hypertrophy or at least some contraction of the muscular coat. It was formerly held that most of the gastric ulcers are either on the posterior surface of the organ or on the lesser curvature. Brinton found in one hundred cases that the ulcer was on the posterior surface or lesser curvature or pylorus in eighty-six per cent.; Welch in 77.9 per cent. from a study of seven hundred and ninety-three cases. Nolte in forty-one cases, however, found the disease located in the greater curvature, anterior wall, or pylorus, in thirty-eight, or ninety-one per cent. If this last percentage is shown to be even measurably correct, it is extremely important from a surgical point of view, opening up great possibilities to the operator.

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[1] Brinton, 1859, p. 182.

[2] Durck, quoted by Hemmeter in "Diseases of the Stomach," p 554.

[3] Letulle: Centralbl. f. Path., Bd. iv., p 760.

[4] Lang Wien. med. Presse, 1885, p. 11.

[5] Engel: Hemmeter, "Diseases of the Stomach," p. 558.

[6] Chiari. Prag. med. Woch., 1885, p. 47.

[7] Berthold, quoted by Welch, *loc. cit.*, p. 487.

[1] Steiner. Pepper's "System," vol. ii., p. 487.

The ordinary symptoms of ulcer in the stomach are localized pain after eating, vomiting, hæmatemesis or melæna, or both. There may be also gastric irritability. We should look for all of these symptoms of gastric ulcer; but they may not occur. There may also be the signs of the disease with which gastric ulcer is often associated. Tuberculosis may be present but have no lesion from which we can get the tubercle bacilli. However, in such cases we should expect anæmia and a low count of the red blood cells, or a reduction in the hæmoglobin, even in cases in which there has been no apparent hemorrhage. As syphilis holds an important place among the probable causes, we should look closely for the signs of the disease. Pain is a most prominent symptom of gastric ulcer. There are two places where the pain is apt to be located; one is the epigastrium, and the other is in the back—a later sign. The point of pain is usually well localized, and will vary from an area of one-half inch to one and a half inches in diameter. The painful spot in the back is usually to the left of the spine and over the tenth, eleventh, or twelfth lumbar or first dorsal vertebra. Sometimes it is as high as the eighth vertebra. Another sign is hyperacidity of the stomach, caused perhaps by an irritation of the gastric nerves, producing an excessive secretion of hydrochloric acid. If, however, an ulcer has once formed, or there is the direct stimulus to the formation of hydrochloric acid, and if the motility of the organ is so interfered with that the food is unduly retained, there will be hypersecretion of the gastric juices. And yet, on the other hand, after ulcers have become chronic, the glands may become so exhausted by hypersecretion that they will excrete a diminished amount of hydrochloric acid and pepsin, and so it happens that there may be hypo- instead of hypersecretion of the acid. As a rule, however, subacidity or hypochlorhydria or hyposecretion, whatever name is given it, is a neurosis. The points of pain are aggravated by eating, but are present at all times in the same spot. At first it might be classed as simply epigastric distress, but it is often of a boring character, going through to the back. When the stomach is empty there is little if any actual pain, but after eating there is apt to be some immediate distress, due to the solid food producing irritation; after a couple of hours the pain will be due to the movements of the stomach and the increased acidity due to the pouring out of hydrochloric acid. If the pain does not occur within an hour after eating, the ulcer is probably either in or near the pylorus or the duodenum. Relief comes through vomiting or after the food has been expelled through the pylorus. As a rule, in gastric ulcer pain is to be expected as early as half an hour after eating. Thirst is another symptom. Vomiting is frequent, but may be absent. Hæmatemesis is usually the first sign of gastric ulcer, but it is very inconstant, occurring in from twenty-five per cent. to eighty-five per cent. of the cases. The amount of blood vomited varies; it does not depend on the size of the ulcer but on the size of the vessel. When there is hæmatemesis, there is pretty sure to be melæna later, but when the ulcer is near the pylorus we may have melæna without hæmatemesis. Flatulence is a symptom that is not uncommon. It is due to some one of the causes connected with indigestion. It is one of the exciting causes of perforation. If the vomited matter has the appearance of coffee grounds, the indications are that the ulcer is small. If much blood is lost the ulcer is probably large, but we should not be deceived; a small amount may be vomited and a larger amount pass off by the bowels. The cause of the hemorrhage is apt to be some unusual exertion. The appetite is usually good during the early history of the disease. The bowels are apt to be constipated. Diarrhœa is not a common symptom. There may be merely the symptoms of dyspepsia, but chronic catarrhal gastritis usually accompanies the gastric ulcer. I saw such a case in the practice of the late Dr. Thurman, of this city. His patient had been fairly well till within a few days of his death, when signs of perforation appeared from which he did not rally. At the autopsy it was found that he had a large chronic ulcer on the anterior aspect of the organ under the parasternal line. The ulcer had perforated the organ probably some time ago, through the medium of a subphrenic abscess, and there had been a discharge through the anterior abdominal wall in the left groin; but the sinus had never closed. It was surrounded by a fibrous cord, impervious at the upper end, but in the lower portion lined with a smooth membrane, excreting a serous fluid and capable of admitting a urethral bougie for from eight to ten inches. The patient had been under the care of one of our most distinguished surgeons, but it did not appear that an operation had ever been proposed, although in this particular case it would have been comparatively easy to follow up the sinus, excise the ulcer, and sew up the wound. But it was before the era of laparotomy. In such instances, however, operations have been done by Billroth, Hoffmeister, and Mikulicz, and these three have been successful, according to Weir.[1]

In a great majority of cases ulcer of the stomach involves adjacent organs. Brinton found this to be the case in seventy per cent. It is probable, however, that large ulcers such as have been described can never be cured without an operation. In our diagnosis, we are called upon to discriminate chiefly from gastric catarrh, cancer of the stomach, nervous dyspepsia, hyperacidity, sarcoma, duodenal ulcer, diseases of the pancreas,[2] and the subphrenic abscess that is independent of gastric ulcer. In gastric catarrh there is diffuse pain after eating; tenderness and pain are diffused at first; later as improvement sets in there are more limited areas of tenderness. In gastric ulcer the pain is more distinctly localized; but these statements have, after all, comparatively little value, because in ulcer there is usually more or less chronic gastritis and the pain is not always localized. Hæmatemesis is a marked symptom; in catarrh it is usually absent, and is never profuse. In gastric catarrh, if chronic, there is usually dilatation, and it may be extreme. There is little dilatation in gastric ulcer. The vomit in catarrh is mostly mucous. In nervous dyspepsia the pain is relieved by pressure. It is sharp and shooting, and usually occurs when the stomach is empty. The pain is relieved by stimulants, while in gastric ulcer it is increased by stimulants. This gastralgia is seen in hysteria, melancholia, and other nervous affections. There is no hæmatemesis or melæna in nervous dyspepsia.

In this country carcinoma of the stomach is much more common than the malignant ulcer. It is usually a disease of middle age or above it. There are vomiting and sometimes hæmatemesis. The vomited matter is apt to be offensive. There is usually some emaciation, though not always, but the distinctive sign is a tumor that can be felt. When recognized positively by palpation, it may be confidently said that the patient will not live more than six months. Cancer is a progressive disease without intermission. It is sometimes said that gall stone may be mistaken for gastric ulcer. It is more correct to say that abscess of the liver, due to cholecystitis, may be hard to differentiate from subphrenic abscess caused by perforation of the stomach. The history of the case is most important. In gall stone, the pain is violent and brief and distinctly localized. It is apt to be accompanied or followed by an attack of jaundice, and the liver will be tender and swollen. Sarcoma of the stomach is rare, but a number of cases have been reported. It may be primary or secondary, nodular or diffuse. The onset is usually insidious. There may be anorexia, hæmatemesis, or melæna. As yet, however, we have no clinical signs that will permit us to differentiate this neoplasm from other conditions. However, if a tumor can be felt, and the spleen is enlarged, the disease is probably sarcoma, more especially if a sarcoma has been removed by surgical operation. Carcinomas and sarcomas do not, in my experience, ever occur contemporaneously in the same subject.

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[1] Medical News, May 2, 1896, p. 488.

[2] A case of hemorrhagic pancreatitis has been mistaken for gastric ulcer (Maurice H. Richardson: Philadelphia Medical Journal, February 2, 1900). Laparotomy was done, and the patient recovered.

The prognosis as to eventual cicatrization is doubtful, notwithstanding the favorable opinions of some eminent writers. Brinton says that perforation did not occur in eighty per cent. of his cases. That ulcers will heal is shown by the scars found at post-mortem. Thus, in 11,888 bodies, 164, or 1.04 per cent., had open ulcers, and 373, or 3.01 per cent., had scars, which would make at least sixty-nine per cent. of cures. According to the consolidated statistics of Dittrich, Jaksch, Welling, and Dahlerub,[1] in 303 cases of healed and unhealed ulcers, there were 147 scars and 156 open sores, so that at least in fifty per cent. cicatrization had been accomplished. According to Debove and Remond, cures may be found in fifty per cent., the causes of death being tuberculosis twenty per cent., perforation and peritonitis thirteen per cent., hæmatemesis five per cent., inanition five per cent., complications seven per cent.; a total of fifty per cent. Welch puts the danger of perforation at 6.5 per cent. Patients will sometimes get well without treatment.

Treatment.—In so far as treatment is concerned, two things should be prominent in one's mind: first, to relieve immediate symptoms; second, to cure the ulcer. In hæmatemesis one cannot insist too strongly on rest in bed, and that the patient must not get up for any reason whatever. No food should be taken by the mouth, and in fact no liquid should enter the œsophagus. The lips may be bathed in water. If hemorrhage continues, some preparation of ergot should be used, perhaps followed by morphine in gr. ¼ doses. An ice or cold-water bag should be applied to the stomach. In case of collapse, transfusion should be made with decinormal salt solution. During this period the patient should be fed by the bowel. Six ounces of peptonized milk should be given every three or four hours. At the end of three days a little liquid may be given by the mouth, *i.e.*, milk, lime water, beef tea, or the peptonoid. At the end of the week the patient should be put on a regular diet, and kept in bed. The bowels should be moved by laxatives, such as Apenta water. Warm applications should be made continuously to the epigastrium. After two weeks the patient may be allowed to get up, but food likely to distend the stomach should be avoided. The stomach should never be washed out or the tube used in gastric ulcer; profuse hemorrhage may occur with all its attendant dangers. There is, I am sure, much harm done sometimes by unskilful washing out of the stomach. Large pieces of mucous membrane may be caught in the eye of the tube and torn out. Bits of mucous membrane are so frequently found in the wash-water as to lead to the supposition that they were torn off by the tube. In fact, at post-mortem examination I have seen in a single case numerous erosions of the stomach caused by lavage. Operative measures have been frequently resorted to, and especially during the last few years.

But, as will be seen, it is difficult to make a fair comparison between the medical and surgical results that have been reported thus far. When Weir and Foote published their paper,[1] there appeared to be no reason to prefer surgical to medical methods, for the surgical mortality in their seventy-eight collected cases was set at 71.51 per cent. Apparently the surgical outlook is now better, for Tinker[2] reports that one hundred and thirty-one cases he has collected since the former date show a surgical mortality of only 35.71 per cent., while individual surgeons are now known to have reported still better results. Thus, Haberkant's show a surgical mortality in gastro-enterostomies of only twenty-five per cent.[3] Further, of Tinker's cases thirty-seven operated on during the first twelve hours showed a mortality of only sixteen per cent.; in pyloroplasty of 13.2 per cent.[4] The French surgeon, Doyen, in his book[5] puts his mortality after gastro-enterostomies at ten per cent., while W. S. Mayo, of Minnesota, reports that he had only one death in fifteen gastro-enterostomies, a mortality of 6.6 per cent.[6] Accepting these statistics it is plain that the dangers from surgical interference are becoming gradually less and less in certain classes of operations, so that the counsel of the surgeon may be well invoked by the medical practitioner in these cases. In fact, in suspected cases of gastric ulcer the physician and surgeon should work together, mutually aiding one another in diagnosis and in deciding the question as to whether an operation is advisable or not.

For on the medical side of the case it must be recognized that the mortality from medical treatment is probably quite small. Weir and Foote once put it at twenty per cent.[7] On the other hand, a recent writer[8] puts it at only five per cent.; while Leube, of stomach fame, has stated publicly[9] that in five hundred and fifty-six of his cases he has lost only twenty-two per cent. by death, and four per cent. represents his failure to cure.

It would not be proper to let the opportunity pass of emphasizing the statement, that a surgical operation is the only possible resort in some cases, if life is to be saved.

But all is said and done, and although, therefore, surgery seems likely to gain new laurels in the treatment of gastric ulcer, especially in complicated cases, or if the operations be done very early, medical practitioners will still be content in uncomplicated cases to employ established medical methods, and will have a good share of success.

The most dangerous complication is peritonitis, and it is extremely important to be able to recognize this condition at the earliest possible moment. Palpation ought to show a little tenderness over the ulcer. Peritonitis sets in with a chill, a rise of temperature to 100 or 102 F. The patient lies with the knees drawn up, and has the characteristic facies. The pulse is rapid and small. It is now that surgical relief is to be sought at the earliest possible moment.

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[1] Brinton, p. 163.

[1] Medical News, April 25 and May 21, 1896.

[2] Philadelphia Medical Journal, February 3, 1900.

[3] Weir. *Loc. cit.*

[4] Semaine Méd., 1897, p. 142.

[5] "Traitement chirurgicale des affections d'estomac," 1895, p. 392.

[6] Philadelphia Medical Journal, February 3, 1900.

[7] Medical News, May 2, 1896.

[8] Robert Saundby. Brit. Med. Journ., January 20, 1900.

[9] Semaine Méd., 1897, p. 142.

Subphrenic abscess is another complication that is also very important from a surgical point of view. It may be dependent on or independent of gastric or duodenal ulcer, but it is most frequently caused by perforating ulcer of the stomach or duodenum. Other causes are ulcerated appendix, abscess of the liver or kidneys, or various intraperitoneal troubles; it may also be due to extraperitoneal influences. I have described such a case as a sequel to empyema.[1] Subphrenic abscesses are apt to be so large as to push down the stomach and the spleen on the left side and the liver on the right, raising the diaphragm up to the level of the third or fourth rib; they may even perforate the diaphragm, causing empyema, or burst through the lungs into a bronchus and so discharge their contents. In a large number of cases these abscesses contain gas, owing in part to communication with the stomach, or to the decomposition of their contents. At first the signs will be gas in a sac containing liquid associated with a perforated ulcer of the stomach or duodenum, together with pain in the epigastrium, possibly a gastric tumor, and the signs of local peritonitis. The differential diagnosis must be made from empyema, simple abscess of the liver or spleen, or pneumothorax. Theoretically the upper level of the diaphragm should in subphrenic abscess be concave, with the concavity upward so that the upper limit of the abscess should correspond to this upward curve of the diaphragm. On the other hand, in simple empyema the curve of the diaphragm should be downward.[2] In these cases of subphrenic abscess, according to Penrose and Dickson,[3] including the thirty-four cases collected by Weir with fifteen cures, Nowak estimates his cures at fifty-five per cent. The treatment should be incision with or without exsection of the rib and drainage. I should be disposed from my experience to recommend through drainage as originally recommended by Chassaignac.[4] If the diagnosis of a subphrenic abscess is made, a surgical operation should be considered at once.

There is no difference in anatomical characters between the ulcer of the stomach and the duodenum; in fact, the non-malignant ulcer that has been described, with its sharply cut edges and rounded contour, may be found as well in the duodenum and œsophagus as in the stomach; for the gastric juices can under appropriate conditions act in all these localities. In fact, the causes of the one ulcer are equally well those of the other, except perhaps that burns have a special tendency to be associated with duodenal ulcers (in from twelve per cent. to four per cent. of burns). As in the stomach, these ulcers are usually found in a middle period of life, but there is this difference, that in men they are three times as frequent as in women. Duodenal ulcers are usually found near the pylorus on the inner or posterior walls of the bowel. In a large number of cases there will be no symptoms; in about 12.5 per cent. ulcers of the duodenum and stomach will be associated together. In one hundred and fifty-one cases of duodenal ulcer collected by Perry and Shaw[5] there were no noticeable symptoms. So far, however, as we are able to decide, symptoms of pain come on later than in gastric ulcer. If it occurs in from four to five hours after eating, duodenal ulcer is probable. There is also more or less pain to be expected over the right lower border of the liver. This pain radiates and may go through to the back. There is no tumor, but there may be a painful spot. If the patient takes no solid food, the pain may stop. As in gastric ulcer, hemorrhage is an important sign. If the food is first vomited without blood, and blood follows, the indications are that the difficulty is below the pylorus. There will also be obscure dyspeptic symptoms. The prognosis is more unfavorable than in gastric ulcer, because the disease is less easy of reach.

The following are some illustrative cases taken from my hospital and private records:

Case I.—Probably syphilis of lungs and liver; ulcer of stomach; death following hæmatemesis. L. St. R——, aged forty-two years, admitted September 18, 1882. The patient had some chronic sore throat. The hair had fallen out in large quantities. She had been tapped for ascites. Eleven days after admission to hospital she had melæna, followed by hæmatemesis. Hypodermics of ergot were given without avail, the patient dying of collapse. At the autopsy, the whole gastro-intestinal tract was found congested, while the sigmoid flexure and rectum were found thickened. At one point in the stomach there was a superficial ulceration. This case illustrates the fact that a very small ulcer may be the seat of a fatal hemorrhage. It was probably syphilitic.

Case II.—Chronic tuberculous ulcers of the bowels; catarrhal gastritis. A. R——, aged thirty-six years, admitted to hospital October 14, 1886. For the past five years the patient had suffered from pain over the pylorus and vomiting after eating. The pain had not been constant, but was marked after taking food. The order of symptoms had been, after a meal, pain, nausea, and vomiting. There never was any hæmatemesis. The patient was taken with severe epigastric pain and also vomiting, with severe intestinal cramps and abdominal soreness. A second attack occurred three months later. Two months ago, he had another attack. The pain he described as if the intestines were twisted or knotted. The stomach would retain nothing, not even ice water. Constipation and flatulence were present. Rectal injections could not be retained. The mouth and throat were swollen; vomiting of greenish matter occurred. The patient became delirious, collapse ensued, and he died on the third day after admission. No history of tuberculosis or syphilis had been obtained from him. At the post-mortem the lungs were found infiltrated with tubercles, and the mesenteric glands were cheesy. Tuberculous ulcers were present from the duodenum downward through the entire length of the intestine. In this case the patient died of ulcerative enteritis, while the stomach was merely in a condition of catarrhal gastritis. This case is especially interesting as showing the difficulty of distinguishing enteric from gastric ulcer. It was never suspected that his disease was anything but gastric ulcer, until the autopsy showed the error.

Case III.—Tuberculous phthisis; duodenal ulceration, etc. G. H——, aged twenty years, porter, admitted to the hospital May 6, 1880, was found on examination to be emaciated and in the third stage of phthisis. He had hectic and night sweats, with chronic diarrhœa. The patient died of exhaustion fourteen months after admission. The bowel was studded with ulcers from duodenum to cæcum, as shown by post-mortem examination. This case and the preceding one show that tuberculosis plays an important part in ulcer of the duodenum.

The two following clinical cases from my practice are sufficiently interesting to be detailed:

Case IV.—Ulcer of the stomach and intestine; typhoid fever; tuberculosis; membranous enteritis. The patient was put under my care by a physician April 12, 1898. The history was as follows: A. K——, aged nineteen years, had been delicate all her life. She had "enteric fever" in August, 1897, which lasted four weeks. A month later she had intestinal colic. Still a month later she began to cough, and diagnosis of acute tuberculosis was made. She had a daily rise of temperature, with night sweats, loss of appetite and flesh. Throughout her sickness a good deal of pain occurred in her stomach, coming shortly after meals. Iron, bismuth, silver, etc., did not relieve her. Menstruation was suspended for eight months. There was no vomiting. On examination it was stated that she had lost twenty pounds during the year. She complained of pain in the epigastrium after eating, with occasional flatulence. There was no movement without medicine, but Hamburg tea relieved her constipation effectually. She vomited food; there was pain on pressure over the centre of the stomach. Physical examination showed consolidations of both apices, as also scattered areas in both lungs. The pulse was weak and intermittent. The temperature was 99.8° F. Small doses of calomel stopped vomiting. Complete mental and physical rest was ordered, with some such nutrient as marrow, the prepared infant foods, and malt preparations, of which maltzyme was especially satisfactory. Carefully selected and nutritious foods were also prescribed at intervals of two hours, so that she took something six times a day. Starchy food was excluded as far as possible. Gradually, as her strength came to her, she was allowed to take short walks. This treatment was kept up for twelve months, at the end of which time she was gradually permitted to return to the regular diet of a woman in health. She had gained sixteen pounds. She now (January 30, 1900) has the general appearance of health, rides her wheel, and is constantly gaining flesh. Epigastric pain is only occasional, and this is caused by gaseous distention.

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[1] Medical Record, November 17, 1888, p. 582.

[2] Curtis: "Twentieth Century Practice of Medicine."

[3] Trans. Clin. Soc., London. 1893, vol xxxvi., p. 72. Leyden: "Ueber Pyopneumothorax." Zeitsch. f. klin. Med., 1880, Bd. i., p 320

[4] Chassaignac "Traité de la Suppuration," vol. ii., p. 341.

[5] Guy's Hospital Reports, 1892, vol. i.

Case V.—Gastro-intestinal ulceration; chronic gastritis, endocarditis; lateral curvature. In April of 1898 I saw in consultation a lady who had been under treatment for several years and had consulted many eminent practitioners both at home and abroad. Several summers earlier she had suffered from what was called acute gastritis. She then vomited blood. A diagnosis of cancer of the stomach was made, and a surgical operation was proposed. She had been suffering from mitral endocarditis and interstitial nephritis, but during a recent trip in Europe had gained some ten to fifteen pounds. After her return an attack of influenza ensued, and exposure to cold brought on a fresh exacerbation of nephritis. I found her much emaciated and suffering from gastric and abdominal pain increased by pressure. The liver was not enlarged. There was no thickening over the pylorus. Owing to emaciation the stomach could be accurately mapped out. From the duration of the disease and the absence of tumor, I excluded cancer. The heart's action was tumultuous. Her hands and feet were cold. The pulse at the wrist was almost imperceptible. The heart apex was carried to the left. There was much food undigested. Relief was given by kneading the bowels and continued application of warm compresses. Some improvement followed the use of the subgallate of bismuth and the tincture of adonis vernalis in doses of ♏ i., together with calomel followed by codeine. The sarcopeptones were retained. Stimulants were also given freely. The patient was greatly improved, when an accident happened on the third day after I first saw her; though admonished to keep perfectly quiet and not to rise from her bed for any reason, she insisted on rising, and during the exertion a large quantity of blood escaped from the bowels. Death followed at once.

Case VI.—Disseminated tuberculosis with tuberculous ulcers of stomach. I had the opportunity of seeing another interesting case at Bedford Mills, N. Y., in the practice of Dr. J. F. Chapman, of Katonah, N. Y. Miss M——, aged fifteen years, I found confined to her bed with all the symptoms of acute general tuberculosis. The case was beyond the reach of medical skill. The diagnosis was confirmed by the autopsy, the peculiarity being in this case that while the family give no evidence of tuberculous taint, the daughter was an extreme example of tuberculous infection, with numerous tuberculous foci in the stomach, in addition to those of the mesentery and peritoneum.

I should add that in these cases classed as tuberculous no bacilli were found, because at that time the tests for bacilli were unknown, but there was no doubt in my mind that they were tuberculous.

7 East Eightieth Street.

ON THE TREATMENT OF FATTY HEART.

By PROFESSOR TH. SCHOTT, M.D.,

BAD NAUHEIM.

In attempting to give the treatment of fatty heart I shall relate my own experience and also the changes which have occurred in the therapy of chronic heart disease in the course of the past century. We shall see that different theories have led to different modes of treatment.

Three varieties of fatty heart are generally recognized, viz., (1) that in which the fat lies as an overgrowth or penetrates between the muscular fibres, so that large quantities of fat are found covering the pericardium or underlying it, quite enveloping the heart. This condition may be observed at the apex, in the sulci of the large cardiac vessels, especially at the sulcus transversus and the base of the heart. The fat may even penetrate between the muscular fibres as deep as the endocardium. (2) Fatty degeneration of the muscle, in which more or less numerous globules of fat are intermixed with the muscular tissue and the action of the cardiac muscle is thus weakened. (3) When the fat tissue fills up, as it were, the lacunæ of the muscular substance; this is to be seen in hearts the muscular walls of which are quite enfeebled, and in which, as a consequence, the fat penetrates into the muscular substance, or in hearts which have become atrophied by myocarditic processes, and in which the fat is found in the lacunæ of the fibrous tissue. These globules of fat appear to the eye like yellow spots of various sizes. In this condition the fatty tissue is only accidental and has nothing to do with the original disease process.

That which we usually understand by a "fatty heart" is either an overgrowth or intermixture of fat, or it is a condition of fatty degeneration of the heart muscle. Not infrequently we find these two conditions coexisting and in a state of transition, so that it is difficult to distinguish one form from the other.

I shall now endeavor to consider fatty heart, properly so-called, viz., the first-named variety, with its transition to the second.

As we have no unequivocal symptoms of fatty heart, we are obliged to arrive at a diagnosis by a combination of conditions, by general observations, and by especial heart symptoms. Thus, a fatty heart may be diagnosed if the following conditions are detected: an easily induced sensation of fatigue in a person having an abundant deposition of fat over the body in general, or more especially upon the chest and bowels, with difficult breathing, amounting at first only to a slight oppression and ending in dyspnœa, with small feeble, frequent, and easily compressed pulse, with final dilatation of the heart, and when through weakness of that organ, or owing to the effect of an accumulation of fat around it or in its walls, the ictus cordis begins to disappear; further, a condition of general plethora, or fulness of the skin, and a sense of straining in the bowels, etc. But all these symptoms cannot be regarded as absolutely unmistakable signs, for I have met with many cases in which these symptoms were due to weakness of the heart caused by chlorosis or anæmia, overexertion, mental excitement, coitus nimius, or to the abuse of coffee, tea, alcohol, etc., all of which excesses it is known either weaken the cardiac muscle or affect the nerves of the heart. Only long experience will enable the practitioner to avoid erroneous conclusions, but in general we may say that the diagnosis of fatty heart is made rather too frequently. He who has patients under his observation for a certain length of time will be less liable to make a serious mistake in this respect.

The prognosis depends chiefly upon the state of the cardiac muscle, the duration of the disease and its symptoms, and, further, upon the etiology, age of the patient, etc. The stronger the heart muscle, the less advanced the state of degeneration, the younger the patient, the more normal the blood, the better will be our chance of curing the evil. The graver the symptoms, the more may we expect their temporary amelioration to be followed by relapses, and these are especially to be feared in old people suffering from a fatty heart and in whom other disorders are present. With the improvement of the system of treatment of chronic diseases of the heart, the prognosis of these cases has become much more favorable than formerly.

The prophylaxis plays an important part with such patients. In those cases in which, owing to heredity or to individual disposition, there exists a tendency to obesity, early attention should be given to physical exercise and to moderate mental activity, with such regulation of the diet as to prevent additional accumulation of fat. Whenever the physician has reason to diagnose the first stage of fatty heart, he should forbid the patient doing anything which might prove injurious to or weaken the heart, lest some degeneration of the heart muscle may already be present or about to occur. As all these precautionary measures will have to be spoken of in the general treatment of fatty heart, I need not dwell upon them at present.

Therapy.—It will not be uninteresting to recall, for a moment, the systems of treatment which have formerly prevailed. Before all others the means depended upon were of a pharmacological nature, especially such drugs as caused either nausea or vomiting; at a later period, bleeding was relied upon. Notwithstanding that these measures and remedies not infrequently resulted in collapse and weakness of the heart, or in prolonged periods of anæmia and chlorosis, yet they continued to be resorted to for a long time until they were supplanted by drastic purgatives; but these also were attended by so many dangers that they fell into disuse and gave place to the use of purgatives of a milder nature, which in their turn yielded to the employment of the modest mineral waters. The enumeration of remedies formerly resorted to would be imperfect, did I not mention the preparations of iodine, the use of which had many adherents. Although these preparations are still advocated by a certain number of practitioners, I must not fail to mention that all the salts of iodine are apt to destroy the albuminates, and by their irritant action upon the mucous membrane of the stomach and intestines so impair the appetite that their administration, if relied upon at all, should be reduced to a minimum. Another drawback to their use is the fact that they are more likely to reduce the general obesity than the fatty condition of the heart. The same objections apply to the lately recommended preparations of thyroidin. Doubtless in a certain percentage of cases their use has resulted in a more or less satisfactory decrease of fat, but this result, as I have of late had repeated occasion to demonstrate, is accompanied, in patients suffering from fatty hearts, with considerable danger, for the effect upon the cardiac muscle and upon the nervous system is such that death may result. Thus there may occur tachycardic attacks, dilatation of the heart muscle, insomnia, and nervous excitement amounting at times to mania. As regards oöphorin in tabloids, which during the past year has been recommended for the treatment of obesity in females and also for cases of fatty heart at the climacteric years, I must defer giving an opinion, at least for the present. A quarter of a century ago the principal rôle in the treatment was played by the mineral waters, and chiefly such as contained sulphate of sodium, like those of Marienbad, Karlsbad, Tarasp, etc. Especially were the springs of Marienbad relied upon, and they are still visited by many in the treatment of general obesity with a fatty heart. But even at these springs we no longer see, as formerly, that avidity in the use of the waters in order to obtain in the least possible time the greatest decrease in weight. The dangers of such a course of the waters were not infrequently such as even to threaten life, for patients have come to me from these springs, when in a course of four to six weeks such a loss of weight in proportion to the bulk of the body had been caused, that a rapid and marked diminution of the strength had resulted. One of my patients, who had previously been sent by her physician to Marienbad, was seized during her second week of treatment at that place with an acute attack of œdema of the lungs, and had to be sent home in a most critical state. The mineral-water treatment brings dangers to the heart which will be spoken of hereafter, but general debility, chlorosis, and anæmia, etc., are not infrequently caused by such prolonged purgative measures. There is a still further drawback in that if other modes of treatment are added to prevent a further accumulation of fat, the patient upon his return home is sure to have a return of the obesity. The injurious effect of such forced cures by the use of mineral waters containing sulphate of sodium caused many to abandon their use, and to turn for relief to such saline waters as those of Kissingen, Kreuznach, Nauheim, etc. But even these waters have been used in too large quantities. Formerly, I frequently met with patients for whom seven to nine glasses daily had been prescribed, each glass containing eight ounces of a one-and-a-half-per-cent. solution of salt. While it was not to be feared that such daily quantities of these waters would cause an immoderate reduction of weight, their use not infrequently brought about a gastric catarrh to which obstinate constipation was often added, requiring the active interference of the attending physician. To the late Beneke is due the credit of having been the first to draw attention to the fallacy of such severe procedures.

In the last half-century the method of treatment of fatty heart has been revolutionized. Entirely new procedures have replaced the old ones. The two names I must first mention are Stokes and Banting, or, more correctly stated, Harvey-Banting. To the first we owe the mechanical and to the latter the dietetic treatment. Both systems now not only form the basis of the therapy, but have been further developed in different directions and supplemented and made more efficacious by new methods. First, as to the dietetic therapy: The fundamental idea of the Harvey-Banting system was to inhibit further accumulation of fat in the body by means of abstinence from carbohydrates and from fatty food, and to impede the transformation into fat by the use of increased quantities of albuminates. Bearing in mind the perfectly reliable investigations of Pettenkofer and Voit, I feel thoroughly convinced that the total food supply prescribed by the originators of this system is insufficient in nitrogen to maintain the normal quantity of that element in the body, or, in other words, that the excessive supply of albuminates certainly leads to a decrease of fat, but causes at the same time a dangerous reduction of the albuminates of the body. The injurious effects of such a Harvey-Banting cure became but too soon evident in the supervention of general nervousness and debility, by insomnia, etc., and a baneful influence was produced on the functions of the heart by a weakening of the cardiac muscle. Furthermore, the excessive ingestion of albuminates may cause disturbances of digestion, and the predominance of nitrogen in the food has in some cases resulted in symptoms of a toxic nature; not infrequently gouty affections are thereby either evoked or increased in severity. It is not to be wondered at, therefore, if at the present time the Banting cure is but rarely recommended by a prudent practitioner. The modification suggested by Ebstein, who instead of albuminates increases the quantity of fat taken by the patient, may be called a system of insufficient feeding with all its dangers, and has therefore but few advocates. It is hardly necessary to mention the old ideas of Schroth, who prescribed dry bread exclusively, or those of Tarnier, who allowed nothing but milk, for they amounted in reality to forms of starvation with all their fatal consequences.

Among all these dietetic formulæ those of Oertel are most in harmony with the physiological statements of Pettenkofer and Voit, but unfortunately he combined with them a severe reduction of liquids, an idea first advanced by Dancil, and the well-known climbing system, which I shall discuss later. Oertel applied his system to cases of heart disease with or without obesity. However rational his system of treatment may at first appear, experience has shown that it is not without danger to the patient, the more so because he failed to differentiate between the use of alcoholics, effervescent beverages, and plain water. He, moreover, frequently reduced the fluids to such an extent—as low as twenty ounces pro die—that an injurious effect was sure to result. His view, too, that he could thus diminish at will the volume of the blood has proved erroneous. I shall state later what cases may be benefited by the use of the Oertel cure, but it may be mentioned here that I and many others have distinctly learned that the very condition which Oertel strove to prevent, an insufficiency of the heart-muscle, has certainly resulted from a pursuance of his treatment, and has been accompanied by dyspnœa, dyspepsia, insomnia, and in some cases by nephritis. Hence the Oertel cure has lost many of its adherents. Of all the systems of reduced diet in the treatment of obesity and of special heart diseases which have been proposed of late years, it may be said that they are dangerous. Many are apt to forget that a fatty heart is a heart weakened by muscular insufficiency. From what precedes we may conclude that no diet cure hitherto proposed is of itself sufficient either to prevent the development of a fatty heart or to benefit one without injuring the patient in other respects. In all cases of reduction of the fatty tissues we run the danger of at the same time diminishing the albuminates, whereby the muscular and nervous systems are sure to suffer. It is not a matter of indifference which organs are deprived of the albuminates, for the loss of a few grams of the cardiac muscles may do more harm than the reduction of as many pounds of albumin in some other part of the body, as, for example, in the extremities.

With our present knowledge we cannot, after a reduction of the albumin of the body has been brought about, state whence that constituent has been taken, nor do we know of any remedy to prevent a loss of a part of the muscular substance of the heart. Experiments upon animals have taught us that by starvation it is difficult to diminish the fat in or about the heart. We learn that the fat and the muscles of the body may be largely reduced without any appreciable diminution of the heart fat. Be it therefore understood that we cannot altogether dispense with dietetic measures, but they must be combined with other therapeutic procedures, of which the first to be mentioned is the

Mechanical Treatment.—This mode was first introduced by Stokes. He had noticed that people with fatty hearts suffered when climbing mountains, at first from dyspnœa, but that later, as he so well expressed it, "they got their second wind," and were then able to attain their object without being harmed thereby. But this mountain-climbing as a sole method of treatment soon fell into disuse and was abandoned on account of injurious effects which often resulted, and because of the violent opposition to it by scientific men. Many physicians then went to the other extreme and advised their patients to indulge in excessive rest, until about fifteen years ago, Oertel, having tried the Stokes system on his own person, endeavored to systematize mountain climbing by organizing in different places certain climbing excursions, better known under the name of "Terrain Kuren" (climbing cures). These consisted in various paths whereby the patient was at liberty to choose in gradation those of a level nature and others with more or less of a rise, while the character of still others was quite steep. Even this method was found to be followed in many cases by injurious consequences, giving rise to violent opposition—the reasons for which I shall speak of later—so that the number of those who prescribe the climbing according to Oertel's method has rapidly decreased.

Of late years a large number of apparatuses have been invented, having in view the diminution of fat by an increase of the muscular functions, and thereby a strengthening of the cardiac muscle. I will merely mention that of Gaertner, the rowing-machine, the contrivances of Nicander, the different chest exercises, etc.; but all these expedients were unable to rival the machines invented by Zander. I do not purpose to discuss their value here, having done so in previous publications in which I have called attention to their shortcomings; whether the apparatus lately invented by Herz can overcome the defects of the Zander machines remains yet to be seen.

The gymnastic treatment, first brought into notice as a therapeutical measure by my brother, the late August Schott, and by myself, consisting, as the readers of this journal know,[1] of exercises with resistance or self-resistance, can unhesitatingly and safely be resorted to in all the different forms of fatty heart. Provided the degenerative process is not too far advanced, and there are no other complications, and the age of the patient is not too far advanced, we begin at once with a resistance of middling strength, increasing rapidly to a vigorous resistance. The long rest generally taken after these exercises is not so requisite in the treatment of fatty heart. Of course such patients must take abundant exercise in the open air, but the climbing of mountains should not be allowed until the heart shows increased muscular strength and a more normal functional activity. As my brother and I have always declared, the climbing of mountains may form the ending but never the beginning of the cure, as only thus do we avoid the danger of overstraining and further weakening of the heart. On the other hand, we have to guard against too much rest;

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[1] Vide Theodor Schott: "Balneo-Therapeutics and Mechano-Therapeutics in the Treatment of Chronic Heart Disease," New York MEDICAL RECORD, February 14, 1891; "Treatment of Chronic Diseases of the Heart in the Light of Roentgen Rays," New York MEDICAL RECORD, March 26, 1898; "On the Treatment of Cardiac Neuroses," New York MEDICAL RECORD, March 11, 1899.

it is well known that all stout people incline to physical laziness, especially after meals. In order to bring about a diminution of weight and of fat, rest should never be indulged in after eating. If there be need of repose, the patient should lie down for a while before the meal and take a walk after it. This procedure alone will benefit those suffering from obesity and especially persons afflicted with a fatty heart. In combination with these physical exercises, massage will prove an efficient expedient for promoting the absorption of fat, but without exercise massage is unavailable for this purpose, and the reasons therefor I hope to demonstrate to my readers in a future paper.

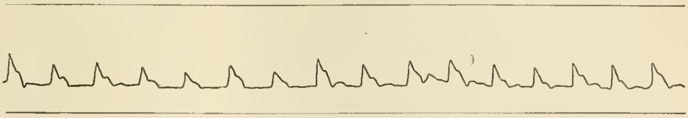
Fig. 2.—After Twenty Minutes' Exercises with Resistance.

Balneological Treatment.—In this field during the last decennium the application of the balneological and hydrotherapeutical treatment has been found to be of the greatest value. Hydrotherapy is preferably resorted to in the form of potations or douches, but with patients suffering from fatty heart extremes of temperature, high or low, may prove dangerous and should be avoided. The readers of this journal are doubtless familiar with the balneological method introduced by my brother and myself, and I will therefore merely state that when the degenerative process is not far advanced we can without fear proceed with baths of gradually increased concentrations of salt, as well as with baths with increased quantities of carbonic acid gas, and it is especially with fatty-heart cases that we can have early recourse to the use of Sprudel- and Sprudel-Strombäder (effervescent running-baths). Unless there are contraindications thereto, such as chlorosis and anæmia, rheumatic or arthritic complaints, or advanced age, all of which require a warmer temperature, we may with better advantage begin with the baths of low temperature. I generally order at first a temperature of 88° to 86° F., and gradually get down to baths of 77° to 76° F. The duration of the bath at the commencement of the course is usually ten minutes, and the bath is at first intermitted on the second day, and afterward every third or fourth day. The duration of the bath is gradually increased up to twenty minutes. I have rarely seen good results from a longer duration. Those cases of fatty heart associated with chlorosis and anæmia are especially and very rapidly benefited by various effervescent baths which I have mentioned.

The balneological-gymnastic method in combination with the dietetic treatment is undoubtedly the agent which to-day is most relied upon in the therapeutics of fatty heart, and the question arises, Have we better and more successful results by their use and application? Judging from my large experience in this field it is without hesitation that I can answer this question in the affirmative, so that I may say that the prognosis of fatty heart has now become much more favorable.

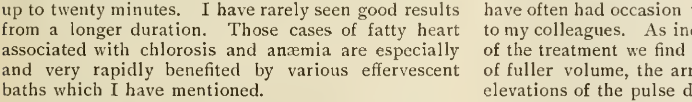
Fig. 1.—Before Treatment.

While with all the older methods of treatment which I have mentioned a diminution of the albuminates of the body was brought about simultaneously with the reduction of fat, we are now able to cause the fat of the body to be gradually consumed, while at the same time the muscular substance is not only spared but is frequently augmented, and the volume of the blood is increased. Thus, it may happen that the patients gain in weight, although a decrease of the panniculus adiposus and of the abdominal masses of fat may be clearly demonstrated. I have repeatedly described such cases in my writings, and among them have called especial attention to a patient suffering with kyphoscoliosis—a case exactly similar to that which Oertel enlarged upon with so much enthusiasm—who lost his fatty heart and all the symptoms connected therewith, without any loss of the weight of his body. But I must here energetically warn against a rapid loss of weight, especially one out of proportion to the bulk of the body. The relief produced by such a rapid decrease in weight is but too often of a delusive nature, for while the patient and his respiratory function are rendered temporarily more comfortable by the disappearance of fat from the bowels and thorax, general debility is sure to supervene very soon, and often violent dyspnœa as a result of the loss which the heart muscle sustains simultaneously with the reduction of the fat; various disturbances of the circulation occur, and the fatty degeneration with a rise of temperature is often followed by myocarditis with all its serious consequences. Such a picture is one which was formerly but too often seen, and even to-day is not infrequently met with. What a marked difference is seen as the result of a dietetic-balneological-gymnastic treatment correctly carried out! It certainly requires more time, but the risk is so much less and the success so much greater. Had I space I might relate a long series of such cases. Many of them have been published either by myself or by physicians who have familiarized themselves with our method of treatment in Nauheim.

By this method of treatment we soon notice a marked change for the better in the patient, and I have often had occasion to point out this improvement to my colleagues. As indicative of the favorable effect of the treatment we find that the small pulse becomes of fuller volume, the arrhythmia disappears, and the elevations of the pulse diagram, showing the elasticity of the arterial wall, become more visible and frequent; the pressure of the pulse gets stronger; a tachycardia disappears, while not unfrequently we see a bradycardia give way to a normal frequency; the pale or yellowish complexion of the patient becomes of a ruddier hue; the sounds of the heart become louder; the dilatation, which is always present in cases of advanced fatty heart, gradually disappears; the ictus cordis, which could scarcely be felt, becomes more perceptible, the respiration freer and deeper, and the capability for physical exercise increases day by day, so that finally the patient can walk for hours without trouble, and even ascend slight elevations, and now it is when this amount of improvement has been achieved that he may safely be allowed to make somewhat longer excursions in the mountains. It does not follow that because, by assiduous attention and constant care, and with the aid given by the frequent use of the thermometer, we have brought about such a favorable condition in our patient, the treatment can then be abandoned; on the contrary, we must impress upon him the necessity of his continuing for many months the same regimen of diet and exercise, and if he be of middle or of advanced age the danger of a relapse should not be lost sight of; in a younger person this danger is by no means so probable. I therefore generally advise the patient on his return home to continue for quite a while his gymnastics with resistance, for by so doing I am sure that most striking and enduring results are accomplished. One ought never to forget that in cases of fatty heart our chief aim should be to strengthen the cardiac muscle and to maintain its vigor. The latest researches in this field all go to prove the correctness of our views. The increased bulk of the heart is only due to its being covered by or partially made up of fat, while its muscular substance is inferior in quantity to that of a normal organ, as has been fully confirmed by the latest investigations of C. Hirsch; the quantity of the muscle of the heart is always in a direct proportion to that of the whole body. Hence the more we increase the muscular strength of the individual *in toto*, the more we strengthen his cardiac muscle. That such a satisfactory result may be readily obtained by our balneological and gymnastic method, I have already attested in my published cases. Of these many were cases of fatty heart under my care at Nauheim, and their daily improvement and ultimate recovery I was able to demonstrate to a large number of physicians stopping in that town, some for study and some for their health.

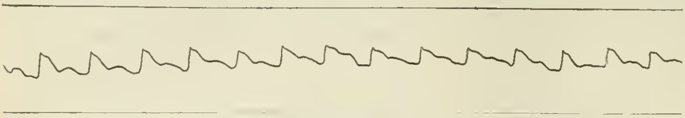

Fig. 3.—After an Effervescent Bath (Sprudelbad) of Spring No. VII., of 86° F. and ten minutes' duration.

As an ocular demonstration of the beneficial effect of bathing and of gymnastic exercise I give here without further details the diagrams of the pulse and measurements of its pressure, taken from two patients. Figs. 1 to 3 refer to a wine merchant, thirty-three years of age, whose height was 1.70 metres, but who weighed two hundred and twenty German pounds. He suffered greatly from fatigue and from dyspnœa even in a state of rest. Frequency of the pulse after a long repose, 110; pressure of pulse, 95 mm. Hg.; respiration, 26.

Fig. 2 shows the effects of gymnastic exercises of twenty minutes' duration resorted to immediately after the first medical examination. The patient felt relief in breathing. The pulse was fuller and much less compressible; frequency reduced to 100–98; pressure, 110 mm. Hg.; respiration, 21.

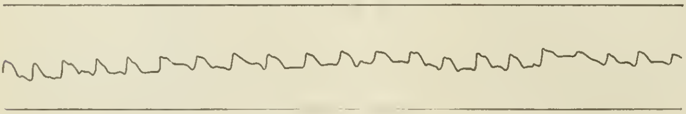

Fig. 4.—Before Treatment.

Fig. 3 shows the effect of an effervescent bath (Sprudelbad) of spring No. VII., of 86° F. temperature and ten minutes' duration, which was taken immediately after the above-mentioned exercises. The respiration was lowered to 18; pressure of the pulse rose to 115 mm. Hg. Its frequency went down to 94. After a treatment of six weeks the patient, although he had lost only six pounds in weight, was perfectly free from all his complaints.

Fig. 4 is taken from a lady from New York, Mrs. S——, forty-seven years of age, of middling stature; weight one hundred and eighty-two pounds. Pulsus inæqualis; frequency, 132; pressure of pulse, 95 mm. Hg. The patient took a cure of five weeks' duration in Nauheim, when in order to avoid the season of extreme summer heat she spent an interval of two weeks among the mountains, and then resumed the course of treatment in Nauheim for another three weeks. She took altogether thirty-four baths, and once or twice daily went through with the gymnastic movements with moderate resistance. The reduction of the patient's weight amounted to only four pounds, but while before treatment her breathing had been short she could now walk for hours without trouble. The anæmia had left her, and she felt perfectly sound and well.

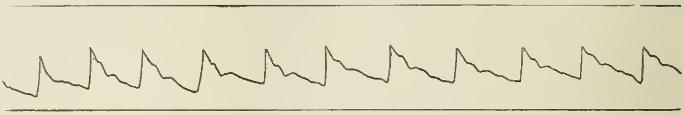

Fig. 5.—After Treatment.

Fig. 5 shown clearly the change of the pulse; frequency, 72; pressure of the pulse, 130 mm. Hg.

ROUND ULCER OF THE DUODENUM.

By PERCIVAL R. BOLTON, M.D.,

INSTRUCTOR IN SURGERY, CORNELL UNIVERSITY.

The great rarity[1] of ulcer of the duodenum, in New York at least, has led me to think that a review of this subject and the report of several cases which have been admitted to the Hudson Street Hospital, four of them in the care of Dr. L. A. Stimson and one in my own, would not be without interest.

Case I.—Man, aged thirty-five years, a United States mail agent, a hard drinker. Eight hours before admission he developed very severe abdominal pain. There was no vomiting. On admission, the abdominal wall was tense; there was no distention; there was tenderness over the region of the gall bladder. The temperature was normal; the pulse 90. The temperature rose, and the tenderness became general; there was no distention. The liver dulness disappeared. The probable diagnosis was appendicitis. Twenty hours after the first symptom the abdomen was opened over the appendix, and a large amount of greenish-brown fluid was evacuated. The appendix was normal. There was a well-marked peritonitis. The patient's general condition prevented any further search for the focus of infection. He did not rally, and died some hours later.

The autopsy record has been lost, but Dr. Fielding Taylor, who was house surgeon at the time, says that there was a well-developed peritonitis, and that a round ulcer of the posterior wall of the first part of the duodenum was found about two inches from the pylorus. Its base presented a minute perforation.

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[1] Kinnicutt, 0.4 per cent. among thirty thousand autopsies.

Case II.—Man, aged twenty-eight years, sailor; a hard drinker. No previous diseases of significance were noted. Two days before admission, without assignable cause very severe abdominal pain developed. It was not, so far as could be learned, referred to any particular region of the abdomen, but was accompanied by vomiting. There is no note of the character of the vomitus. The same condition continued the next day, and on the third he was admitted to the hospital. At this time there were general distention and tenderness of the abdomen; but no localized tenderness and no loss of liver dulness. The temperature was 103° F.; respiration, 20; pulse, 120. No further diagnosis was possible than peritonitis of unknown origin. The abdomen was opened by a liberal median incision. The intestinal coils were everywhere matted by recent fibrin. There was little or no fluid free in the peritoneal cavity. The patient's condition did not warrant a protracted search for the source of infection, and after rapid irrigation and the introduction of drains he was returned to his bed. Death followed on the third day, or the sixth from the time of the initial pain.

The autopsy showed a general peritonitis. In the posterior wall of the third part of the duodenum there was a sharply lined ulcer 2.5 x 0.75 cm. in dimensions, perforating the gut and exposing the pancreas, which at this point was necrotic and infiltrated by pus, as was the subperitoneal tissue about the duodenum as far as the jejunum, from which region the peritonitis was judged to start. The mucous membrane of the duodenum and ileum was pigmented, and the solitary follicles of the latter were very prominent.

Case III.—Man, aged thirty-five years, brakeman; a hard drinker. He is said to have had a similar attack thirteen years ago, and typhoid fever three years ago. A short time prior to admission he developed severe, not localized abdominal pain, accompanied by vomiting. On admission, the abdominal wall was rigid; there was no distention, but very great, though not localized, tenderness. Temperature, 102° F. The symptoms gradually improved until the fourth day, when there developed the symptoms of a rapidly spreading peritonitis, which seemed most probably to have originated in the appendix. The abdomen was opened over the appendix in the usual way, and a quantity of yellowish, not offensive fluid evacuated. The appendix was found to be normal. A well-marked peritonitis was present. At this time the patient's general condition became such that no further investigation could be safely carried out, and after placing drains he was returned to bed. He did not rally, and died some hours afterward.

At the autopsy the peritoneal cavity was found to contain some ounces of sero-purulent fluid. The peritoneal surfaces were everywhere congested and covered with a thin layer of fibrin. The first portion of the duodenum was adherent to the under surface of the liver to left of the gall-bladder by recent fibrin, and presented a perforation 2 mm. in diameter. The superior wall just beyond the pylorus contained an ulcer with indurated walls, whose base was perforated as above described. There was a second old but superficial ulcer in the posterior wall just beyond the pylorus.

Case IV.—Man, aged twenty years, an Assyrian, single; a tailor. There was no note of alcoholism. Seven months ago he had an attack of illness characterized by pain in the region of the liver and vomiting, lasting two weeks. A few hours before admission he developed severe pain referred to the right side of the abdomen, and accompanied by vomiting. On admission, the abdominal walls were found to be rigid; there was general tenderness, perhaps a little more marked in the region of the appendix. There was no tumor. The temperature was 102° F.; respiration, 48; pulse, 118. The probable diagnosis was appendicitis. Twenty hours after the beginning of the attack the abdomen was opened by an incision over the appendix, and a quantity of watery fluid and odorless gas evacuated. An active peritonitis was present. The patient's general condition failed rapidly and compelled the abandonment of further procedures. Death followed in twenty-four hours.

On autopsy, the abdominal cavity contained several ounces of thin, offensive pus. There was a general peritonitis associated with considerable exudation of lymph. Immediately beyond the pylorus in the anterior wall of the duodenum was a round ulcer 1 cm. in diameter, whose edges were thickened and whose base presented a small perforation.

Case V.—Man, aged forty-five years, German, married; clerk. The family history was good. He was a moderate drinker. A similar attack is said to have occurred four years ago. Personal history otherwise was negative. The patient was perfectly well until six hours before admission, when he was seized with severe pain referred to the right iliac region, which gradually increased in severity, becoming general, but most intense in the right side of the abdomen. On admission, the abdominal wall was tense; there was no distention; tenderness was well marked over the appendix; there was no tumor; liver dulness was present. The temperature was 100° F.; respiration, 32; pulse, 104. At the time of operation, twenty-two hours after the onset of pain, the symptoms were the same except that distention was beginning to develop. The probable diagnosis was appendicitis. The abdomen was opened over the appendix, evacuating a considerable amount of turbid serum. A well-marked peritonitis with fibrinous exudate was present in the right half of the abdomen and iliac fossa, but the appendix, except for its peritoneal coat, was normal. Following up the ascending colon and its hepatic flexure the region of most intense peritonitis was found beneath the liver and about the duodenum, but no perforation of this part of the intestine could be recognized, though it was assumed to exist. Accordingly a large iodoform-gauze drain was carried from the region of the duodenum out through the abdominal wound, which had been extended up to the margin of the costal cartilages. The whole abdomen was repeatedly flushed, particularly the pelvis, where a large amount of fluid exudate was found, and ample drainage provided for. The patient rallied well and did fairly for several days; then he became septic, dying on the seventh day after operation.

The autopsy showed the following: In the regions of the wounds and in the iliac fossa the parietal peritoneum was adherent to the subjacent coils of intestine which were also adherent to one another. There was a moderate amount of puro-fibrinous exudate in the right iliac fossa and along the ascending colon. The omentum covered most of the coils of small intestine, and these showed only slight congestion and injection of the peritoneal coat. The pelvis and abdomen generally were perfectly free from fluid of any sort. There was no ulceration of the slightly thickened mucous membrane of the stomach. The pylorus was normal.

Immediately below the pylorus on the antero-superior surface of the duodenum was an old oval ulcer 1.5 cm. in length, its long axis being transverse, whose edges were thickened and rounded. The base of the ulcer was composed of peritoneum and presented a perforation 8 mm. in width. A depressed scar 1 cm. in diameter was located 2 cm. to the right of this ulcer. The rest of the duodenum was normal. The mucous membrane of the cæcum and ascending colon presented a number of grayish irregular patches of necrotic false membrane.

Lesions.—These cases illustrate fairly well some of the pathological features of the disease under discussion. In four of them the ulcer occurred in the first part of the duodenum within two inches of the pylorus, twice in the anterior wall, once in the posterior, and once in the superior. In one case the posterior wall of the third portion was the site of ulceration. In three of the cases the ulcers were single; in the other two there was in one the cicatrix of a previously healed ulcer in the anterior wall of the first part, and in the other superficial ulceration of the posterior wall of the first part.

The ulcers averaged a little more than 1 cm. in width, and perforation had occurred in all; three times into the general cavity, once behind the peritoneum, once toward the under surface of the liver to which the duodenum was adherent. In all five a spreading or a generalized peritonitis was present.

Of Collin's[1] group of 262 cases, in 242, or 92.3 per cent., the ulcer was found within 4 cm. of the pylorus, in 10 in the descending portion within 10 cm. of the pylorus, and in 6 cases in the third portion. Of 119 cases in which the ulcer occurred in the first portion of the duodenum, in 68 the anterior wall was the site, in 3 the anterior superior, in 39 the posterior, in 6 the posterior superior, in 2 the posterior inferior, in 10 the superior, in 1 the inferior; of 8 ulcers of the second part 5 occurred in the internal wall, 2 in the posterior, and 1 in the external; of 4 ulcers of the third part, in 3 the anterior superior wall was affected, in 1 the posterior.

In number there is considerable variation. Among 233 cases, in 195 it was single, in 38 there were two or more. There is considerable variation in size and outline, but usually the ulcer is not large, involving but a small portion of the circumference of the gut; the base may be formed by the submucous, muscular, or peritoneal coats, and occasionally by the tissues of neighboring structures to which the duodenum may have become adherent. The margins and base of the ulcer are commonly very tough and dense, and show but feeble attempts at repair.

Perforation is stated by Collin to have occurred in 69 per cent. of his group of 262 cases, with a circumscribed or general peritonitis in 125 cases; in 38 perforation is said to have been prevented by adhesions to the pancreas, liver, or gall bladder, but the percentage of perforations is placed at a lower figure by other writers, *e.g.*, as low as 42.8 per cent. by Chvostek.[2] This discrepancy depends, no doubt, upon the great uncertainty that must always practically attend the diagnosis of duodenal ulcer.

The circumscribed peritonitis which sometimes follows perforation may result in accumulations of pus beneath the diaphragm, subphrenic abscess (Maydl), or in fistulæ between the duodenum and the surface of the abdominal wall, the colon, or gall bladder; or fatal erosion of contiguous vessels may occur.[3]

As the effects of cicatrization Collin notes, among thirty-nine cases, dilatation of the stomach or duodenum, stenosis of the duodenum, obliteration or dilatation of the common bile duct, stenosis of the orifice common to the common bile and pancreatic ducts.

Etiology.—By most pathologists round ulcers of the duodenum are regarded as identical with those of the stomach in general characters, and are supposed to be due to the action of gastric juice upon the mucous membrane, one or other, or both, being abnormal. This explanation depends for its basis upon the fact that the vast majority of duodenal ulcers are found in the first and second portions, above the entrance of the pancreatic duct, and therefore where the mucous membrane is exposed to the acid gastric contents prior to their neutralization by the alkaline pancreatic juice and bile.

Sex, for some reason, seems to be an important etiological factor. Collin states that 79 per cent. of the cases of duodenal ulcer occur in males; the greater frequency in males being due to the more habitual use of alcohol by that sex.[1]

As to the influence of age, Collin arranges 297 cases as follows:

Between	birth	and	10	years	42
"	11	"	20	"	24
"	21	"	30	"	43
"	31	"	40	"	52
"	41	"	50	"	46
"	51	"	60	"	41
"	61	"	70	"	18
"	71	"	80	"	10
"	81	"	90	"	2
"	91	"	100	"	1

In this table are included 38 ulcers following burns and 3 following erysipelas, etc.

Symptoms.—It is indicative of the difficulty of diagnosticating the presence of duodenal ulcer that in the great majority of cases the lesion has not been recognized before perforation. Indeed it has been stated that diagnosis is impossible; but Boas[2] denies this and narrates the histories of several cases in which he was able to recognize the presence of the ulcer. He groups the symptoms under the following heads: 1. Sensitive points—correspond to seat of pain in parasternal line, 2 cm. below the gall bladder. There are numerous exceptions. 2. Vomiting. Vomiting, probably reflex, occurs after prolonged and severe pain; it is present in 17 per cent. of the cases. 3. Intestinal hemorrhage and hæmatemesis are present in one-third of the cases in marked degree. The loss of blood may be so great as to cause symptoms of collapse or even to be fatal. Repeated intestinal hemorrhages along with the other symptoms of the ulcer are characteristic. 4. Composition of the stomach contents. Observations have differed so much that at present no value is to be attached to hyper- or subacidity. 5. Urine, negative. 6. Jaundice is not significant.

Perforation of the duodenum at the site of ulceration, however, marks the beginning of a sequence of symptoms of severe character which vary somewhat, depending upon the seat of the perforation, the rapidity of the escape of intestinal contents, and development of adhesions. The first symptom noted has usually been severe pain referred at times to the region of the duodenum, to the upper part of the abdomen, or not localized at all. Vomiting usually promptly follows the onset of pain.

In some of the reported cases shock was said to have been present at first,[3] but in none of the Hudson Street cases was this at all conspicuous, and in the patient who was admitted very soon after the beginning of his symptoms none was present.

The next symptoms to appear are those of peritonitis. These are usually those of the severe and rapidly spreading type, and directly controvert the theory that infection by the contents of the upper parts of the intestine is less serious than by that lower down. Less often the peritonitis is circumscribed. In either case the inflammation begins in the right side of the abdomen. It thus simulates with great exactness the peritonitis which originates in appendicitis. Indeed the whole picture is that of appendicitis, and in many of the cases operated upon the probable diagnosis was appendicitis.

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[1] Collin: Thèse de Paris, 1894.

[2] Wien. med. Jahrb., 1885.

[3] Boas: "Darmkrankheiten," p. 307.

[1] Boas: *Loc. cit.*, p. 297.

[2] Boas: *Loc cit.*, p. 300.

[3] Perry and Shaw: Guy's Hospital Reports, 1893, p. 266.

There are other lesions giving rise to peritonitis, with which it is readily possible to confound perforating ulcer of the duodenum, and of these ulcer of the stomach, pancreatitis, suppurations of the liver and biliary ducts occur to the mind at once. About the symptoms of the peritonitis itself there is nothing that is diagnostic, and the only really significant symptom, which may be but is not always present in intestinal perforations of whatever kind, is loss of liver dulness. When present, this is a symptom of great value, but its absence is by no means conclusive.

Course; Prognosis.—What proportion of ulcers of the duodenum cicatrize spontaneously is difficult to say; a considerable number do so, as the tables of Collin[1] show, where the effects of thirty-nine cicatrized ulcers are recorded. It would seem equally difficult to estimate the duration of the ulceration, and I know of no figures that furnish any information on this point, and I question the value of attempting any computation in this direction through the close relation this ulcer bears to that of the stomach. It is probable that a given ulcer will perforate the wall of the intestine sooner or later, and in that event the prognosis is always most grave; the peritonitis so produced is most likely to become a generalized one and terminate fatally; a circumscribed peritonitis with rupture of the abscess into a neighboring viscus or through the abdominal wall is the rarest event, and is never to be counted upon. Nor have any considerable proportion of patients submitted to operation after perforation has occurred survived. Of twenty cases of perforation treated by operative measures collected by Darras,[2] seventeen patients died and three only recovered. But here again, as in almost all cases of perforative peritonitis, the result of operative interference depends in no small measure upon the period at which it is undertaken.

Treatment.—Ulcer of the duodenum is not likely to come into the hands of the surgeon for treatment before perforation has occurred, and it is, therefore, this phase of the lesion that will be considered here. In rare instances the shock consequent upon perforation may be very severe, and even fatal,[3] but, as a rule, it is not very conspicuous, as might be inferred from the slow escape of intestinal contents through a minute opening. If at all marked or severe, it goes without saying that shock must be energetically combated before any extensive operative procedure may be undertaken. Nevertheless interference must not be too long delayed, and I think no one will dispute the statement that in the presence of a spreading peritonitis there is far less danger to life in incision of the abdominal wall than in delay. Hence I believe that the earliest possible moment is the time for operation.

The problem presented resolves itself into two factors: (1) the treatment of the duodenal ulcer; (2) the treatment of the peritonitis.

In a certain proportion of cases circumstances, notably a rapid decline in the patient's general condition, or failure to discover the perforation, may render any direct attack upon the ulcerated duodenum impossible, and make drainage by carrying a gauze tampon from the site of perforation out through the abdominal wall the only plan available. But this should be regarded as only tentative, and a more rational scheme carried out as soon as may be.

Various operative procedures have been practised at times upon the ulcerated and perforated wall of the duodenum. Closure of the perforation by sero-serous sutures seems hardly sufficient to achieve more than obliteration of the perforation; the ulcer itself persists, and even if cicatrization occurs there is no provision against the consequent distortion or narrowing of the gut. Resection of the segment of the duodenum which bears the ulcer is objectionable also. It is applicable only in the first part of the duodenum and in the presence of a single ulcer or at least multiple ulcers over only a very limited longitudinal extent of intestine, and finally it seems unnecessary except when a great part of the circumference of the duodenal mucous membrane is involved. Gastro-enterostomy, except to supplement excision of so much of the duodenum that enterorrhaphy cannot be practised, has nothing to recommend it.

The most eligible plan of treatment consists in excision of the ulcer. This may be done in almost any part of the duodenum except the entrance of the pancreatic duct, and is not at all difficult in the first portions of the duodenum where ulceration is most apt to occur. The excision need not go very wide of the ulcer, but must be closed by Czerny-Lembert sutures, as in pyloroplasty, so that the suture line lies at right angles to the long axis of the gut.

The second factor in the problem, the treatment of the peritonitis, will depend in a measure upon whether the inflammation is localized, spreading, or general. For a peritonitis well circumscribed by adhesions nothing is necessary beyond sponging out the pus present and supplying adequate gauze drainage. For a more extensive peritonitis, and one that is spreading, it is doubtful how much and how little had best be done. It is the practice of some surgeons to expose the inflamed areas of peritoneum by eviscerating the patient, and to remove all of the adherent flakes of lymph, to sluice the peritoneum with salt solution, and then to return the intestine. Others do not allow the intestine to prolapse at all, but repeatedly flood the peritoneum with salt solution. Afterward in either plan the peritoneal cavity is sponged dry or left full of salt solution.

Again, by many operators the freest possible drainage is provided by carrying gauze or tubes to all of the conventional drainage areas of the peritoneum, making additional incisions through the abdominal wall if they are needed. On the other hand, the free use of drains is sometimes regarded as dangerous and as likely to afford routes of infection that in the absence of drains would not exist.

Patients recover at times from septic peritonitis treated in any of these ways, so that at present no very definite rules can be formulated.

I myself am inclined at present to the opinion that no great advantage is gained in the treatment of peritonitis by eviscerating the patient and submitting the already inflamed peritoneum to the prolonged exposure of manipulation necessary to remove adherent flakes of fibrinous exudate. On the contrary, I feel confident that by this proceeding shock is substantially increased without any compensating advantage, for the same removal of fibrin may be as well accomplished by passing the intestine beneath the wound; and it is certain that so far as the removal of fluid exudate is concerned this can be just as thoroughly done by carrying large quantities of salt solution through the Chamberlain tube to all parts of the peritoneal cavity; nor should one hesitate to break down adhesions for this purpose. Such irrigation, however, must be carried on until the overflowing fluid returns clear. Many times in the course of irrigations made in this way I have noted that marked improvement in the pulse occurred. After this irrigation the peritoneum should be sponged fairly dry; there is perhaps some advantage in leaving a quantity of salt solution, but an excess quickly finds its way out into the dressings.

As to the use of drains, no doubt a strip of gauze should lead down to the point of infection, and I habitually also drain in this way areas of peritoneum inflamed to the degree of producing a fibrinous exudate, but I have not found it necessary to drain regions which have simply been the repositories of turbid serum and which have not advanced beyond the appearance of pretty active injection.

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[1] *Loc. cit.*

[2] Darras: Thèse de Paris, 1897.

[3] Perry and Shaw: *Loc. cit.*

THE PROPHYLAXIS AND TREATMENT OF GONORRHŒA BY METHYLENE BLUE.

By JOSEPH ALAN O'NEILL, M.D.,

NEW YORK.

Methylene blue administered internally will cure gonorrhœa in from four to seven days. To the diplococcus, which is the specific cause of this disease, it is especially fatal. The pyogenic bacteria that make gonorrhœa a mixed infection succumb very promptly to this germicide.

It is best given in gelatin capsules in one-grain doses three or four times a day. After the fourth day the dose may be reduced to twice a day. Given alone it sometimes causes irritation of the neck of the bladder, but when combined with oil of nutmeg there is no trouble of this kind. Oil of sandalwood is a desirable adjuvant because of its diuretic action and also on account of its sedative effect upon inflamed mucous membrane.

For several years methylene blue has been used in solutions varying in strength from 1 : 1,000 to 1 : 100 for direct irrigation of the urethra in acute gonorrhœa. But conservative practitioners are so opposed to this method of treatment, and the staining-properties of the methylene blue are so pronounced, that for use in this way it has not become very popular. Recent observations show that, when given internally, it reappears unchanged in the urine within two hours. This, of course, simplifies the problem of cleanly and complete urethral irrigation. By giving four one-grain doses of methylene blue daily there is always enough of it in the urine to kill all the germs it comes in contact with. This is irrigation "from above," irrigation not of the urethra alone, but of the entire urinary tract. By this method of irrigation there is no danger of forcing the infection into remote recesses of the genito-urinary organs. The urine impregnated with the methylene blue not only kills the germ, but also carries away its corpse.

Methylene blue is a coal-tar product, one of the aniline colors, and, like the other derivatives of the series, it lowers the blood pressure, diminishes the sensibility of the sensory nerves, and is, therefore, an antipyretic and an analgesic. In large or long-continued doses it causes vomiting, vesical tenesmus, and diarrhœa. Piotrowski reports ephemeral albuminuria, cephalalgia, nausea, and malaise from the exhibition of from one to three grains. These results are not confirmed by other observers; hence it is believed that he used impure drugs, possibly methyl blue.

I have seen troublesome gastric symptoms follow the administration of the methylene blue of the shops, but with the following formula put up for me in elastic capsules I have had uniformly satisfactory results: ℞ Methylene blue, gr. i.; oil of nutmeg, gtt. i.; oil of sandalwood, gtt. ii. I never continue the use of the above formula for more than ten days without intermission, and while giving it I instruct the patient to drink freely of water.

The recent widespread interest in methylene blue as a cure for gonorrhœa probably had its beginning in the address of Prof. Austin Flint, delivered before the New York State Medical Association in May, 1895, when he as president opened the eleventh annual meeting of that body. In the course of his remarks Dr. Flint said:

"In a few cases of gonorrhœa that were incidental to other diseases in the medical wards of Bellevue Hospital, I used methylene blue alone internally with great success. . . . In two of my recorded cases the results were truly remarkable. The first case was that of a man, thirty-five years of age, with moderate but characteristic discharge, which had existed for two or three days. He was put upon methylene blue, gr. iss. three times daily, and had no other treatment. The next day the discharge was very much diminished and the ardor urinæ had disappeared. I saw the patient again on the ninth day, and he was perfectly well. He stated that the discharge had ceased on the fourth day.

"The second case was that of a man, fifty years of age, with his first attack, who was seen by me the first day. In this case the gonococcus was discovered in the discharge. The patient took gr. ii. of methylene blue three times daily for three days, and twice daily for four days. There was a great diminution of the discharge on the first day, and on the seventh the patient was entirely well."

My results with this agent, while not so brilliant as those reported by Dr. Flint, have nevertheless been very satisfactory. In no case have I found it necessary to continue treatment for more than ten days. I have seen the thick, purulent discharge reduced in twenty-four hours to a thin, colorless mucus. This serous exudate would seem to me a necessary aftermath of any acute ulceration. Denude mucous membrane in the urethra or anywhere else, and there is bound to be some oozing of serum until the abrasion is healed. The mission of the methylene blue is accomplished when it has destroyed the bacteria of suppuration. This it does within a remarkably short time. It seems to have a specially deadly effect upon the gonococcus; and this leads me again to quote Dr. Flint, who, in closing his address, said:

"It is a reasonable scientific proposition that methylene blue would probably act as a prophylactic against gonorrhœal infection in impure intercourse."

For obvious reasons positive results from such preventive treatment are not obtainable; still it is so logical that it seems the proper treatment to advise for any patient who may need it. The physician who by this advice prevents the development of a single case of gonorrhœa really deserves his title—doctor.

Against such doctrine the moralist may rise in his wrath and charge collusion against social purity; but after discussing this theme at length with a number of the best and ablest physicians in New York, I am satisfied that the profession is ready and willing to meet the charge. Gonorrhœa is a social vulture that preys upon trusting women and innocent babes, and the physician who with a full knowledge of its remote results fails to give prophylactic counsel is indeed a colleague of the sinner, a party to a sin that menaces society.

Contrast the distorted dream of the social purist with the increasing list of hysterectomies, ovariotomies, and other mutilating operations made necessary by ignorance of simple prophylactic principles. Witness the anguish of the young mother who sees her babe blinded for life by ophthalmia neonatorum—and then dare to tell the father that it might have been prevented, not by instilling a silver solution into the eye, but by giving him a little golden advice about his gonorrhœa.

The prevention of gonorrhœa is as legitimate and laudable as the prevention of smallpox. To tell a man who has been exposed that methylene blue may forestall the penalty of his impurity can no more be regarded as aiding immorality than could the statement that vaccination will prevent smallpox. To withhold this information will not in the least tend to clear the social atmosphere nor to advance the interests of morality.

202 West Eighty-second Street.

Clinical Department.

URETERO-VAGINAL FISTULA; OPERATION; CURE.

By F. W. JOHNSON, M.D.,

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L. H. N—— single, thirty-five years of age, presented herself January 31, 1898, with the following history: She had been flowing slightly every day for the past three months without pain. Previous to this she menstruated every four weeks. She has lost five pounds in weight. The flowing has been most profuse during the afternoon and night. Menstruation began at the age of twelve years, and was perfectly regular every four weeks until three months ago. She flows from five to seven days, and saturates eight to ten napkins. She has scarcely any pain. She has no leucorrhœa, no vesical symptoms, and no constipation. Her mother died at the age of seventy, of cancer. Her father died, aged forty years, of some "liver trouble." She has always been strong and well, working in a factory since she was eighteen years old.

Physical examination revealed a small fibroid on the posterior wall of the uterus. On February 5, 1898, the uterus was curetted in order to get a specimen for microscopical examination. The pathologist reported that a microscopical examination of the scrapings showed marked proliferation of atypical glands in places invading the muscular tissue; also numerous small areas of degenerated and proliferated epithelial cells. The diagnosis was adeno-carcinoma.

On February 8, 1898, a complete suprapubic hysterectomy was done. Before opening the abdomen the cervical canal was thoroughly cauterized and the cavity packed with sterile gauze, and the cervix separated from the vagina at the vault anteriorly, laterally, and posteriorly, with the cautery. The uterus with tubes and ovaries was sent to the pathologist, who reported as follows: "The uterus shows one or more characterstic intramural fibroids of small size, and near the internal os two cauliflower excrescences, the size of an English walnut. A microscopic examination shows adeno-carcinoma of the uterus, involving principally the fundus, but showing no evidence of disease of tubes or ovaries."

On the separation of the slough made by the cautery, part of the urine began to run away through the vagina; the other part was passed naturally. Except for the leakage, the convalescence was perfect. On making an examination I found what appeared to be a uretero-vaginal fistula.

After waiting nearly two years without any improvement in the leakage, she consented to an operation which I had proposed long ago. Having seen the fistula a great many times, I had made up my mind that the ureter had been divided throughout its whole diameter just where it entered the bladder. When the patient was lying down or sitting no urine escaped into the vagina. Her general health had not appreciably suffered, and owing to her scrupulous cleanliness the vagina was in a healthy condition.

I had made up my mind to do the operation described by Dr. Howard A. Kelly for ureteral fistula at the base of the bladder. On examining the patient when she was etherized for the operation, January 11, 1900, I found the fistula was in the lateral wall of the ureter. An oval denudation in the vaginal walls and in the ureteral walls around the opening was made similar to the denudation for a vesicovaginal fistula. The sides of the denudation were brought together by means of interrupted silver-wire sutures.

February 20, 1900: The operation was a success, and there has been no leakage of urine since it was done, and what is better, there is no evidence of a return of the adeno-carcinoma.

EPILEPTIFORM CONVULSIONS, FOLLOWING THE INTRANASAL APPLICATION OF COCAINE.

By SAMUEL KOHN, M.D.,

NEW YORK.

Although the varied manifestations of the toxicity of cocaine have become fairly familiar to the medical profession, cases just like the one about to be described are so rare as to deserve more than passing notice.

C. R——, aged forty-six years, a man of strong physique, weighing about one hundred and eighty pounds, commenced to bleed from the nose at 4 P.M., April 29, 1899; at 5:30 P.M. I was called. Blood was flowing freely from both nostrils, particularly from the left; considerable blood had found its way through the posterior nares, pharynx, and œsophagus into the stomach, as was evidenced by the vomiting.

The patient sat with his head inclined forward, his face looking into a wash-basin containing considerable blood; the countenance was pale, and the man was nervous and trembling. Leaving the question of diagnosis for later consideration, I applied my method for checking nosebleed, which is described in No. 23, vol. xlv., of the Medical Record. The patient was placed in a chair, in an upright position; all constricting bands about the neck, body, and limbs were loosened, and he was instructed to breathe through the widely opened mouth, as deeply and as rapidly as possible. The principle upon which this simple method depends for its efficacy is the enforced stoppage of all currents of air, voluntary and involuntary, through the nostrils, until the bleeding ceases. The object achieved is complete rest for the interior of the nose, which favors coagulation at the bleeding point; of course, blowing the nose is strictly interdicted.

Whatever blood drips from the nares is to be gently touched off with the absorbent cotton; the head is to be inclined forward somewhat to prevent the escape of blood into the pharynx, which causes continuous hawking and spitting, and sometimes vomiting. In this case the bleeding ceased within a few minutes, and I submitted the patient, whom I have known for years, to a closer examination, with the following result: There were no growths or hypertrophies in either nostril; there was an erosion on the floor of the left nostril about the size of a small lentil, due probably to the patient's habit of picking the nose; the profuse bleeding from this slight trauma was explained by the full-blooded habit of the patient. The man had never been sick with any serious ailment, although he was a sufferer from rheumatic twinges now and then; he had been for years a steady but moderate imbiber of alcoholic stimulants; the heart sounds are unusually strong; no valvular lesions are apparent, so far as I could make out. The urine is free from albumin and sugar. These particulars are all thus detailed, because of the extraordinary effect upon the patient of a small quantity of cocaine applied externally, to be described presently. The cardiac hypertrophy and evident beginning arteriosclerosis were the predisposing causes of the profuse bleeding from the insignificant trauma.

At 8 P.M. I was again hurriedly summoned. The patient, finding that the bleeding had ceased for over an hour, had, contrary to my orders, washed out his nose with cold water, and, as is the habit of such patients, had violently blown his nose, to clear out all the clots; I found the hemorrhage as free as at first. The method just described was again employed, and, although it requiréd more time, was again successful in checking the bleeding.

Having another important case to see at the time, I asked my friend, Dr. M. S. Kakels, to remain with the patient until my return. At 10 P.M., on my return, the bleeding was effectually checked. On consulting with Dr. Kakels, however, we came to the conclusion, in view of the tendency to recurrence of the bleeding, to plug the nostrils loosely, in order to insure the patient against a fresh bleeding during the night. The introduction of Fraenkel's speculum, and the gentlest possible manipulation with the probe, started up a slight bleeding, to control which I determined to apply a ten-per-cent. solution of cocaine to the bleeding point in the floor of the left nostril. By means of an absorbent cotton applicator the cocaine solution was applied first to the left and then to the right nostril; in a minute or two a second application was made to the left nostril, whereupon the patient became deathly pale, somewhat cyanosed, the facial muscles commenced to twitch, general muscular relaxation set in, and he fell to the floor completely comatose; he was then seized with convulsions of the most marked epileptiform character, being thrown from one side to the other by the powerful clonic muscular contractions. The convulsive movements involved the right half of the body more than the left, and also the muscles of the face. There was some foaming at the mouth; the pupils were equally dilated. The pulse was feeble, 100, but perfectly regular, which feature encouraged us greatly. The convulsions continued for some five minutes without any sign of abatement, but they slowly became less marked, and at the end of about ten minutes ceased altogether.

The bleeding from the nose had ceased with the onset of the convulsions, and did not recur at any time. The patient remained very weak. The cause of this unusual effect of cocaine upon a powerful man, who had previously never had any illness worth mentioning, is undoubtedly the excitant effect of the drug on the nerve centres; although the cerebral anæmia, caused by the very considerable loss of blood and the patient's prolonged upright posture, may have contributed largely to the untoward effect.

Convulsions as a result of cocaine poisoning have been reported by Curgenven[1] after the ingestion of ten grains of the salt by the mouth. Garland[2] reports a death, in convulsions, forty minutes after the ingestion of fifteen grains of the salt. The smallest lethal dose thus far recorded is gr. $\frac{2}{3}$ by the mouth. So small a dose as gr. $\frac{1}{100}$, hypodermically, has produced faintness, pallor, tinnitus, etc. The instillation into the conjunctival sac of a four-per-cent. solution of cocaine, and applications to the gums, pharynx, larynx, and urethra, have caused similar symptoms. But the writer has been unable to find in the literature a single case reported of convulsions in an adult produced by the application of cocaine to the nasal mucous membrane by means of an applicator. Had a spray been employed it might have been said that a large quantity of cocaine had been absorbed by the nasal mucous membrane.

815 MADISON AVENUE.

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[1] Quarterly Med. Journ., January, 1896.
[2] Lancet, November 2, 1895.

GUNSHOT WOUND OF THE KIDNEY.

By WILLIAM F. BARRY, M.D.,
WOONSOCKET, R. I.

ON July 25th, Mrs. B——, while engaged at her household duties, was shot by her husband. Two shots were fired, both taking effect—one in the right lumbar region, the other in the abdominal wall. The perpetrator of the deed continued his work, firing two shots into his wife's mother, and two more into his own head. The husband and mother-in-law died in a very short time. The wife fled from the room to the street, where she was picked up and brought to a neighbor's house. Dr. W. W. Browne, of Blackstone, Mass., was summoned, and immediately sent for the writer in consultation. On arrival I found the patient pale and profoundly shocked. The wound in the abdominal wall was giving little trouble, but the wound in the back was bleeding profusely. This was tightly packed with iodoform gauze until the hemorrhage ceased. Copious subcutaneous and rectal injections of saline solution with hypodermic use of strychnine, brandy, and nitroglycerin served to relieve the shock considerably. Fortunately the wound in the abdominal wall was only muscle deep, and the bullet was easily located at the opposite side. This canal was then irrigated and a wick of gauze placed in each end for drainage. It was decided to await events before more was done with the wound in the back. The following day the patient had rallied considerably, and was submitted to an x-ray examination. The bullet was located in the ilium of the right side.

Upon removing the bandages the following morning the dressings on the back were saturated with urine. There were, however, no signs of blood in the urine passed by the usual channel. It became necessary to change the dressings five and six times daily, and after the first day the urine passing through the bullet wound was not mixed with blood.

The patient was maintained in a well-nourished condition, and the sinus was kept well open to allow of free drainage of urine. It was evidently a case in which either the pelvis of the kidney or the ureter was injured. There were no symptoms pointing to injury of the intestine. The case was a very interesting one, as the patient continued to improve, and was very carefully watched by Dr. Browne and myself. There seemed to be about half the normal quantity excreted by the false passage and the remainder by the normal passage. Gradually the amount discharged upon the dressings diminished, while that passed from the bladder increased, until after about six weeks had elapsed the sinus closed entirely and has never given any concern to the patient since that time.

Mitral Stenosis.—Rummo says that (1) silent stenosis signifies a very slight lesion; (2) stenosis with presystolic murmur signifies a slight lesion; (3) stenosis with diasto-presystolic murmur signifies a serious lesion; (4) silent systolic stenosis signifies an extremely grave lesion, hyper-constriction, and very weak myocardium.—*La Riforma Medica*, February 7, 1900.

The Biological Action of the Essence of Bitter Orange Peel.—Francesco Valerio concludes from experimentation that this essence in heterodermatous animals produces paralysis by diminishing and finally abolishing the conductibility and the reflex powers of the spinal cord. In guinea-pigs, rabbits, dogs, and pigeons it produces convulsions by stimulation of the cortical motor centres of the brain, the bulbar centre being probably also involved.—*Giornale Internazionale delle Scienze Mediche*, December 31, 1899.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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PURE-FOOD LEGISLATION.

THE second pure-food bill to which we alluded last week, known as the "Brosius bill," provides in Section 1 that "the Secretary of Agriculture shall organize the chemical division of the Department of Agriculture into a bureau of chemistry," which, besides other duties, "shall also be charged with the inspection of food and drug products, as hereinafter provided in the act. The Secretary of Agriculture shall make necessary rules and regulations for carrying out the provisions of this act, under which the director of the bureau of chemistry," etc. There are several very serious objections to this first section, namely: it virtually places the responsibility of carrying out the act on a "bureau" instead of on the shoulders of one man who can be held accountable for the proper performance of his duties; second, it permits other executive departments to call on this "bureau" for such chemical work as may be required by them. Surely we believe a food bureau will have business enough of its own without undertaking any outside work. Third, it would appear to trespass on the present domain of the Treasury Department, so far as the inspection of foreign drugs is concerned; fourth, neither this section nor any portion of the proposed act states by whom this "director of the bureau of chemistry" shall be appointed. This is certainly a curious omission. Sections 2, 3, and 4 are administrative and appear to be right and proper. Section 5 reads "that the term 'drug' as used in this act shall include all medicines recognized in the United States Pharmacopœia and National Formulary, for internal or external use, and cosmetics," etc. We fail to understand why the "National Formulary," a work that we believe is simply a private business venture, is thus given such an authoritative position. And "cosmetics" too—surely that "bureau" will have its hands full. Section 6, if all reference to the "National Formulary" be omitted, is eminently satisfactory, with the single exception of the words "provided further, that no dealer shall be convicted under the provisions of this act when he is able to prove a written guarantee of purity," etc. We very much question the advisability of this provision; who is to guarantee the guarantor? Section 8 reads in part (italics our own), "That it shall be the duty of the Secretary of Agriculture to fix standards of food products when advisable, and to determine the *wholesomeness or unwholesomeness of preservatives and other substances which are or may be added to foods*, and to aid him in reaching just decisions in such matters he is authorized to call upon the *director or the bureau of chemistry and the chairman of committee on food standards of the Association of Official Agricultural Chemists*, and such physicians, not less than five, as the President of the United States shall select from the medical department of the army, the navy, and the United States Marine Hospital, and not less than five *experts*, to be selected by the Secretary of Agriculture by reason of their attainments in *physiological chemistry and hygiene*, to consider jointly the standards of all food products (within the meaning of this act), and to *study the effect* of *preservatives and other substances added to food products on the health of the consumer*," etc.

Referring more particularly to the portions of the section we have placed in italics, we earnestly inquire what there is in the education of a chemist or any expert in "physiological chemistry and hygiene" that qualifies him in any manner to judge of the wholesomeness or otherwise of "preservatives." If a person suffers in consequence of taking preservatives, he seeks relief not of the chemist but of the physician. The true test of the effect of "preservatives" is clinical experience. The chemist at best has but negative evidence, as the positive evidence when it exists would come only to the knowledge of the practising physician. An advertisement of one of the most commonly used preservatives reads as follows: "The preserving of meat demands modern methods. Wisdom is shown by selecting a Preservative Reliable and also absolutely Harmless." The use of this very preservative (in dairy products), however, is forbidden by State law and by ordinances of the health department of this city. Yet we have known a professor of physiological chemistry to state positively before one of the senate committees of this State that the preservative in question is absolutely harmless. He based his conclusions on some experiments he had made on dogs. If he had consulted the columns of this and other medical journals and well-known works of reference, he would perhaps have believed otherwise. We admire the assurance of the chemists, but we must protest against their acceptance as authorities on questions of this nature. The province of the chemist is to determine the nature and composition of bodies, not their effects for good or ill on the human system.

Section 13 provides that the expenses necessary to the carrying out of the various provisions of the act shall not exceed $100,000.

Comparing the "Babcock" and the "Brosius" bills, we unhesitatingly give preference to the former, if modified as suggested in our last issue. The Brosius bill, on the other hand, contains so much that is objectionable that it should be entirely recast if it seeks to carry out its ostensible purpose effectively.

The Utah State Medical Society.—The next annual meeting of this society will be held at Salt Lake City, on October 2 and 3, 1900.

THE SURGERY OF MALIGNANT NEOPLASMS OF THE LIVER.

It is only within the last twelve years that any serious and systematic attempts to operate upon malignant growths in the liver have been made, and the earlier cases were attacked in a rather tentative and hesitating way. The removal of a tumor in the liver has almost always been attempted in connection with operation for some condition of the gall bladder or ducts, and not as a primary operation. Three of the earliest cases (Bruns, Garré, 1888, Hochenegg, 1889) were of this character, and in two of them certainly the operative work consisted in the removal of a carcinomatous mass secondary to malignant disease in the gall bladder. Since these cases, the reported attempts to remove growths from the liver have rapidly increased in number, and we are gradually becoming able to arrange our knowledge and lay down certain rules of procedure.

The kinds of growth with which we must be prepared to deal are, pathologically considered, adenoma, carcinoma, and sarcoma, the last very rare if primary, and hopeless if secondary, and the other two very little better under the latter circumstances. Adenoma of the liver, though not essentially malignant, behaves like a malignant tumor, and as a primary growth is commoner than carcinoma, to which it is closely related, and with which it may be described. Carcinoma is very commonly secondary to growths in the stomach, pancreas, gall bladder, or more distant structures, and its prognosis is proportional to the site and extent of the primary growth. Of course cases are almost always seen too late to be in the least suitable for surgical intervention, though if the tumor was originally in the gall bladder there might occasionally be a chance for its removal with the secondary hepatic deposit. We shall therefore be safe in saying that the only malignant tumors of the liver which are ever likely to be considered as at all operable are some adenomata and a very few secondary carcinomatous deposits, with very rarely a primary carcinoma, in all of which a diagnosis of probability at least is made early. If the tumor is a secondary carcinoma, it is important that the secondary quality is not metastatic, but depends upon continuity of tissue. In the case of true metastasis there must have been wide dissemination of the infection, and deposits will not be limited to the immediate region of the primary mass, so that operative attack is obviously useless. Primary carcinoma of the liver is a rare disease, but may sometimes be amenable to operative treatment.

Keen has recently (1899) added to the literature of the subject the history of a very interesting case in which a fortunate combination of circumstances as to site and conformation made the extirpation of a large tumor a brilliant success. The operation was undertaken with the diagnosis somewhat in doubt, and it was only after opening the abdomen that the growth was seen to be a nodular mass involving practically the whole of the left lobe of the liver. There had been no jaundice, no intestinal symptoms, and, in fact, no reason except that of locality for suspecting the liver as the seat of the trouble. The whole mass was removed, partly by ligature and partly by slow cauterization with the Paquelin instrument, and it is stated that the hemorrhage was never alarming. The size of the wound in the liver was reduced as much as possible by drawing over the peritoneum, and packing was introduced down to the rest of the surface necessarily left raw. Recovery was rapid. Examination of the tumor showed it to be one of the forms of carcinoma, with many areas of necrosis in it, and the case seems to have been one of true primary carcinoma of the liver which came to operation before the lymphatics were involved, since these were reported uninfected at the time of the removal of the growth.

It is only in such cases in which there is distinct delimitation of the disease that we can hope to do anything of a radical nature, and it is also evident that as disease approaches the hilus it becomes more dangerous and less suitable to any operative treatment. The method of operation is really the only element in the question about which we can make any definite rules, for as regards diagnosis, local involvement, site of tumor, and prognosis, each case is a law to itself, and it is only when we have come to some sort of a decision upon all these points, either before or after the beginning of the operation, that we reach a stage where we can lay down general rules. Experience has shown pretty conclusively that the cautery and ligature alone or combined are the safest and quickest means of controlling bleeding from hepatic tissue, and that pressure with packing is a useful adjuvant. The cauterized wound in the liver should be treated by packing, and the abdominal cavity protected from contamination by the same means. All means of combating the effects of hemorrhage should be ready for immediate use, for it is never certain that we can avoid serious trouble in this regard. Widening experience will probably show that the adenoma is the most favorable for operation, and secondary carcinoma the least so; in fact, that the latter is practically never operable except in a very few cases in which the growth has started in the gall bladder or ducts and has extended to the liver by continuity of tissue. Furthermore, there is no prospect that any but growths in the superficial portions of the liver can be attacked successfully, even supposing that it were possible to make a diagnosis with reasonable certainty when the tumor lies very deep.

Bile from healthy liver tissue will not hurt the peritoneum, but from inflamed and infected gall ducts it will cause peritonitis.

The Mission of Gen. Leonard Wood.—In an appreciative note of the work of General Wood in Santiago, *The Lancet* ventures the prediction that "General Wood will regenerate Cuba in the same manner as the British have regenerated Jamaica, and that in the course of time yellow fever will be exterminated in the former island." We believe this is a safe prediction, if only the politicians will leave him in Cuba and not drag him away in order to make him a vice-presidential candidate this summer.

News of the Week.

Measles at Yale.—Many cases of measles have been reported among the Yale students since smallpox attacked a freshman at the Sheffield Scientific School. Nearly all these students have gone to their homes.

The Western Ophthalmologic and Otolaryngologic Association will hold its annual meeting in St. Louis on April 5, 6, and 7, 1900, under the presidency of Dr. W. Scheppegrell, of New Orleans.

The Association of American Physicians.—The fifteenth annual meeting of this society will be held in Washington, in connection with the triennial congress, on May 1st, 2d, and 3d, under the presidency of Dr. E. G. Janeway, of New York.

Quarantine against Bovine Tuberculosis.—Governor Stanly, of Kansas, has issued a proclamation declaring a quarantine which practically prohibits the importation of dairy cattle into that State. The quarantine was established at the request of the Live Stock Sanitary Commission in order to prevent the further introduction of tuberculosis into Kansas herds.

Dismissal of a Hospital Ship Captain.—The master of the hospital ship *Missouri* has been dismissed from the army transport service as a result of an investigation of charges made against him by the surgeon in charge of the vessel. The main charges were that the captain refused to recognize that the surgeon, who had the rank of major in the regular service, ranked him on the vessel, and that he talked with others against the latter during the voyage from New York to Manila.

A New Hospital in Brooklyn.—The old Kent mansion, at Second Avenue and Sixtieth Street, Brooklyn, will soon be occupied by the new Bay Ridge Hospital, Dispensary, and Training-School for Nurses. The building has been given by Mr. John Beet for use as a hospital for five years, provided a sufficient sum is raised to cover the cost of equipment and part of the operating-expenses for the first year. It is expected that the hospital will be opened in June.

College of Physicians of Philadelphia.—At a stated meeting of the section on general medicine, held March 12th, Dr. Alfred Stengel presented a communication entitled "The Importance of Glycosuria as a Symptom." He pointed out that the urine normally contained traces of sugar, but that clinical significance was attached only to such amounts as were demonstrable by means of the ordinary tests. Glycosuria might occur apart from diabetes and might result from the ingestion of sugar or of starch in excessive amount. When, however, it was a symptom of diabetes it occurred independently of the quality and quantity of the food. Dr. David L. Edsall presented a communication entitled "The Relations of Diet to Diabetes." He pointed out the importance of determining in every case of diabetes the amount of carbohydrates that could be ingested without the development of glycosuria, as this constituted an important guide in treatment, for it had been shown that patients did worse when carbohydrates were wholly excluded from the diet than when they were permitted to have as much as they were capable of assimilating. When sugar appeared in the urine independently of the character of the food, the diet should, for a time at least, be restricted to fats and proteids. Dr. James Tyson read a paper entitled "The Treatment of Diabetes and its Complications." He attached first importance to the dietetic treatment and secondary consideration to the use of drugs. Among the latter arsenic and opiates were most useful, and particularly codeine and morphine. Alkaline mineral waters might be taken with advantage. For diabetic coma subcutaneous infusion of saline solution was indicated.

Philadelphia Hospital.—Dr. James M. Barton has resigned from the surgical staff and Dr. Samuel Wolfe from the medical staff. A third ophthalmologist has been added to the medical board, and Dr. Howard Forde Hansell has been elected to fill the vacancy.

Fiftieth Anniversary.—Dr. William B. Ulrich, of Chester, Pa., celebrated on March 15th the fiftieth anniversary of his entrance on medical practice. The event was commemorated by a reception to the Delaware County Medical Society.

Smallpox at Yale.—There have been four cases of smallpox among students of the Sheffield Scientific School during the past two weeks. None of the cases is serious. There has been a great exodus of students from New Haven, and those who remain of the associates of the sick men have been quarantined.

The Plague.—Major Taylor, surgeon in charge of the military hospital at Honolulu, reports under date of March 1st, that since the first outbreak in that city there have been sixty-four cases of plague with fifty-five deaths. He believes that the epidemic is over, though there may still be sporadic cases from time to time.

A Hospital for Contagious Eye Diseases.—A bill has been introduced into the State legislature providing for the establishment by the city of New York of a hospital for the treatment of contagious eye diseases. The institution is to be located in the borough of Manhattan, north of Fifty-ninth Street. The board of managers is to consist of Drs. John C. Lester, of Brooklyn, and John L. Adams, Peter A. Callan, and Thomas R. Pooley of New York, together with three physicians to be named by the mayor. The health department of the city is to furnish all food, medicines, and supplies.

Philadelphia County Medical Society. — At a stated meeting held March 14th, Dr. E. W. Holmes read a paper entitled "The Anatomy of Hanging," in which he made a comparison between hanging and strangulation, giving a description of the anatomical lesions produced by hanging, together with a consideration of the methods of judicial hangings and an analysis of the sensations of those hanged and resuscitated. Dr. S. Solis-Cohen, the retiring president, delivered an address entitled "Progress in Therapeutics." He dwelt upon the fact that disease and recovery represented a continuous process, and that the intervention of the therapeutist should be addressed to aiding and directing nature in her efforts to bring about the desired end.

A Congress for the Study of Tuberculosis will be held in Naples on April 25th–28th.

Dr. A. G. Wippen has been elected vice-president and treasurer, and Dr. William L. Ballenger professor of otology, rhinology, and laryngology in the Chicago Eye, Ear, Nose, and Throat College.

The State Sanatorium for Tuberculosis.—The Senate finance committee has reported favorably Senator G. A. Davis' bill appropriating $150,000 for the establishment of a State hospital in the Adirondacks for the cure of incipient tuberculosis.

South African War.—Sir Thomas Naghten Fitz-Gerald, the senior surgeon to the general hospital at Melbourne, Australia, has been appointed to an advisory post as surgeon with the British South African forces, and has left for the seat of war. Mr. Treves is returning to England, and Sir William MacCormac left Durban on March 10th for home.

Philadelphia Pediatric Society.—Dr. Miller presented a case of profound secondary anæmia in a girl two years old with symptoms also of rachitis. Dr. J. M. Swan reported a case of chronic valvular endocarditis following chorea. The patient was a girl, about ten years old, who had presented symptoms of arthritis, followed by an attack of chorea, and subsequently to which symptoms of endocarditis developed. Dr. J. H. McKee reported a case of a large sarcoma of the kidney, with operation and operative recovery. The child remained well for several weeks after the operation, but symptoms of recurrence soon appeared and finally terminated fatally several months after the operative interference. Dr. Alfred Hand, Jr., exhibited a sarcomatous kidney removed from a child, two years old, in which also temporary improvement followed the operation, although death resulted a short time later.

Alleged Hypnotism in the Courts.—A man has recently been convicted of murder in a Nebraska court, the principal witness against him being the wife of one of his victims, in order to be free to marry whom he is said to have killed his wife and the witness' husband. The case will be appealed on the ground that the accused was not permitted to enjoy his constitutional right to be confronted by his accusers, in that the principal witness, when testifying, was not required to face the accused, and that the court erred in permitting the witness to wear a heavy cloak and colored eyeglasses, purposely preventing the defendant looking her in the eye and thus forcing her to tell the truth. The attorney's defence to this plea will be that the allegations are true, and that while the constitutional right of the accused may have been violated technically, the step was necessary, as three physicians asserted that the woman was under the hypnotic influence of the prisoner to such an extent that she could not testify while facing him. This will afford a grand opportunity for the production of contradictory medical expert testimony.

A Twin-Bearing Family.—A circumstantial account is given in the New York *Times* of a remarkable occurrence in a New Jersey village recently. Three sisters living in the village gave birth on the same day to six children, three sets of twins, two pairs being boys and one girls. All were born between eight o'clock and midnight.

The Jefferson Medical College and Princeton.—A report has been current for some time that the Jefferson Medical College, of Philadelphia, was soon to become the medical department of Princeton University, but President Patton, of Princeton, has recently denied emphatically that any such union was contemplated.

A City Hospital for Tuberculosis.—Dr. Nelson H. Henry has introduced into the State Assembly a bill appropriating $350,000 for the purchase of a site and erection of a hospital for the treatment of pulmonary tuberculosis. Upon the completion of the hospital the New York City board of health is to have jurisdiction over it, and will prescribe the rules and regulations to govern the institution.

Seaside Hospital of the Brooklyn Children's Aid Society.—The Children's Aid Society of Brooklyn has received a gift of $10,000 from two women for the building of an infants' hospital and a beach pavilion as an extension to its other buildings used in the summer at Coney Island. The hospital will be reserved for cases of critical illness. The main floor will be divided into a number of rooms, so as to permit mothers to be with their sick children. The buildings will be completed in time for the summer season.

Improved Health Conditions in the Philippines.—Surgeon-General Sternberg has received a cablegram from Colonel Greenleaf, chief surgeon in the Philippines, saying that the total number of cases in the military hospitals in and around Manila March 12th was twelve hundred and eighty-seven. There has been a steady reduction in the number of cases under treatment at the hospitals since January 20th last, when they numbered twenty-five hundred and forty. The report, however, does not cover the sick in the hospitals of northern Luzon and at Iloilo. Reports received by mail from Manila are that the hospitals are in excellent condition, and that the bubonic plague has been fully checked, if not conquered.

Medical Courts of Honor in Prussia.—The institution of professional courts of honor is not a new one in Prussia. The army has its courts of honor and so has the legal profession, and on April 1st, the *British Medical Journal* says, "similar courts for the medical profession are to come into existence. The plan of organization is simple. In each district where there is an *Aerztekammer* (representative body of doctors) a court is to be established; it will consist of the president of that body, three of its members, and, in addition, a judge of one of the local courts. A central supreme court will act as court of appeal, and is to consist of (1) the director of the Prussian ministerial medical department, (2) four members of the central committee of the *Aerztekammern*, (3) two medical men specially elected by the king of Prussia. The courts are to exercise jurisdiction over all certified practitioners excepting medical officers of the army and navy and others for whom a state disciplinary board already exists. The scope of jurisdiction is defined by the new law as follows: 'Every medical man is bound to exercise his profession conscientiously, and by his behavior—both in his professional and in his private life—to show himself worthy of the respect which his profession demands. A medical practitioner who fails in the duties incumbent on him is subject to the infliction of a penalty by the court of honor. Political, scientific, and religious opinions or actions of a practitioner as such can never form the subject of proceedings in a court of honor.' The penalties which the court may inflict are: (1) Warning; (2) reprimand; (3) fine, not exceeding 3,000 marks (£150); (4) temporary or permanent withdrawal of the right to elect members of the *Aerztekammer* or to be elected a member."

A Medical Club Swindle.—A man has been arrested in Chicago for running a fake hospital association. He collected money from the members of the association, guaranteeing free hospital treatment for any who were sick. The dues were regularly collected, but when any member fell ill there was none but the public hospital to receive him.

Lucrative Divine Healing.—A man was recently arrested in Boston on a charge of fraudulent use of the mails, whose occupation was that of a "divine healer" by letter. He constituted in himself a faith-cure association which practised therapy by correspondence. It is stated that he employed forty girls in sorting and writing letters, giving what he called his "absent treatment," charging his distant patients $5 a month. It is alleged that his business has recently brought him in $30,000 a month.

Militant Advocates of Vaccination.—A Christian Scientist lectured recently in Victoria, B. C., on the "Failure and Iniquity of Vaccination," and his remarks were so outrageously slanderous and false that they aroused the ire of the anti-faith-healers in the audience, and a general mêlée ensued. When order was finally restored most of the men present bore marks of the fight, and several of the "scientists" acquired a sudden "belief" in epistaxis.

Another "Human Ostrich" has come to grief and the knife of the surgeon in Baltimore. According to the newspaper report of the operation, conducted at the Johns Hopkins Hospital, the following junk was removed from the man's stomach: Ninety-one nails, iron and wire, measuring from one to four inches in length; one pocketknife, seven knife blades, one about three-quarters of an inch wide; nine horseshoe nails, four inches long; eight screws, two and one-half inches long; eleven small pins, ordinary size; two screw-eyes; forty-nine tacks, some with very large heads; one small staple, twenty-five grains of ground glass, four brass watchchains, with catches and stays, and twelve and one-half feet of three-eighths-inch iron chain.

Mortality of Michigan during February.—In the *Michigan Monthly Bulletin of Vital Statistics* for February the secretary of State reports that 2,673 deaths occurred in Michigan during the month. This is 37 deaths more than during the preceding month, but over 1,100 less than during the same month of the preceding year. The death rate for the month was 14.5 per 1,000 of population, showing a considerable increase over January, whose rate was 13.0. There were 445 deaths of infants under one year of age, 210 deaths of children aged from one to four, inclusive, and 772 of persons aged sixty-five and over.

The Medical Society of the State of North Carolina will meet in Tarboro, Tuesday, May 22d, under the presidency of Dr. George W. Long, of Statesville. The board of medical examiners will meet Wednesday, May 16th, and will make their report before the adjournment of the society. The annual discussion will be held on the afternoon of the second day, Wednesday, May 23d, the subject being "The Continued Fevers of North Carolina," led by Dr. James M. Parrot, of Kingston. On Wednesday evening, May 23d, the annual essay will be read by Dr. R. H. Whitehead, of Chapel Hill, and the annual oration will be delivered by Dr. T. S. McMullen, of Hertford.

The Obligation of Caring for Sick Children.—A child of Christian Science parents died not long since in Detroit of diphtheria. Its only treatment consisted in assertions by healers that nothing was the matter. When some of the sane neighbors, realizing the danger to the community and cruelty to the child of neglecting a case of contagious but usually curable disease, sought to make an example of the guilty parents, they were rebuffed by the prosecuting attorney. This legal light, according to the newspaper accounts, said that there was nothing to be done, since no doctor had failed of his duty in reporting the case, and the relatives and healers, not being physicians, could not be charged with knowing and concealing the nature of the disease.

An Epidemic of Pneumonia.—A strange story of the practical extinction of a family by pneumonia is reported in the New York *Times* of March 17th. On Thursday of last week, it says, a farmer residing near Deckerstown, N. J., died of pneumonia. He was ninety years of age. Two hours after the funeral, on the following Saturday, an unmarried daughter, aged sixty-five years, died of the same disease. Another daughter lay seriously ill with pneumonia in an adjoining room, and she died last evening. A married daughter came to her father's home to care for the afflicted ones, and she is now ill with pneumonia, and has slight chances of recovery. A son, who has conducted the farm for several years, and his wife are both afflicted with the same malady at the family homestead.

Dr. William McNeill Whistler, a brother of the celebrated painter, died in London on February 27th, at the age of sixty-three years. He was a graduate of the medical department of the University of Pennsylvania in the class of 1860, and served during the civil war as surgeon in the Confederate Army. At the close of the war he went abroad and took the diplomas of M.R.C.S. and M.R.C.P. He practised in London, and was physician to the London Throat Hospital.

Dr. Otto Leichtenstern, of Cologne, died on February 28th, of influenzal pneumonia. He was born in 1845 at Ingolstadt. After teaching for a few years, subsequent to graduation in medicine, at the Universities of Munich and Tübingen, he went in 1879 to Cologne, where he succeeded Riegel as director of the medical division of the Bürger hospital. Dr. Leichtenstern was a well-known medical author, but the work which brought him his greatest renown was the discovery of the ankylostoma as a cause of anæmia in brick-makers.

Obituary Notes.—Dr. Benjamin S. Lewis, of Camden, N. J., died at Plainfield on March 10th, at the age of forty-three years. He had been a member of Camden city council and was a member of the board of health.

Dr. Orlando Fegley died at Allentown, Pa., on March 10th, at the age of sixty years. He was a graduate of the medical department of the University of Pennsylvania.

Dr. Justus Lessey died at Philadelphia on March 14th, at the age of eighty years, from angina pectoris. He was a graduate of Jefferson Medical College, but for a number of years has been incapacitated by loss of vision from the pursuit of his profession.

Dr. Samuel Hayes died at his home in Newark, N. J., on March 14th, of apoplexy, at the age of ninety-three years. He was a graduate in arts from Princeton in 1825, and for two years had enjoyed the distinction of being the oldest living graduate of that college. He was graduated in medciine from the Geneva Medical College in 1829. In 1895 he received the degree of LL.D. from Princeton. He was a corresponding member of the Munich Medical Society and of the Botanical Society of Ratisbon. He retired from practice many years ago, but was a trustee of Princeton University and president of a bank in Newark.

Dr. Albert B. Strong, of Chicago, died in the State Hospital at Kankakee on March 17th. Death was due to exhaustion, brought about by maniacal excitement, the attack being an acute recurrence of three similar afflictions. His mental collapse resulted from losses involved in the failure of a bank. Dr. Strong was born at Galesburg, O., and was a graduate in arts of Kenyon College. He served during the civil war in the Eighty-fifth Volunteer Infantry, and afterward took up the study of medicine, being graduated from the Rush Medical College in 1872. He was a member of the Chicago Medical Society, the Illinois State Medical Society, and the American Medical Association.

Dr. Adolph Callison died at his home in this city on March 16th, on his eighty-second birthday. He was born in Copenhagen, and was the son of Dr. Adolph Callison, a court physician to the king of Denmark. He studied at the universities of Copenhagen and Kiel and in Vienna, Berlin, and Paris. He came to this country about fifty years ago and established a private school. He had not practised medicine for many years.

Dr. Thomas B. Hood died at his home in Washington on March 15th, at the age of seventy-one years. He was born in Fairview, Ohio, and was graduated from the Medical Department of the Western Reserve University in the class of 1861. He began practice in Columbus, but soon after the beginning of the civil war he entered the army and served as a surgeon. Subsequently for eleven years he was medical referee of the Pension Office, and since 1885 had practised in Washington. He was a professor of diseases of the nervous system in the medical department of Howard University, and was also dean of the faculty.

Dr. Hans R. Hoffmann died at his home in Union Hill, N. J., on March 18th, of pneumonia, at the age of thirty-five years. He was a graduate in medicine of the University of Leipsic in 1889.

Progress of Medical Science.

Boston Medical and Surgical Journal, March 15, 1900.

Steam in the Treatment of Chronic, Hyperplastic, and Senile Endometritis, Putrid Abortion, and Puerperal Sepsis.—F. W. Johnson reports thirty-one cases in which steam was used instead of curetting. It is introduced into the uterus, after dilatation of the cervix, by means of an ordinary steam throat atomizer, to which a hard-rubber tube, eight inches long, conically pointed at one end, is connected by soft-rubber tubing. The steam as it leaves the boiler is at 212° F., and is allowed to enter the uterus for thirty seconds, and for another thirty seconds after the removal of the uterine speculum. Excellent results are claimed.

Injuries about the Shoulder at Birth.—J. S. Stone says that true congenital dislocation of the shoulder—that is, defective development of the scapula and head of the humerus—is of extremely rare occurrence. True traumatic dislocation of the shoulder at birth or in early infancy is also of very rare occurrence. Obstetrical paralysis is due, probably almost invariably, to a stretching and in some cases a rupture of the two upper roots of the brachial plexus. It is usually recovered from entirely in the course of a few weeks or a few months. In persistent cases surgical intervention may be of value.

Instruction in Co-ordination in Tabes.—J. J. Putnam has a patient who has been taught to stand and walk and do various exercises, and, considering the difficulties to be overcome, has made good progress.

Muscular Dystrophy.—J. J. Putnam reports a case in which the disease began at the age of thirteen years, and has progressed ever since, the patient being now thirty years old.

Acromegaly.—G. L. Walton describes a typical case. He believes that there is a relation between this disease and lesion of the pituitary body, if the secretion of this gland is increased.

Rupture of Quadriceps Extensor Tendon.—J. C. Warren reports two cases, in both of which operation gave excellent recoveries, with perfect functioning of the extensor muscles of the thigh.

Fresh Fractured Patella Sutured with Catgut through the Periosteum.—J. C. Warren operated one hour after the injury. The patient walked alone, without crutches, in six weeks.

A Second Case of Chronic Cyanosis without Assignable Cause.—Richard C. Cabot reports a case, probably due to venous congestion, the cause of which is unknown.

Resection of a Portion of the Liver for Adeno-Carcinoma of the Cystic Duct.—J. C. Warren performed this operation with good results.

Idiopathic Dilatation of the Colon.—R. H. Fitz reports a case in a child, aged two years, evidently due to obstinate constipation.

Poliencephalitis, Superior and Inferior, with Acute Anterior Poliomyelitis.—E. W. Taylor reports such a case in a man, aged twenty-seven years.

Journal of American Med. Association, March 17, 1900.

The Physician as a Witness in Court.—William J. Herdman proposes the adoption of the following suggestions as a means to secure much-needed reform in the matter of expert testimony: (1) Experts should be appointed by the trial judge. (2) Their compensation should be a part of the court expenses. (3) They should have abundant opportunity to investigate the facts of the case, so far as they bear on the opinion they are expected to deliver. (4) That opinion should be given to the court in writing, signed and sworn to. (5) Any dissenting expert opinion must also be in writing, and state the grounds on which dissent is based. (6) Experts may be sworn as witnesses and cross-examined, but the cross-examination is not to extend beyond the limits of the subjects embodied in the opinion they have been asked to express.

The Nutritive Function of the Bronchial Arteries in Growth; Disease and Repair of Pulmonary Tissue.—D. Lichty says it is the bronchial artery circulating in the intercellular spaces of the lungs, apart from the vessels involved in the pneumonic process, that prevents a sweeping destruction of the lung tissue when injured or diseased. Post-mortem evidences show us that the lung far exceeds any other tissue in the body—not excepting the peritoneum—in its ability to overcome the effects of tuberculous inoculation. The author concludes that we must admit this is largely due to the systemic circuit of the obscure bronchial artery and its nutritional activity.

Some Points in Treatment of Severe Crush Injuries of the Extremities.—John Prentiss Lord deprecates the tendency to over-conservatism in these cases, in the dictation of a watching and waiting course, and emphasizes a general need for a more universal application of the principles of drainage. To these principles he says must be added the application of the best surgical methods for carrying off and maintaining the wound products aseptic. This may be accomplished by an abundant hygroscopic dressing, though in more severe cases the moist antiseptic dressing is more efficient.

Symptomatology, Diagnosis, and Treatment of Neoplasms of the Kidney.—Under the head of symptomatology, L. I. McArthur includes: (1) Tumor in the renal region; (2) hæmaturia; (3) pain; (4) cachexia. As aids in determining diagnosis he gives: (1) Study of the history; (2) examination of the urine; (3) palpation; (4) cystoscopy, ureteral catheterization, and exploration by sounds; (5) direct exploratory incision. For treatment he gives: (1) Puncture; (2) nephrotomy, or (3) nephrectomy, according to the indications.

Infantile Diseases from the Standpoint of Biology.—Joseph Clements, in summarizing, says that we may accept the dicta that disease is abnormal vital activity, and the cause may be from without or may arise independently within; that the cause does not necessarily determine the nature of the disease, but the response of the vital activities to the contact relation of the irritant or cause, whatever it be.

May Not Gonorrhœal Vulvo-Vaginitis be Acquired by Children Indirectly?—Charles O'Donovan concludes from observation of cases after admission to the hospital wards that it is quite possible for the infection to be carried from one child to another by means of toys or otherwise. In uncleanly families the infection may follow the use of towels or the transferring of clothing from an infected to an uninfected child.

Renal Calculi.—M. L. Harris says that practically all kidney stones may be considered of bacterial origin. So far as medical treatment is concerned, he knows of none except it be symptomatic. When the diagnosis is made the stone should be removed, and there is at present no way to do this except by operation. The author states the mortality for stone in the aseptic kidney as a little over three per cent.; in septic kidney, over ten per cent.

Pathology of Renal Neoplasms.—Daniel N. Eisendrath says that during the past ten years great progress has been made in the pathology of renal growths, although much still remains to be investigated in this field. To this end every tumor should be carefully described and subjected to microscopical examination.

Case of Hepatic Abscess Presenting Some Points of Interest.—In this case, reported by Hermann B. Gessner, the writer thinks the suppurative hepatitis may be traced back to a dysentery occurring six years earlier. As to treatment, analgesia was successfully produced by means of a ten-per-cent. solution of eucaine-B.

Gastrectomy.—W. S. Thorne reports one more case in which this rare operation was performed. The patient survived the operation forty hours, dying from shock.

Professional Education and Ethics.—This is a plea by A. E. Baldwin for the better ethical instruction of students in dentistry.

Treatment of Gunshot Wounds of the Abdomen; Some New Statistics.—By H. H. Grant. See Medical Record, vol. lvi., page 906.

The Grippe Exanthemata.—By Harriet E. Garrison. See Medical Record, vol. lvi., page 28.

New York Medical Journal, March 17, 1900.

Shock and its Surgical Significance.—J. H. Rishmiller holds that sensory-nerve irritation sufficiently powerful to produce exhaustion of the vasomotor centre causes a reflex paralysis, and consequently a dilatation of the vascular mechanism. There are two forms of shock, according as hebetude or excitement predominates. Shock may to a large degree be prevented by counter-irritation applied to the extremities. Brandy per os and morphine subcutaneously before operating are prophylactic. Treatment consists in stimulating the vascular system and the application of artificial heat to the body. In cases of profuse hemorrhage an infusion of decinormal saline solution is indicated.

Apomorphine as a Hypnotic.—C. J. Douglas advises the hypodermic administration of doses of gr. $\frac{1}{30}$, to be given when the patient is in bed and ready for sleep. Restful slumber comes on in from five to twenty-five minutes. Cumulative effect is denied, and the remedy can be regularly used. Both as a hypnotic and emetic the remedy is thoroughly neutralized when dissolved in a saturated solution of boric acid—a fact which the author has never seen mentioned in literature.

The So-Called X-Ray Burn.—J. Rudis-Jicinsky divides the injuries from the *x*-ray into superficial dermatitis, spasmodic vascular contraction followed by immediate relaxation and renewed nutrition of the cells following upon the preceding mortification, and sequelæ of an acute attack with more extensive tissue destruction. He believes that the future perfection of apparatus and shortened time of exposure will diminish the untoward effects of the rays.

Varicose Spinal Veins.—C. E. Coon relates the history of a man, aged fifty-eight years, who died of tuberculosis, and who had suffered during life from excruciating pains in the lower extremities. Autopsy showed at the junction of the dorsal and lumbar vertebræ an extensive varicose condition of the spinal veins, which was thought to have been the cause of the pains.

Extensive Thrombosis of the Lateral Sinus and Internal Jugular Vein following Acute Suppurative Otitis Media.—M. D. Lederman describes a case of this nature occurring in a girl aged nineteen. He indorses liberal incisions of the soft parts in surgery of the mastoid. In this case the internal jugular vein was ligated in its lower portion. Secondary periphlebitis occurred, but the patient finally recovered.

Tinea Favosa.—C. A. Kinch gives the history of the literature of this affection, with a general statement concerning its pathology, characteristics, and treatment.

The Sheldon Murder Trial; Résumé of the Expert Testimony for the State.—By W. S. Cheesman and A. H. Hamilton. A continued article.

The Administration of General Anæsthetics.—By C. A. Temple. A continued article.

Medical News, March 17, 1900.

Instruments and Apparatus Used in the Diagnosis and Treatment of Gastric and Intestinal Diseases.—H. W. Lincoln enumerates, with a brief description of each, these instruments: Stomach tube, stomach bucket, œsophageal probe, gastrodiaphane, intragastric bag fitted with intestinal intubator, gastrograph, gastroscope; *x*-rays, photography, intragastric spray, intragastric electrode, gyromele, and powder-blower. He adds that each instrument has its field in the diagnosis and treatment of gastric and intestinal diseases, but many gastrologists depend largely for therapeutic results upon the stomach tube and lavage apparatus. There is, however, no question that the spray, electrode, and powder-blower are productive of some of the very best results.

Case of Pulmonary Tuberculosis Successfully Treated by Drainage and Iodoform, with Apparent Recovery.—Alexander Hugh Ferguson describes a case of this nature in a colored man, twenty-seven years old. In inserting the dry iodoform powder into the diseased lung tissue, no pain whatever was felt; but as soon as sound tissue was encroached upon, pain and uncontrollable coughing occurred. The emulsion also caused pain and coughing.

The After-Treatment of Fractures and Dislocations.—D. N. Eisendrath emphasizes the advantages of hinged splints, especially for elbow, shoulder, and foot, believing in the efficacy of active motion by the patient himself. He approves of massage in dislocations and fractures after the dressings are removed. He also speaks of gymnastic apparatus for ankylosis of the elbow and shoulder.

Tympano-Mastoiditis.—Emdon Fritz defines this affection as an inflammatory process which involves the tympanic cavity and the mastoid portion of the temporal bone. He cites three instructive cases.

The Significance of Earache in Children.—By T. H. Halsted. See MEDICAL RECORD, vol. lvii., p. 207.

Philadelphia Medical Journal, March 17, 1900.

The Spontaneous Disappearance of Senile Cataract.—Walter L. Pyle divides cases of this sort into those due to (1) absorption after rupture of the capsule; (2) dislocation of the lens; (3) intracapsular resorption of the cortex and sinking of the nucleus below the axis of vision after degenerative changes of the Morganian type; (4) complete resorption of nucleus and cortex without history of rupture, dislocation, or degenerative changes; and (5) disappearance of incipient cataract without degenerative changes or marked difference in the refraction. He reports a case in class 4.

Connective-Tissue Tumors of the Abdominal Wall.—Albert L. Stavely discusses the fibroid and sarcomatous neoplasms of the abdominal wall, and reports a case of removal of a small fibromyxoma from the inguinal region.

Gangrene of the Tonsil.—Alexander C. Howe reports a case of this nature in a man, twenty-six years old. A cure was obtained by cutting away the dead tissue and applying peroxide of hydrogen and nitric acid.

Hairpin Removed from the Bladder through a No. 12 Kelly Cystoscope.—Hiram N. Vineberg reports this case. The hairpin had slipped in, according to the account of the patient, a young woman, during an effort to extract a retroversion pessary.

Peroneal Type of Progressive Muscular Atrophy.—Theodore Diller reports two cases of this condition occurring in a brother and sister, twenty and twenty-five years old respectively.

A Case of Tetanus Treated by Subdural Injections of Antitoxin, and Hypodermic Injections of Carbolic Acid.—By Ernest Laplace. See MEDICAL RECORD, vol. lvii., p. 192.

Selections from the Lane Lectures.—A portion of a lecture on diseases of the arteries, delivered by T. Clifford Allbutt at Cooper College in 1898.

Glosso-Labio-Laryngeal Paralysis.—Francis P. Morgan reports a case of bulbar paralysis in a man forty-seven years old.

British Medical Journal, March 3 and 10, 1900.

Myasthenia Gravis Pseudo-Paralytica.—Thomas Buzzard gives the histories of two patients affected with this disease, a man and a woman. In these cases the results obtained by electrical examination were of great interest and importance, and the term "myasthenic reaction" has been applied to the remarkable behavior of the muscles under electrical stimuli. This "myasthenic reaction" should be sufficient to prevent the mistaking of these cases for hysteria, an error of diagnosis often made, and a very serious one, as the prognosis in this disease is very grave and death often occurs rapidly. As to treatment the best results seem to be obtained by rest, removal from disturbing surroundings, and good food. Feeding by tube, which is often of service in bulbar paralysis of the ordinary type, should be avoided.

The Causes and Treatment of Movable Kidney.—C. Mansell Moullin says that the width of the lumbar recesses is one of the penalties which have followed the assumption of the erect attitude, and that taking that width into consideration the wonder is not that movable kidney occurs, but that it does not occur more often. It accounts completely for the peculiar clinical distribution of movable kidney. It is hereditary and common; present in women much more often than it is in men; and in women who have borne children more often than in those who have not. As to the treatment the author says the choice lies between wearing an abdominal belt and nephrorrhaphy, the former expedient, in his experience, only succeeding in the milder cases, when combined with massage and muscle-strengthening exercises.

The Eye Symptoms of Locomotor Ataxia.—C. O. Hawthorne concludes from a record of thirty cases: (1) That an optic-nerve atrophy, an ocular paralysis, or an Argyll-Robertson pupil may exist as an isolated symptom for a long time; (2) that any two may be associated, with an increased presumption that the process causing them is of the locomotor-ataxia order; (3) that any one of the three or a combination of two or all of them may exist in conjunction with more or less pronounced evidences of spinal disease; (4) that occasionally a case which commences with purely ocular symptoms may be seen to develop with comparative rapidity characteristic symptoms of the spinal lesion of locomotor ataxia.

A Case of Complete Inertia and Prolapsus Uteri.—A case reported by F. L. Pochin, who says that the accident is extremely rare and has been ascribed to traction on the cord, either by the midwife or as a result of the funis being twisted round the child's neck. In this case the patient had been very anæmic for a long time before delivery; there had been some trouble with the afterbirth, and the midwife had "pulled the cord a little." The writer detached the placenta, bathed the uterus with hot boiled water, and returned it to its normal position. The patient quickly improved under stimulating treatment, and the puerperium was comparatively uneventful.

Perforating Gastric Ulcer, with Notes of Two Successful Cases after Operation.—P. Rhys Griffiths reports these cases, and says that the operation for perforating ulcer may be very easy or may be very difficult, requiring great care and patience to render the holes water-tight. The openings in the anterior wall are generally fairly easy to close, but the openings in the posterior wall, which fortunately rarely occur, often present serious difficulties. Absolute cleanliness is the keynote of success. In one of the cases reported recovery was uninterrupted, the other developed a subphrenic abscess.

A Contribution to the Surgery of Perforated Gastric Ulcer.—A. B. Mitchell considers this subject with special reference to the results of operations in Ulster, where the total number of cases operated on have been fourteen, with seven recoveries. The author draws the deduction that a few cases of true perforating ulcers result in recovery without surgical aid, but that the chief factors in successful treatment are early diagnosis and early operation. When once the physician suspects symptoms of perforation there is not a moment to be lost.

A Contribution to the Study of the Pituitary Body.—In this preliminary communication, W. A. Osborne and Swale Vincent say that their investigations have been performed, as were those of other observers, with ox material, but that they used dogs and rabbits for the experiment animals. In the main their results have been confirmatory of those obtained by others, with the addition of some facts in regard to the histological, chemical, and comparative physiological aspects of the question.

Maniacal Excitement during an Attack of Influenza.—John H. Spitzly reports this case, in which the patient, a man twenty-five years old, suffered delirium of so violent nature that the employment of a male nurse was necessary to keep him from throwing himself from the window. This excitement continued for nearly a week in spite of narcotics, the application of ice to the neck and head, and frequent doses of gray powder. There was perfect recovery from all symptoms in three weeks.

Suicide in Scotland.—Sir John Sibbald concludes after an examination of the statistics on this subject that the alleged increase of suicide must be regarded as not proven. We must keep in mind, he holds, that a great change has taken place in public feeling in regard to this matter of late years; the belief that the act of suicide necessarily involves disgrace has much diminished, and efforts to conceal its occurrence have therefore decreased. The degree of efficiency of the registering machinery must also be kept in view.

Diphtheria, Parturition, Retained Membranes, and Influenza in the Mother; Diphtheria in the Infant.—R. H. Steen reports this case as being of interest owing to the association of confinement with diphtheria and influenza. Both mother and child made good recoveries after the administration of large doses of antitoxin. The child received a dose of 350 units when five days old, and 1,000 units the following day, but exhibited no ill effects.

Case of Tabes Dorsalis with Bulbar Symptoms.—George E. Rennie reports this case, which he considers exceptional because of the severity of the laryngeal paralysis and the involvement of the other bulbar centres. The involvement of the pharyngeal muscles was so extensive that nasal feeding became a necessity, and the dyspnœa was so great that tracheotomy had to be performed and a tube worn, until the patient finally died of a lobar pneumonia.

Experiments to Determine the Efficacy of the Different Constituents of Haffkine's Plague Prophylactic.—C. Balfour Stewart gives the results of experiments with rabbits. Haffkine, on theoretical grounds, thought that the addition of the supernatant fluid reduced the case mortality, and the results obtained by Stewart show experimental confirmation of this theory.

Gastro-Jejunostomy for Gastric Ulcer.—In this case, reported by W. Jones Greer, the patient had suffered for nearly ten years from symptoms of gastric ulcer. Scientific dieting and rectal feeding failed to effect more than transient amelioration of the symptoms. Operation was followed by a complete return to health, the patient having gained twenty-seven pounds in four months.

Retention of the Placenta for Nine Days.—Griffith Griffiths reports this case. Douches of sublimate solution (1 : 1,000) and the administration of ergot and quinine (the latter for the malarious condition) resulted in a gradually subsiding temperature, followed by perfect recovery.

A Case of Tetanus.—W. Murray reports a case of well-marked tetanus in a boy ten years old, who had been wounded in the foot by a stone, in which recovery followed treatment by antitetanic serum, in conjunction with chloral and bromide of potassium.

Supernumerary Nipple.—E. G. Salt reports a case in which there was a supernumerary nipple on the under surface of the right breast which was large enough for the child to suckle, and from which milk flowed freely.

Practical Observations on Cancer of the Breast.—The first of the Lettsomian lectures, by Sir William Banks. See Medical Record, vol. lvii., p. 510.

The Surgery of the Stomach.—Abstract of the first Hunterian lecture, by A. W. Mayo Robson. See Medical Record, vol. lvii., p. 510.

The Anatomy and Pathology of the Rarer Forms of Hernia.—By B. G. A. Moynihan. The second of the Arris and Gale lectures.

The Lancet, March 10, 1900.

Tuberculosis of the Kidney; its Etiology, Pathology, and Surgical Treatment.—D. Newman concludes a lengthy article. He finds the process more virulent in some parts of the genito-urinary tract than in others, the bladder, prostate, and epididymis being more resistant than the kidney. He has been able to collect statistics of 135 cases of operation for tuberculous kidney done during the last ten years as follows: Deaths, one month or less after operation: exhaustion, 2 cases; extension of tuberculosis, 2 cases; uræmia (42 per cent.), 11 cases; various accidents, 12 cases; deaths, total immediate, 27 cases. Operative mortality, 27 out of 135, or twenty per cent. Remote results: of 19 cases no record; of the remaining 89 cases, died in two to three months, 6 cases; died in four to nine months 7 cases—total, 13; immediate deaths, 27; number of deaths within nine months, 40. General mortality after operation, 40 out of 135, or 29.63 per cent. Survived one to eight years, 45 cases, or 33⅓ per cent. Prognosis good or improvement great in patients alive one to nine months after operation, 31. Total survivors and promising cases, 31 plus 45, making 76, or 76 out of 135, or 56.3 per cent.

The Surgery of the Stomach.—A. Mayo Robson discusses the operative treatment of gastric ulcer and of hemorrhage due thereto. From the statistics on the subject and from his personal experience he concludes that operative treatment in acute hemorrhage gives such a high rate of mortality—64.2 per cent. as compared with from five per cent. to ten per cent. in cases treated medically—that it is better in such cases to rely solely on medical means. But in repeated chronic hemorrhages the operation of gastro-enterostomy affords a reliable method of treatment, since it gives rest to the stomach and removes the hyperacidity of the gastric juice. When the ulceration is at the pylorus, where it so frequently leads to hypertrophy and stenosis, the operation relieves the symptoms and cures the disease.

Practical Observations on Cancer of the Breast.—W. M. Banks discusses the question of the increase in cancerous diseases with its accompanying death rate. The prevalence of the affection has increased more among men than among women. He is disposed to lay great stress on the "flesh-eating" theory as the cause of the increase, for the disease is not so prevalent among vegetable and rice eaters. Most of the sufferers are persons who are likely to eat and drink too abundantly and do not take enough exercise, persons who live well and do not work off their spare products. He indorses the statement that "cancer is eminently a disease of persons whose previous life has been healthy and whose nutritive vigor gives them otherwise a prospect of a long life."

Complete Ossiculectomy (Removal of Remains of Drumhead, Larger Ossicles, and External Attic Wall) in Chronic Otitis Media.—R. Lake analyzes fifty cases. Both sexes were alike affected. Forty-two patients were cured, while three had temporary relapses. Improvement in the hearing-power was noted in twenty-one. The right ear was affected in twenty-nine and the left ear in twenty-one. The average age of the patients was 22.4 years, and the average duration of the disease was thirteen years.

A Suggestion for a Method of Opening the Pericardial Sac, Founded on a Case of Purulent Pericarditis.—C. Ogle and H. Allingham advocate a three-inch incision from the costo-xiphoid angle outward along the lower edge of the seventh left cartilage through which access is had to the pericardial sac, which can then be opened at its lowest part in front. The procedure has been demonstrated on the cadaver, but has not yet been tried on the living subject.

A Case of Gunshot Wound of the Abdomen with Injury to the Intestine; Recovery without Operation.—The patient was one of the soldiers engaged at the battle of Elandslaagte in South Africa, and came under the care of C. Reissman, a civil surgeon at Cape Town.

A Case of Rupture of the Brachial Plexus.—P. Stewart and M. Collier report the case, which occurred as the result of a fall in a man aged thirty-three years. The subsequent history showed that the patient had probably fallen during an epileptic fit.

On the Application of Electricity in Medical and Surgical Practice.—H. L. Jones describes the various forms of apparatus for electrical application.

The Sanitary Condition of the Irish National Schools.—By A. Roche.

Deutsche med. Wochenschrift, March 1 and 8, 1900.

Active Dilatation of the Heart.—Hans Herz discusses in its various aspects the dilatation of the heart resulting from an active alteration (not diminution) of tone of the cardiac muscle—hyperdiastole, described by O. Rosenbach in 1897. The condition occurs physiologically during active exercise, through the action of hot baths, sometimes in pregnancy, and during digestion. Pathologically it is seen in extreme nervous states, as a result of sexual excess, and in certain morbid conditions. It is very common in young persons of the working classes, say between fourteen and nineteen years of age, and is induced by rapid growth, physical labor, and the disturbances due to puberty. In later life the two conditions in which active dilatation of the heart most commonly occurs are obesity and abdominal plethora. The prognosis is usually favorable if the condition is recognized, but depends upon a prompt removal of the cause, in the effort to accomplish which the proper treatment consists.

A Piece of Bone in the Lung for Four Years.—Gustav Killian reports the case of a man, forty-two years old, who inhaled a splinter of bone. He suffered from a very severe and long-continued attack of coughing with bloody expectoration and a sticking pain in the chest. After this signs of pulmonary trouble appeared and continued with varying intensity for four years, during which time he consulted ten general practitioners, six specialists, and sought relief in seven hospitals and clinics in vain. The writer finally succeeded in extracting the foreign body by means of the bronchoscope and a tracheal forceps. The chip of bone measured 15 mm. in length, 11 mm. in width, and from 1 to 4 mm. in thickness (three-fifths, two-fifths, and one-twenty-fifth to one-sixth inch).

Simultaneous Extra- and Intra-Uterine Pregnancy.—Hermes reports the case of a woman, thirty years old, who had had three children born at term and five miscarriages. She had menstruated last in July. In September she was operated upon for extra-uterine pregnancy, the product being the size of an orange and connected with the left tube. The uterus was slightly enlarged and anteflexed. The woman made a good recovery, but as the uterus was apparently growing larger she was instructed to report regularly after leaving the hospital. This proved to be a normal pregnancy, and the woman was delivered of a full-term child in April.

Ophthalmoscopic Findings in Leprosy.—E. v. Düring and Trantas report ten cases of leprosy in which they found chorio-retinitic changes of a specific character, but in several instances these were very slightly pronounced. It is probable that these changes were present in some other cases in which a clouding of the media prevented a view of the fundus. These changes were associated very frequently with other lesions, such as iritis, cyclitis, and sclero-corneal lepromata. These lesions of the fundus are never seen in syringomyelia, and their presence is therefore of value in the diagnosis between this affection and leprosy.

A New Method in Physical Examination.—Eduard Weisz has noted a bulging of the intercostal spaces during phonation (counting), which he attributes to the pressing outward of the lung tissue. The bulging is not present over the spleen and liver, so that the lung marks out its own limits. The sign is absent also over a large pleural effusion. The patient is best examined while lying down, the chest being illuminated by daylight admitted from one side. Such words as "cat," "kilt," and "day" are among the best for phonation for this purpose.

Splitting of the Kidney.—Egbert Braatz reports the case of a woman, thirty years old, who suffered severe pain in the right kidney. An exploratory incision was made into the kidney but nothing abnormal was found. The pain disappeared for three years, then returned in great severity. The kidney was now extirpated, and examination showed a cheesy tuberculous abscess at the upper pole of the organ, and a healed tuberculous focus at the lower pole. Doubtless the latter had been the cause of the original trouble, and had healed as a result of the incision into the kidney.

The Early Diagnosis of Pulmonary Tuberculosis.—Ernst Levy and Hugo Bruns insist upon taking the entire amount of sputum for the twenty-four hours for examination, as the bacilli are not always present, and repeated examinations at not too long intervals must be made. In case of a negative result from sputum examination, resort should be had to animal inoculations. The authors also use the original tuberculin for diagnostic purposes, and believe that with care in its employment no harm can come from it.

Pathology and Treatment of Lamellar Cataract.—Bähr reports on 153 cases of lamellar cataract operated upon in Hirschberg's clinic. Of these 92 were in male, and 61 in female subjects. In 7 the cataract was single, in all the others double. In 136 cases there were symptoms of rickets. The treatment that gives the best results in children is discission.

Severe Nervous Symptoms Caused by the Presence of Intestinal Worms.—Max Heim reports two cases of severe nervous symptoms and nutritional disturbances in infants under one year of age which were caused by the presence of lumbricoid worms. These symptoms disappeared at once upon the expulsion of the parasites from the intestine.

Orthopedic Treatment of Malpositions of the Uterus.—By G. Zepler; a continued article.

A New Instrument for Vibration Massage.—A. Eulenberg describes a new instrument of his device.

Münchener med. Wochenschrift, Feb. 20 and 27, 1900.

Contribution to the Knowledge of Alexins, as regards their Specifically Bactericidal and Hæmolytic Influences.—H. Buchner says there is no doubt that Leber has positively proved by his experiments the important fact of histolysis and proteolysis through the agency of the leucocytes, this being in perfect agreement with their general function as absorption cells. He says further that the idea of the existence of specifically bactericidal material must, as far as he is concerned, be definitely laid aside. He believes that bactericidal properties and specificity belong to different kinds of substances, viz., alexins and antitoxins, respectively. The bactericidal and hæmolytic properties of alexins possess nothing of the character of specificity. Everything of specific nature belongs to the antitoxins.

Clinical Contribution to the Symptomatology of Pancreatitis Acuta.—Hans Doerfler reports a case of acute suppurative pancreatitis and necrosis of the pancreatic tissue. There were severe lumbar pains from the beginning to near the end of the disease. Since section offered no other explanation, there can be no doubt that these pains were caused either by the pressure of the pancreas, enlarged by inflammation, on the solar plexus and the semilunar ganglion, or by an extension of this inflammation to these structures. Osler and Hughes have in acute pancreatitis found round-celled infiltration in the ganglia and inflammatory changes in the nerve cells. Also a striking feature was the great distention of the ascending and transverse colon and their sharp limitation from the entire descending colon.

Hydrorrhœa Ovarialis Intermittens: A Contribution to the Knowledge of Tubo-Ovarian Cysts.—Max Nassauer, in reviewing this subject, says that in all probability there occurs in all cases an antecedent gonorrhœa causing the tubo-ovarian cyst, which constitutes the origin of the hydrorrhœa. First, there is a gonorrhœal inflammation of the tube, which extends to the ovary and the pelvic peritoneum on the same side. Here the cyst is formed, and when it bursts the adherent tube drops into it, the fimbriated extremity of the tube adhering to the edges of the rent in the cyst wall, and in this way the cystic fluid gains access to the tube. The evacuation of the fluid takes place periodically.

On the Occurrence of "Riding-Pain" in the Patella.—J. A. Rosenberger speaks of three cases of this kind. The prognosis is absolutely good; for when the cause, *i.e.*, pressure, is eliminated, the pain is relieved. Severe pain disappears in the first days. Therapeutically, relief from pressure and absolute rest are indicated. Recovery will always follow. Rubbing and the bath are valuable remedies. Massage in the early treatment cannot be considered, as it increases pain. On account of the absolutely negative findings in this affection, the physician might think of simulation or exaggeration.

The Influence of Spinal Puncture and the Condition of the Spinal Fluid in Chronic Hydrocephalus.—Julius A. Grober reports two cases, and says that their clinical significance lies without doubt in the fact that it is possible to cure chronic hydrocephalus. Whether this is permanent or only for a time, further observation must show. That frequent repetition of spinal puncture has played an important, if not the chief, rôle in this treatment, is apparent from the observation of other hydrocephalic children.

A Method of Treatment of Lung Tuberculosis with Subcutaneous Injections of Oil of Camphor.—B. Alexander states that from the beginning he daily injected 0.1 gm. camphor. For patients with fever he daily injected 0.01–0.02 gm., or in cases of great weakness 0.03 gm., of camphor for a week or a month without interruption. Patients free from fever were treated likewise, or had injected daily 0.1 gm. camphor for four days; then after intervals of at least eight days these are repeated.

Clinical Contribution to Intestinal Lipoma.—Florian Hahn states that lipomata of the digestive tract are rare tumors. The interesting points in this case are that the lipoma was multiple in the submucosa, and that there was the combination of external and internal lipoma; also that there was sclerosis of the intestinal wall in the position of a degenerated lipoma. It is the first case of invagination from lipoma in which recovery took place through resection.

A Case of Self-Injury with Hysterical Basis.—J. Eversmann relates the case of a woman on whose body—hands and arms particularly—water blisters appeared, no cause being apparent. It was finally discovered that the patient herself applied cantharides plasters when free from observation.

A Case of Friedrich's Ataxia.—C. Wickel gives the history of this case, and in speaking of the etiology notes phthisis in the father. The child was always sickly. This weakness may have caused a tendency to affections of the central nervous system. Lues was not proved in the father.

On the After-Treatment of Severe Abdominal Operations.—Steinthal believes in the efficacy of regularly repeated intravenous infusions of physiological salt solution, in connection with subcutaneous oil injections and nutrient enemata.

Angina with Endocarditis.—Roeger speaks of the frequency of this combination. The treatment of endocarditis consists in the application of an ice-bottle to the precordia, absolute rest in bed, and avoidance of stimulating drinks.

The Relation between Scrofula and Trachoma.—S. Bäck states that there exists a certain causal connection between trachoma and scrofula of the eye. Both perhaps may be traced to the same etiological factor.

Treatment of Suppuration of the Eyes in the New-Born.—A. Lamhofer washes out the eyes every hour or two with lukewarm water. If medication is necessary, he uses weak boric or alum solution.

A Rare Case of Paralysis of the Radialis Cured by Freely Exposing and Stretching the Nerve.—Hans Bräuninger reports this successfully treated case. The patient was a youth, sixteen years old.

The Therapy of Lupus and Skin Diseases by Means of Roentgen Rays.—By R. Hahn and Albers Schönberg.

Berliner klinische Wochenschrift, Feb. 26, 1900.

Clinical Significance and Experimental Production of Granular Degeneration of the Red Blood Cells.—E. Grawitz discusses the occurrence of this condition as seen in various diseased states. He does not regard it as an absolute or specific process occurring in the cells, but as a simple degeneration which can arise from many causes, and he cautions against drawing hasty conclusions with reference to its causative relation to any definite pathological condition. He has found that it may be induced in white mice by subjecting them to the prolonged influence of a moderately high temperature.

Nature's Methods of Protecting the Organism against Infection.—In this issue, P. Baumgarten concludes a lengthy polemic (running through two previous numbers) against the views of H. Buechner. He takes a very conservative view as to the bactericidal properties of normal serum, claiming that some of the theories which have been set forth in this regard are not proven by clinical experience, and that a too hasty transference of conclusions from laboratory experience to the domain of actual treatment of disease has been made.

Researches on the Bacterial Contents of Brushes, and the Possibility of Sterilizing them.—A. Winternitz finds that it is possible to sterilize brushes (no matter how long they may have been infected) by boiling them for ten minutes in a one-per-cent. soda solution, and that they may be kept sterile by preservation in a solution of sublimate, 1 : 1,000.

Syphilis of the Lingual Tonsil.—J. Heller makes a statistical study of the frequency of this localization of the specific poison. He discusses the various forms of lesion seen in this situation, paying special attention to the so-called flat atrophy of the tongue.

Vratch, February 12, 1900.

Etiology and Treatment of Angina Pectoris.—Th. K. Geisler discusses that form of angina which occurs in consequence of vasomotor disturbances at the menopause, and formulates the following conclusions: 1. Attacks of angina pectoris observed for the first time at the menopause may be dependent upon the changes occurring at this period, or they may accidentally begin at this time from other and unassociated causes. 2. In the former case the attacks may be purely neurasthenic or hysterical, or they may be of vasomotor origin (spasm of the coronary arteries), giving the picture of severe organic angina pectoris. These two forms may, of course, be combined. 3. In the presence of angina immediately dependent upon the approaching climacteric our first resort should be to specific treatment with ovarian extract.

The High Operation for Stone.—V. I. Lisïanski reports fifty cases of vesical calculus removed by the high operation. There were two deaths from extraneous causes, but none attributable to the operation itself. The stone was solitary in every case but one; in this one case there were two stones. The author advises immediate suture of the bladder in moderately young and well-nourished patients and when the urine is healthy.

Rhinoplasty by Israel's Method.—M. M. Kuznetsoff reports two cases of rhinoplasty for saddle-nose performed after the method of J. Israel. This consists of two steps: (1) The transplantation under the skin of the nose of a piece of bone chiselled from the tibia to supply the bony ridge; (2) A modified Italian rhinoplasty.

Endothelial Neoplasms of the Gastro-Enteric Tract.—By L. V. Soboleff. A continued article.

La Riforma Medica, Feb. 15 to March 1, 1900.

The Cure of Cutaneous Epitheliomata by the Cerny-Trunecek Method.—Cesare Casarini holds that in applying the arsenic cure we should always have recourse to microscopical examinations so as to ascertain whether the prevalence of one histological element over another at all affects the cure. No great importance can be attached to a cure obtained in superficial epitheliomata, since other remedies have also given good results. Still, arsenious acid does hasten cicatrization. The application of the remedy is easy, and, although painful, is usually well supported by the patient.

Hydrocele.—Nicolino Ferrici says that the operation preferred in Roth's clinic is that of Hüter, opening at the inferior end of the tumor, emptying, making a counter-opening above, a long closed forceps being introduced into the sac serving as guide, and drainage. Irrigations are made with a hot boric-acid solution. The aseptic irritation produced by the drainage is usually sufficient to provoke adhesion of the serous surfaces. In rare cases when adhesion is tardy, recourse may be had to one or two irrigations with an iodine solution. The majority of cases result in cure in twenty days.

Uses of the Stomach-Tube in Gastropathy, and Indications for Gastro-Enterostomy.—E. Tricomi says that gastro-enterostomy has already had great triumphs, and that physicians are convinced that in cancer of the stomach benign stenosis, simple gastric ulcer, gastro-succorrhœa, obstinate idiopathic gastrectasy, and some cases of special functional disturbance are best treated by this operation, either alone or combined with resection of the stomach. In the case of cancer there are some cures which have lasted five, seven, and ten years.

The Influence of the Nervous System on the Cure of Fractures.—E. Arcoleo concludes from clinical observation and laboratory experiments that: (1) Excision of the sympathetic in dogs has no influence upon the process of recovery in fractures, which goes on normally; (2) the nervous system has no influence on the formation of the callus in fractures; (3) clinical observations confirm laboratory experimentation.

The Action of Adonis Vernalis in Epilepsy.—G. Gianni believes that this drug may have some influence in attenuating the attacks, but that it may cause them to occur more frequently. It has no advantage over bromide.

A New and Economical Thermostat.—C. Tauzig describes a simple thermostat, easy of construction. and of practical value.

French Journals.

Intoxications following the Ingestion of Molluscs.—Dr. Mosny concludes his article with the propositions: (1) The bacteriological analysis of the organs of molluscs and of the water retained in their shells has revealed the presence of bacteria pathogenic for man, in particular those of typhoid fever, the coli bacillus, and vibrios similar to those of cholera. (2) Experiments have shown that certain pathogenic microbes, and in particular the Eberth bacillus, the coli bacillus, and the vibrio of cholera, artificially placed in contact with oysters, could remain living and virulent in the organism of these molluscs and in the water retained between the valves of their shells, for a longer period than usually elapses between their being taken out of the water and sold for consumption. —*Journal des Praticiens*, February 24, 1900.

Contusive Pneumonia.—A. Sauques says that trauma, and especially thoracic traumatism, may provoke and localize lobar pneumonia by simple contusion. Gamaleïa was able to produce lobar pneumonia in an animal only by injuring the lung, either in inoculating the pneumococcus through the thoracic wall or introducing it by way of the trachea, after having first injected tartar emetic. Experiment has shown that traumatism prepared the way for infection in determining a trouble of the vasomotor system of reflex origin. The rôle and mechanism of traumatism in the development of contusive pneumonia are solidly established.—*La Presse Médicale*, March 3, 1900.

The Plague in Ancient and Modern Times, and its Future in Europe.—Ph. Hauser completes his serial article with a consideration of the future of the plague.—*La Médecine Moderne*, March 3, 1900.

Bulletin de l'Académie de Méd., Feb. 20 and 27, 1900.

Attenuated Forms of Grippe and their Treatment.—H. Huchard classifies these forms as the apyretic, characterized by neuralgias, by nervous asthenia, by general depression, by gastro-intestinal troubles; and the febrile, shown by fever alone. These types often lead on to more severe forms. The author considers quinine sulphate the best possible medicament for this affection, and from the onset prescribes from 1 to 1.5 gm. the first day, and perhaps for several days in succession. He recommends a simple diet, and the ingestion of much milk.

Disinfection in Measles.—E. Vallin says that as in Paris deaths from measles are more frequent than from any other infectious disease except tuberculosis—eight hundred and fifty deaths in 1899; two hundred and fifty from typhoid and from diphtheria—disinfection should be more rigorously practised.

Rhinoplasty.—Paul Berger built up an entire nose by enclosing a metallic bridge between two flaps that were made to unite with each other by first intention. This obviated all possibility of infection, and the result was satisfactory.

Psoriasis.—M. Petrini reports a case cured by the administration of thyroid gland in capsules.

Journal of Nervous and Mental Disease, March, 1900.

The Relation between Trigeminal Neuralgias and Migraine.—James J. Putnam claims that recurrent ophthalmic neuralgia stands out vividly from among the other neuralgias of the trigeminal nerve, and that some of the characteristics that it presents strikingly recall migraine, so that the study of either disease throws light on our knowledge of the other. The difference between "neuralgias" and migraine he believes to be one of degree rather than of kind, due partly to the fact that the centres involved in the case of migraine are of such high functional significance and united in such wide and close association with other cerebral areas.

Lesions of the Optic Chiasm.—William M. Leszynsky divides these lesions into four classes: (1) Associated with intracranial growths and their concomitant symptomatology; (2) from enlargement of the prehypophysis cerebri, as occurring in acromegaly; (3) in syphilitic basal meningitis; (4) from a circumscribed pathological process, which gradually produces complete atrophy of both optic nerves, without any cerebral symptoms whatever.

Epileptic Ambulatory Automatism.—D. J. McCarthy reports a case of that condition, in which an individual consciously or unconsciously performs more or less complex ambulatory acts over which he has no control.

The Edinburgh Medical Journal, March, 1900.

On the Method of Zadig in the Advancement of Medicine.—George W. Balfour, in a review of what has been done by medical science by means of a careful search for that efficient cause which must always precede every effect, speaks of microbes which, although always with us and around us, do us no harm, because when in good health our natural antitoxin is sufficient to neutralize the toxin with which they endeavor to flood our tissues. This is the basis of the Nordrach treatment of phthisis, by forced feeding and free exposure to sunlight and fresh air to increase the natural antitoxin, and thus overcome the toxin of the tubercle bacillus.

Food versus Physic.—John Haddon says that all the nitrogen we require is just as much as will supply the small amount of tissue waste that takes place, and that when we eat much food rich in nitrogen, such as meat, we are putting into our bodies a substance which acts as a foreign body, and must be got rid of by the digestive and excretory organs in the form of urea. It is small wonder therefore, he thinks, that sooner or later we suffer from symptoms due to the ingestion of nitrogen. He believes in making all "gouty" sufferers strict vegetarians.

The Place of Protargol in Eye-Work.—Sydney Stephenson believes that although protargol is not an absolutely ideal agent in treating inflammatory affections of the eye, it is in some respects an important advance upon silver nitrate.

Molluscum Fibrosum.—G. L. Kerr Pringle reports a case which shows both the small soft tumors and the large pedunculated masses. The pigmentation of the body is also disturbed.

Some Observations on Vascular Resistance.—Harry Campbell considers the objects served by arteriolar resistance, and those served by the reduction of the systemic venous resistance to the minimum.

Ulcer of the Cornea.—A. Maitland Ramsay gives a detailed description of this affection, with its etiology, complications, sequelæ, prognosis, and treatment.

The Differential Diagnosis of Gout, Rheumatism, and Rheumatoid Arthritis.—Arthur P. Luff gives rules for the recognition of these three conditions.

Dublin Medical Journal, March, 1900.

The Position of the Murphy's Button in Modern Surgery.—J. S. McArdle concludes in this issue a study of the development of this device, and gives clinical histories of eight cases in which he has used it. He enumerates, as objections which have been urged against it, contraction of the intestine at the site of operation, sloughing from pressure, septic peritonitis, retention of the button, kinking of the bowel, faulty position of the button, difficulty of rectification when once it has been inserted, difficulty of having the proper size on hand, and the expense of the appliance. He does not regard any of these objections as valid. He claims that its use has reduced the mortality of operation from sixty to thirty per cent.

The Rôle of the Municipality in Public Hygiene.—By Sir C. A. Cameron. A presidential address to the Leinster branch of the British Medical Association, February 6, 1900.

Clinical Reports of the Rotunda Hospitals for One Year, November 1, 1898, to October 31, 1899.—By R. D. Purefoy, R. P. Lyle, and H. C. Lloyd.

Zeitschr. f. Diätet. und Physik. Therapie, Feb., 1900.

Treatment of Chronic Ulcer of the Stomach.—August Richter says that in treating this condition the amount of gastric mucus is the first consideration. Only in cases in which he thinks the edges of the ulcer clean and the wall of the stomach smooth and free from mucus, when a certain hyperæsthesia of the sensory nerves of the stomach exists, and the amount of hydrochloric acid is not much increased or normal, is the solution of silver nitrate useful.

The Significance of the Hot-Air Douche in Aerotherapy.—A. Frey, after describing the apparatus, concludes that with it we may produce hyperæmia or anæmia over any given vascular area and maintain it so that the energy of the cells may be increased or diminished. The more extreme the temperatures the more intense are the local results.

Value of Occupation in the Treatment of Disease.—F. Buttersack states that there are two points of importance in reference to the course of disease: (1) The worry which fathers and mothers have about the family; (2) the filling in of time during convalescence.

Treatment of Diabetes at the Menopause.—E. Heinrich Kisch states that the physician must combine a psychical and physical diet in these cases. The patient's time should be fully occupied and the thoughts drawn from unpleasant things.

The Chemical Composition and Effect of the Inorganic Salt Solution according to the Theories of Modern Chemistry.—R. Brasch compares and analyzes Kissingen, Rakoczy, and Carlsbad Sprudel. Several tables accompany the article.

The Blood-Purifying Diet of Galen.—Basler contributes an article comparing the diet in the days of Galen with that of modern times.

Deutsche Aerzte-Zeitung, March 1, 1900.

Prophylaxis of Pulmonary Tuberculosis.—G. Krönig takes the ground that the greater are the natural defences against invasion the greater is the guarantee of escape from tuberculosis. A well-built man with healthy organs has little to fear. The early evidences of tuberculosis of the lung apex are to be best secured by topographical percussion of the apex region; a modification of Biedert's method of finding the bacilli as given by the writer; and a careful investigation of the general condition of the patient.

Clinical Experience with Oxy-Camphor (Oxaphor).—Franz Meyer discusses this drug, which, like heroin, diminishes excitability of the respiratory centre. It was discovered by Manasse, of Munich, in attempting to find derivatives of camphor which would be more soluble than camphor itself. In dyspnœa it is capable of doing good work, and in daily dose of 2 to 4 gm. seems to be harmless. It has the disadvantage of being still quite dear.

On the Origin of Inguinal Hernia.—By Graser. A continued article.

Giornale Medico del Regio Esercito, January 31, 1900.

Angiotripsy.—Attilio Bruni describes the process of arresting hemorrhage by means of Cavazzani's angiotribe. The advantages of the method are its rapidity, and the absence of secondary hemorrhage. For small vessels it is in itself sufficient, and in large ones it may be used in combination with a very slender ligature. Thumin by histological examination has found that hæmostasis is produced, not only by retraction and constriction of the arteries, but by immediate occlusion of the vessel from union of the endothelial coat.

Biliary Lithiasis; Perforation of the Gall Bladder; Acute Peritonitis.—Pasquale Tecce reports a case which terminated fatally, and in which examination of the calculi showed that the two largest of the five examined contained a foreign body. These vegetable fragments must have come from the intestines; a fact which upholds the latest clinical theories that calculus is due to purely local conditions of the biliary passages, instead of to chemical changes.

Annali di Medicina Navale, January, 1900.

The Technique of Suprapubic Cystotomy.—Francesco Rossi gives in detail the procedures to be adopted in this operation, to avoid wounding the peritoneum, and so to treat the wound as to prevent infiltration of urine or to render it innocuous. These details, he says, being a résumé of the most recent procedures of various authorities, have not as yet been described in any work on operative surgery.

Rapidly Fatal Hæmatemesis from Hepatic Cirrhosis.—F. Antonelli reports the case of a sailor who, feeling gastric oppression, endeavored to empty his stomach by vomiting. Fatal hæmatemesis followed. The liver was found to be cirrhotic.

Disinfection of the Hands.—Gaetano Tacchetti describes the method in use in Bassini's clinic in Padua, who has the greatest success in obtaining primary union after operation.

Case of Psychical Epilepsy.—R. Cesàro reports a case in which sudden attacks of hallucination and other psychic-sensorial disturbances, evidently epileptic in their nature, replaced the typical motor attack.

Paroxysmal Bradycardia.—A. Luzzati describes a case due to nicotine poisoning.

Corresp. f. Schweizer Aerzte, Feb. 15 and March 1, 1900.

Two Cases of Tetanus Treated with Antitoxin.—Kocher relates two instances treated at the institute for the investigation of infectious diseases in Berne. In the case of a man, aged thirty-two years, injured upon the head twenty-seven days before, recovery took place after intracerebral injection of 10 c.c. and an intravenous injection of 50 c.c. of serum in the median vein. In a child, aged five years, injured a week before upon the eyelid, the symptoms and course were so acute that there was little hope. An intracerebral injection was made, but the child died the same day.

Intestinal Bacteria and Intestinal Bacterial Poison in the Brain.—Johannes Seitz discusses auto-infection or auto-intoxication, giving details of cases; and touches upon the use of opium in peritonitis. Convulsions in children and unexpected death are explained by invasion of the brain by intestinal bacteria, especially the coli bacterium, without giving rise to meningeal inflammation. In seven out of fifteen cases the bacteria of the intestinal contents were thought to be the cause of the head symptoms.

Ozæna.—F. Siebenmann discusses rhinitis atrophica simplex and fœtida with its constantly accompanying pharyngitis sicca. He thinks that the family physician, who sees the patient frequently and can control him, is better constituted to obtain good results than the specialist to whom occasional visits are paid.

Annales de Gynécologie et d'Obstetrique, Feb., 1900.

Indications for Operation in Cases of Fibroma Complicated by Pregnancy.—H. Delagénière believes that when severe pain is caused by compression of the pelvic organs, or by a tumor incarcerated in the pelvis; when ureters, bladder, or rectum are compressed by a tumor situated in the inferior portion of the uterus; when hemorrhage or placental apoplexy threaten the life of the fœtus, operation should be performed. Abortion or premature labor should never be induced, the rate of mortality being very much greater than in the case of radical operations.

Phlegmonous Dissecting Perivaginitis.—Von Lingen reports a case in a woman, thirty-nine years of age, married, nullipara. The vagina, cul-de-sac, and cervix uteri were gangrenous, and were thrown off. Absolutely no cause could be found for the condition.

Right Hydrosalpingitis with Twisted Pedicle.—M. Hartmann reports a case complicated by adhesive peritonitis and appendicitis. The right appendages and the appendix were removed, and the patient made a good recovery.

Parovarian Cyst.—E. Jeanbrau and J. Moitessier report a case in which the cyst contained twenty-three litres of albuminous fluid.

Archives Générales de Médecine, March, 1900.

Regeneration and Cicatrization as Related to Embryonal Development.—Etienne Rabaud says that as a result of studies in comparative embryology, it is evident that regeneration follows the paths of embryonal development. Homomorphism is the rule, that is to say, the organ is usually regenerated in its usual form and dimensions, but there are exceptions. Regeneration follows the laws of ontogenetic or phylogenetic development; that is to say, the derivation of the epiblast, while still in dependence upon its surroundings.

Purpura and Visceral Affections.—C. Oddo and Olmer, concluding an article from the previous number, state that while purpura may in many cases have no apparent connection with visceral lesions, yet it often is related to anterior affections of the bronchi, lungs, tonsils, and intestines, which serve as the door of entrance to the infective agent, causing purpura. Sometimes the visceral affections cause purpura by altered nutrition and auto-intoxication. Visceral affections existing contemporaneously with purpura are due to the causative toxic infection.

Botryomycosis.—In concluding an article begun in the previous number, Antonin Poncet and Louis Dor give the result of investigations into the nature of these growths which occur in horses after castration, and are also found on the human hand and fingers. They have found it to be due to a special micro-organism called the botryococcus, which has many points of resemblance to the staphylococcus pyogenes, but is not identical with it. There is a human botryococcus as well as an equine.

Organic Hemichorea.—M. Touche says that this affection may be produced by a lesion of the (1) corona radiata; (2) caudate nucleus; (3) anterior portion of the lenticular nucleus; (4) optic thalamus, usually of its external nucleus; (5) internal capsule; (6) region below the optic thalamus, involving the red nucleus; (7) superior surface of the cerebellum.

Cerebral Tumor of Psychoparalytic Form.—Brault and Loeper report three cases. Tumors of the motor region may be manifested only by progressive paralyses and psychical affections. This association of symptoms causes a suspicion of cerebral tumor; an ophthalmoscopic examination is necessary to decide the matter.

Malarial Cachexia.—E. Lefas reports a case in which there was general amyloid degeneration, but total absence of pigmentation in the blood and viscera.

Finska Läkaresällskapets Handlingar, February, 1900.

Hæmatometra in a Rudimentary Horn of the Uterus.—O. A. Boije reports the case of a woman, twenty-seven years old, the mother of three children, who had always enjoyed good health except at the menstrual periods, when she suffered greatly. An oval tumor the size of a hen's egg was felt to the right of the womb and was diagnosed as a pedunculated fibroid. At the operation, however, its true nature was discovered. There was no communication with the cavity of the uterus.

The Work of the Finland Medical Society for 1899.—R. Sievers, the retiring president, states that seventy-two communications by twenty-four individuals were made to the society in the course of the year, and forty-four original articles by thirty-three authors were published in the journal of the society. The seventeenth general congress of Finnish physicians was held on September 21st–23d.

The Electrolytic Properties of the Blood.—Max Oker-Blom reports a number of investigations made to determine the electric conduction of defibrinated blood and of blood serum, and describes a method based upon the differences of conduction, whereby he determines whether a given salt is taken up by the erythrocytes or remains dissolved in the serum.

Traumatic Spondylitis with Subsequent Kyphosis.—H. von Bonsdorff reports two cases of this nature, the first in a man aged twenty-five years, and the second in a lad aged nineteen years.

Meditsinskoe Obozrenie, February, 1900.

Acute Yellow Atrophy of the Liver.—E. M. Schwalbe reports a case of this rare affection occurring in a girl, aged sixteen years. She had been ill a week when she first came under observation, and died a week later. He believes the disease to be the result of some poisonous product, elaborated in the stomach or intestine, and carried to the liver by the blood of the portal vein; but whether this poison is a product of bacterial metabolism or of some abnormal fermentation in the digestive tract he does not venture to decide.

Hereditary Syringomyelia.—S. S. Nalbandoff reports the case of a man, thirty-three years of age, who presented symptoms of syringomyelia. His father had died of laryngeal tuberculosis, and his mother, he said, was a sufferer from "rheumatism of the fingers." She was fifty-five years old, and examination showed that she too had the same disease. Authors usually deny that heredity is an etiological factor in this affection, although Ferrannini and Veshoogen and Vandervelde have written upon syringomyelia as a familial disease.

Adenoids.—I. N. Teterevïatnikoff discusses the frequency of adenoid disease, its relation to aural affections, and its influence in the causation of aprosexia in school children. He reports three cases of unusually brilliant results, following the removal of adenoid tissue from the pharynx.

Primary Sarcoma of the Gall Bladder.—P. M. Nevïadomski reports a case of this description, occurring in a woman fifty-five years old, in which there was found at autopsy a diffuse sarcomatous infiltration of the visceral peritoneum.

Anchoring a Wandering Kidney.—P. A. Baratynski reports a case of movable kidney in a woman, thirty-three years of age, in which he succeeded in removing the distressing nervous symptoms by suturing the kidney in place.

Hereditary Syringomelia.—P. A. Preobrazhenski reports three cases of syringomyelia, the first in a man sixty-five years old, the second and third in two of his daughters, aged thirty-two and eighteen years respectively.

Correspondence.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

The Boer Arrangements for their Sick are becoming better known, and, as I have already been able to say, have been underrated. But the Boers have availed themselves considerably, though reluctantly, of foreign assistance. Six foreign sanitary detachments or ambulances have been admitted to the Boer lines. Two of these were Dutch, one coming from Holland and the other from Java; while the other four came respectively from Belgium, France, Germany, and Russia. A second Russian ambulance has been fitted out, but it has not yet reached its destination. Professor Korteweg, surgeon at the University Clinic in Amsterdam, who served for two months with the Boers—*i.e.*, from the middle of November to the middle of January—reports that the attitude of the Boers toward the foreign nations desirous of helping them is not conciliatory. The foreign medical men and nurses had great difficulty in finding out where their services would be most required, as for strategical reasons it was never indicated where fighting was likely to take place. This want of confidence of the Boers in all European nations was well shown in the treatment that Sir James Sivewright's ambulance received. Sir

James Sivewright, K.C.M.G., who was for many years general manager of South African telegraphs, and who was knighted for his work as commissioner of crown lands in Cape Colony, has strong Boer sympathies. He organized and despatched from Scotland at his own expense a South African medical corps for ambulance service with the Boers. When the ambulance, which was manned partly by Boers receiving their medical education in Scotch universities, and partly by British, arrived at Cape Town, the assistance offered was refused by the Transvaal government. The ambulance, however, proceeded to Delagoa Bay, where certain overtures were made to induce its members to individually volunteer to assist the Transvaal. The British members of the corps regarded these overtures with suspicion and did not volunteer, for Sir James Sivewright's intentions were humanitarian and not dictated by any political motives; whereas, as Mr. Allan Johnson, one of the three British members of the corps, has publicly said, "While the Transvaal government were quite willing to receive any number of Afrikanders into their service, they would not look at an ambulance corps which included Britishers, especially if these showed that they meant to stick tenaciously to their pledge to work for the wounded of every sort and race." Sir James Sivewright's action has been generally held to be unpatriotic and unnecessary, so that the cold and limited reception awarded to his ambulance by the Republican States has been a source of amusement in Cape Town.

Touch and Go at Ladysmith.—It is now known that Ladysmith could not have held out much longer, but that sickness and starvation would have compelled the garrison, which included five hundred women and children, and eight hundred persons sick with typhoid fever, to capitulate. The day Ladysmith was relieved the rations actually issued were (per head) a quarter of a pound of biscuit, three ounces of meal, one pound of meat, one-sixth of an ounce of tea, one ounce of sugar, and pinches of salt and pepper. Blancmanges were being made of violet powder, potatoes were 19*s.* the dozen, jam and marmalade 31*s.* the pot, tomatoes 18*s.* the dozen, and tobacco £12 the pound. Only about four days' full rations remained when Buller's fourth and furious attack dislodged the Boers and relieved the place.

The Cost of the Medical Establishment of the British Army.—The effects of the war, as might be expected, can be traced in the estimates for the medical establishment of the army which were disclosed in the fiscal debates in the British House of Commons at the beginning of March. The total vote for 1899–1900 was £305,800, whereas for 1900–1901 it is £555,000. Under the head of pay to the officers there is an increase of £120,000, which is to some extent accounted for by the fact that the civilian surgeons serving in a consultant capacity with the staffs are being paid at the rate of £5,000 per annum. Provision is being made in the estimates for a large increase of officers in the Royal Army Medical Corps. That the addition is needed has been abundantly proved by recent events, but the War Office will not get more men unless they make up their minds to treat the men they already have in a more conciliatory manner than so far has been the custom. They say that the Royal Army Medical Corps have reason to believe that the present commander-in-chief, Viscount Wolseley, regards their branch of the service with disfavor. But Lord Wolseley's disfavor will not mean so much in the future as it has in the past.

The Meat on Board the Transports.—There have been many rumors that on board some of the transports the troops were badly fed. All these stories have now been rigorously inquired into, with the result that nearly every one has been discredited. But in one case, viz., on board the *Kildonen Castle*, eighteen hundred and forty-two pounds of salt beef was found to be dated "1893," and was consequently returned to the contractors. It is to be hoped that the names of the firms who in this or any other way have attempted to cheat their country will be disclosed. The punishment will be sufficient, without other penalties, of having their names published. Yet it would be advisable to punish them severely in addition.

One Way to Fill the British Hospitals.—The transports conveying troops from Great Britain to Cape Town have recently dropped a great number of men in the Cape Town hospitals. The medical officers of those establishments complain that more care might be exercised in the medical examination at home of men destined for duty at the front; cases of hernia, for example, ought to be detected, when they exist, prior to embarkation. Such patients take up badly wanted accommodation in the various hospitals, and in some instances never get farther than the wards until placed upon a homeward-bound trooper—a decidedly expensive matter for the British government. The medical men serving with the British army consider that the reserves and militia who have lately arrived in South Africa are somewhat disappointing from a physical point of view, which may mean only that the inspection of their physique in England has been carried out in a slovenly or ignorant manner, or may mean that for the present, as far as efficient regular troops are concerned, the supply is running short. The amount of breakdowns in the health of the reservists has come as a surprise to the authorities.

To the Front Again.—If the good weather persists and if there are occasional lulls in the fighting, the hospital accommodation, all of which I have now detailed to you, will suffice, in spite of the heavy demands made upon it. For the slightly wounded get back to the front quickly, while the convalescent are regularly transported to England if they are unfit to serve again. On March 7th there were discharged at Durban twenty-two men from the *Spartan* hospital ship, twenty-eight from the *Maine*, eleven from the *Lismore Castle*, and thirty-eight from the *Nubia*, all being reported as fit for active service again. While the recently wounded return to the front at this rate, there will always be a good deal of space for other unlucky soldiers. But on March 10th Lord Roberts had rolled up ahead of him a large Boer army, of presumably ten thousand men, so that a sanguinary engagement may at any moment call upon the Royal Army Medical Corps for their best services.

OUR LONDON LETTER.

(From our Special Correspondent.)

PARLIAMENTARY—MIDWIVES, ETC.—DEBATE AT THE PATHOLOGICAL SOCIETY ON PROTEIDS IN THE URINE—THE MEDICAL SOCIETY'S ADJOURNED DISCUSSION ON APPENDICITIS.

London, March 2, 1900.

As I predicted, the midwives' bill came on too late on Wednesday. Its fate is probably sealed for this year, as it can be taken only at the close of public business, but an eye must be kept on the chance of its slipping through on some unexpected vacancy at a late hour. Other medical matters in Parliament have been connected with the army and navy services and events in South Africa; the plague and famine in India; the government housing bill, and the bill for the census to be taken next year.

Another set debate has been begun at the Pathological Society. The subject this time is "The Forms and Significance of the Proteids Met with in the

Urine." Professor Halliburton opened the discussion with remarks on the advantage of pathologists and clinical observers co-operating in such debates, passing on to say that our knowledge of these proteids is still very imperfect, though each year marks some progress. These proteids he said were of great molecular weight, and their large size explained why they do not pierce the normal renal epithelium except in minutest traces. That which does is contained in the mucicula, though he admitted with Mörner that a trace of serum albumin is found in normal urine. Serum albumin was also most abundant in physiological albuminuria; but in Bright's disease it is usually mixed with serum globulin. Generally the globulin was the less abundant and its presence less serious. There was some evidence that the molecules of globulin were the larger, which would account for the greater abundance of the albumin. Only after damage to the epithelial cells could the globulin pass through them. The fibrinogen molecule was still larger, and hence its rarity in the urine. The same reason accounted for caseinogen never having been found in cases were lactose discoverable. Having passed in review some other rare proteids, Dr. Halliburton turned to those with small molecules. He distinguished between peptonuria and albumosuria. He would restrict the former term to those conditions, usually of a suppurating nature, in which bacterial digestion led to the formation of proteolytic products which were mainly cast out by the kidneys. The substance most frequently found was not true peptone in Kühne's sense, but deutero-proteose. The term albumosuria was usually restricted to those rare cases in which hetero-albumose was found, due to osteomalacia or other bone disease.

Dr. Bradshaw, of Liverpool, then dealt with myelopathic albumosuria, of which only eleven cases had been recorded. He had met with one case in a man aged seventy years which lasted about a year. There was extensive disease of the bones, but the chief symptom was milky urine due to a proteid which was frequently precipitated spontaneously. The most characteristic reactions were a precipitate below 60° C. (140° F.), also in the cold by nitric and hydrochloric acids. All precipitates were more or less soluble on boiling; that produced by heat was dissolved without apparent change by caustic-soda solution 1:1,000. The proteid was clearly an albumose, but of a peculiar kind not found in other conditions. Its appearance in the urine is the earliest indication of an affection of the bones of the trunk, which has hitherto always been fatal.

Dr. Robert Hutchison then described a peculiar proteid found in the urine of a man who afterward died from multiple myeloid sarcoma. It differed from the body described by Bence Jones in being an albumin, not an albumose. It differed too from all other albumins in having a low coagulation point (58° C.), in being readily denaturalized and only slowly precipitated by acetic acid and ferrocyanide of potassium. The urine presented no visible deposit but was clear, of low specific gravity, and slightly alkaline.

Dr. Pavy could not admit that albumin in any form occurred in normal urine. We might perhaps have functional albuminuria that is not due to histological change in the kidney, but then it was pathological, not physiological. The molecule of sugar was very small, so if present in the blood it would pass through the kidneys. But although normal urine contained no albumin it might contain a small amount of proteid as a nucleo-albumin or mucin. This was sometimes the origin of errors. The urine of the athlete who walked one hundred miles in twenty-four hours Dr. Pavy found to be loaded with albumin and casts at the close of the exploit. The altered pressure in the renal vessels would account for cases of cyclic albuminuria occurring in the morning and being absent at night. The proportion between albumin and globulin had not been shown to be of importance, clinically or pathologically, nor was the total amount of proteid significant. The gravity of the case was to be measured by the presence of casts and the amount of urine passed.

The discussion was then adjourned to the first meeting in April.

The adjourned discussion on appendicitis at the Medical Society came off on Monday. Mr. Sheild said the absence of induration over the cæcum need not preclude operation. Rapid pulse was a very important sign. He was against a resort to opium unless in very small dose, and he urged the importance of getting the bowels to act.

Dr. Cayley would carefully distinguish mild cases from the actually or the potentially severe ones. But he acknowledged that when severe symptoms appeared early in the case it was impossible to know whether they would subside or continue their grave course. Rapidity of pulse was significant, but should be considered in connection with other symptoms. He thought opium beneficial. If withheld until the question of operation was decided it could then be used for the relief of pain as required—not continuously.

Mr. Harrison Cripps said a mild attack might be due to some temporary cause and pass by without operation. But recurrence implied a more permanent condition indicating operation, which unless necessitated immediately should be undertaken in the quiescent period. It was then almost devoid of risk. He had not had a fatal case, and Mr. Treves had had only two in one hundred and thirty operations. The presence of swelling or its absence was not of much significance, as it depended on the position of the appendix. But if there should be very great induration, it might be advisable to wait until the abscess pointed. He objected to buried sutures. He had given up the use of abdominal supports after the operation. He preferred a free incision, and urged the importance of dividing the aponeurosis of the external oblique.

Dr. Hunter held that the disease was always infective; consequently a mild case might at any moment become grave. Suppuration often took place after a mild course of seven or eight days. Therefore he advised operation after that time whenever a rise of temperature occurred. Even 99° or 100° F. might be a significant temperature. Small doses of opium combined with calomel might be useful.

Mr. McAdam Eccles, who had had personal experience of the disease, said the gravity of the case was dependent on the virulence of the microbe. The tissues of the patient could sometimes deal with this, but recurrence should always be met with excision. If they could always remove the appendix the patient would be cured, but this was sometimes impracticable.

Mr. Moullin favored the operation in most cases even at the risk of performing it on patients who might have recovered without. The patient was guaranteed against recurrence by the operation, and its risk was slight. When the symptoms suddenly subsided it might be due to discharge of matter into the intestine, and it was impossible to ascertain the exact condition. Whenever the symptoms were progressing at the end of thirty-six hours an exploratory incision ought to be made.

Dr. L. Thomas, of Cardiff, had had only three deaths in forty-one operations. One case turned out to be a pyosalpingitis, another abscess of the ovary. He had in one instance removed a healthy appendix for symptoms which afterward recurred. They yielded to Weir Mitchell treatment. He used silk for buried sutures, and thought this plan best.

Mr. J. Berry also preferred buried silk sutures, and had never had hernia afterward. The incision should be free and septic matter removed by sponging. He protested against washing out the peritoneum. He had observed that when a surgeon was taken with appendicitis he almost always sent for a physician.

Dr. T. Roberts (president) thought the poor in hospitals had the best chances, as the expense of operations often caused them to be delayed. Physicians were very careful what they did. He was in favor of consultations between physician, surgeon, and family attendant. He thought calomel and opium useful.

Dr. Allchin adhered to the opinion that a great proportion of patients recovered without operation, and one good result of the debate would be that surgeons would no longer oppose the moderate use of opiates.

Mr. Lockwood in reply said rules could not be laid down, for the lesion varied from day to day. A catarrhal mild case to-day might be gangrenous or perforative to-morrow. Several speakers had referred to appendicular abscess. This was almost impossible to diagnose. Why not then make sure by an exploratory incision?

THE TREATMENT OF APPENDICITIS.

To the Editor of the Medical Record.

Sir: Dr. Morris either wilfully or thoughtlessly persists in comparing the surgical plan of operating in every case with the exclusively medical method of not operating in any case, and would have us believe that the conclusions reached from a comparison of their respective results as shown by statistics have some bearing on the question now at issue. If he would only pause a moment and consider the matter without prejudice, he would see at once that statistics giving results of the exclusively medical treatment have no more bearing on the methods which we respectively uphold than would statistics of smallpox or scarlet fever. For purposes of arriving at the right mode of procedure, namely, that which will save the greatest number of lives, the statistics up to date are practically valueless for numerous reasons, the most important being that physicians do not practise the exclusively medical treatment which Dr. Morris tries to make out that I am upholding. Between the extremes of the exclusively surgical and the exclusively medical treatment, though each is advocated by a small coterie of radical surgeons or honest but mistaken physicians, and although there is little to praise and a great deal to condemn in them both, the surgical plan is much preferable, because, as Dr. Morris has well said, the loss of time is less, the death-rate is less, and there is less suffering than under the exclusively medical plan. But we do not accept either of these radical extremes. The vast majority of general practitioners and conservative surgeons have selected the best there is of both the extreme methods, and evolved a plan of management that will cause less suffering, less loss of life, and withal be more practical than either. This plan is to operate on recurring cases as a rule, and to operate on primary cases when circumstances arise which in the opinion of the physician make it justifiable. Dr. Morris asks if I do not know of physicians whom I would not trust to determine the time when operation was justifiable in a given case. I regret to say that possibly there are such, but their number is growing gratifyingly less, and it is not of those I write when I say physicians. I have seen a surgeon operate for appendicitis and remove a handful of stones from a distended gall bladder, but I am not inclined to blame Dr. Morris or surgeons generally on that account. To return to statistics, I wish to admit that I have seen none from Dr. Morris, nor am I able to find that there are any, hospital or any other kind, giving the correct results of the exclusively surgical treatment as compared with the treatment I am obliged to favor. Such statistics in order to be of any scientific value must consist on the surgeons' side only of operation on primary cases. Recurring cases in which the operation is done in the interval belong as much to the general practitioners' side as to the surgical. Again, cases which were mild and treated medically at first until the physician (I mean competent physician) advised operation, and were operated on, whether the operations were successful or not, should be charged to the general practitioners' side; also operations on recurring cases which were treated medically at a previous attack should be credited to our account, if successful, or put on the debit side, if unsuccessful. In other words, the statistics should be made up about as follows:

Surgical.

Dr.	Cr.
Impracticability.	Recoveries from operations on primary cases.
Deaths from operations.	Amount of time saved.
Sequelæ.	

Medico-Surgical.

Dr.	Cr.
Deaths from operations advised by the physician.	Recovery of every case, even the mildest.
Deaths from operations neccesitated by recurrence after apparent recovery.	Recoveries from interval operations.
Sequelæ.	Practicability.

Until Dr. Morris can show statistics on the general plan outlined above, he will do well to drop statistical comparisons which are as unscientific as they are valueless. I believe that a one-per-cent. rate of mortality in cases treated by the medico-surgical plan is none too low when all cases, even the mildest, are included, and unless Dr. Morris can show by statistics carefully arranged, on a plan somewhat like that outlined above, that a one per cent. or one-half per cent. is not a low estimate, it would be well for him to suspend judgment. In order that he may not persist in misunderstanding my position, I will say that the method of management which has commended itself to the profession in general is very concisely outlined in an editorial in the Medical Record of December 30, 1899. Dr. Morris says that he does not know the difference between a mild and a dangerous case of appendicitis, and asks me to define a "mild case." He does not do himself justice in seeking to obscure the real issue by introducing an element entirely foreign to the subject. Every mild case is certainly a dangerous case if it be operated on, and of course has dangerous possibilities if not operated on, but if managed medico-surgically the danger will be reduced to a minimum. Dr. Morris says he does know the pathology of appendicitis. Will he kindly tell us by what term he designates the large number of recorded cases wherein the inflammation was confined to the right iliac region, recovery taking place without formation of pus and no recurrence, and also enlighten us as to the pathology thereof? Dr. Morris asks also if I have actually read those published letters. I most certainly have, and in my opinion they show all the earmarks of a regulation testimonial, as witness letter from patient number six: "No comparison between medical and surgical treatment; the former is torture, the latter painless and blissful results."

Dr. Morris' offer of $1,000 to charity might just as well have been a million as to its results on the treatment he advocates. If he is right the profession will surely find it out, and if his plan is wrong, ten millions of dollars will not blind the eyes of the profession to its shortcomings.

J. S. Horner, M.D.

West Pawlet, Vt.

THE STATIC INDUCED CURRENT.

To the Editor of the Medical Record.

Sir: In his last communication, Dr. Rockwell brings forward no new fact; he merely reiterates pictorially as well as verbally his familiar refrain that, using the apparatus pictured, "the result could be nothing else than the static induced current." Again I repeat, if the result were a current, why did not the ancients say so, and why do they invariably speak of and describe the individual shock which was the purpose for which the apparatus was explicitly constructed? Using gallon Leyden jars with a spark gap of one-twentieth of an inch gives a very painful single shock. And again I repeat that Dr. Rockwell has not yet brought forward the first word to prove that the ancients ever used a series of rapidly passing sparks, thus producing a current, nor has he adduced the least allusion to any sort of a current, whatever its name, nor again allusion to physiological effects upon the muscles such as would be produced by any sort of a current. His entire argument is one of surmise—they might have done so and so.

I reaffirm the title of my article and its contents as true, and no doubt in good time my critic will also be obliged to come to the same conclusion.

Mere captiousness will not down the modern rush of progress in electrotherapeutics or in anything else. Is it, then, indeed so strange to say that one can cure (arrest) locomotor ataxia and arthritis deformans? Is it not to-day common talk and fact to cure phthisis, and yet ten years ago how few would have believed it possible?

But why thresh out old straw any longer; "*Le jeu ne vaut pas la chandelle.*" My one consolation is that it is, after all, no doubt, better to put forth new facts, if done sincerely, even if it does excite a little criticism.

William J. Morton.

March 3, 1900.

Reviews and Notices.

Le Diabète et son Traitement. Par R. Lépine, Professeur de Clinique à l'Université de Lyon. Paris: J. B. Baillière et Fils. 1899.

This book is one of the little booklets of "Les Actualités Médicales" series. All new researches are passed in review. There is a chapter on regimen, and opotherapy is considered.

Les Autointoxications de la Grossesse. Par G. Bouffe de Saint Blaise, Accoucheur des Hôpitaux de Paris.

This is another of the above series, showing how the healthy human organism is a poison factory, the integrity of whose machinery alone prevents the system from being continually injured. During pregnancy the author believes that women run an especial risk of self-intoxication.

Transactions of the Medical Association of the State of Missouri, Forty-second Annual Session. Held at Sedalia, Mo., May 16, 17, and 18, 1899. Kansas City, Mo.: The Burd & Fletcher Printing Company. 1899.

This is a neatly bound volume of papers, many of which are of unusual interest and some of decidedly scientific importance. Dr. Ohmann-Dumesnil contributes a paper on ichthyosis nigricans, showing much literary research.

Handbook of Optics for Students of Ophthalmology. By William Norwood Suter, B.A., M.D., Professor of Ophthalmology, National University, Washington, D. C. New York: The Macmillan Company. 1899.

This work is simplified down to the requirements of the student beginning this branch of science. For those not familiar with trigonometrical ratios, a brief synopsis is given in the appendix. Optics is considered only as it bears directly upon ophthalmology. Heath's "Geometrical Optics" has been made the basis for demonstrating refraction by prisms and spherical surfaces.

Massachusetts Volunteer Aid Association.

This is a report of the work of the association during the war with Spain, when a hospital ship, the *Bay State*, was fitted out and sent to the front. It is interestingly and instructively illustrated. It is compiled by Edward C. Mansfield.

Opinions of Over One Hundred Physicians on the Use of Opium in China. Compiled by William H. Park, M.D. Shanghai: American Presbyterian Mission Press. 1899.

This is a set of questions and answers as to the value of opium and the opium curse, put out in the interests of the anti-opium cause.

Enlargement of the Prostate: its Treatment and Radical Cure. By C. Mansell Moullin, M.D., F.R.C.S. Second edition. London: H. K. Lewis. Philadelphia: P. Blakiston's Son & Co. 1899.

Purely historic considerations have been eliminated, but otherwise there is little change in the present edition. The work is well worth reading by all who have prostatic cases to manage.

Études de Gynécologie Opératoire. By Dr. Phocas. Paris: A. Maloine. 1899.

This paper-covered volume of two hundred and seven pages goes over the ground of operative gynæcology from curettage to total abdominal castration, including clinical observations.

Cure Prompte et Radicale de la Syphilis. Par J. F. Larrien. Third edition. Paris: Société d'Éditions Scientifiques. 1899.

This treatise upon syphilis and mercury, with the author's personal experience with minute doses, has met with a sufficient warmth of reception to necessitate a third hearing. It contains much of interest.

Dermato-histologische Technik. By Max Joseph, of Berlin, and Georg Loewenbach, of Vienna. Berlin: Louis Marcus. 1900.

This is an excellent little work of one hundred and ten pages and nineteen chapters, on the best means of staining, etc., for skin work.

A Manual of Modern Gastric Methods, Chemical, Physical, and Therapeutical. By A. Lockhart Gillespie, M.D. With a Chapter upon the Mechanical Method Used in Young Children, by John Thomson, M.D. New York: William Wood & Co. 1899.

The present work of Dr. Gillespie, who is well known as a specialist for digestive disorders, contains in a succinct form all the methods—diagnostic and therapeutic—used in this branch of medicine. Einhorn, of New York, and Turck, of Chicago, are frequently referred to. The manual is well written and complete, and will be of use to the practitioner.

La Tuberculose est Curable. By Dr. Elisée Ribard; with a preface by Dr. Maurice Letulle. Pp. 170. Illustrated. Paris. 1900.

A book such as this one will always be of considerable interest to the physician, and of positive value to the lay public. In the opening chapter the author shows that tuberculosis in its early stages is curable. The following two chapters—the one devoted to the means and manner of infection, and the other to the early manifestations of the disease—are especially intended for the study of lay people. Under prophylaxis the author indicates the importance of legislative action in preventing the wide spreading of the disease, and in the final chapter on treatment sound and rational procedures are formulated. Altogether the book will repay reading by physicians, legislators, and the general public.

Surgical Suggestions.

Dysmenorrhœa.—Whenever the pain in dysmenorrhœa is entirely or mostly on the right side, especially if it is quite high, it is well to suspect the presence of an appendicitis in connection with the disturbance of the ovary and tube.—A. J. OCHSNER.

Lubrichondrin.—When at a distance from the office, or when a careful, surgically clean assistant is at hand, Professor Bangs' lubrichondrin in collapsible tubes is convenient. But, as the tubes will occasionally "suck back" a little of the lubricant that has been exposed, the whole contents of the tube may become infected.—FERD. C. VALENTINE.

Cancer.—In anatomically impossible cases I do not think it is justifiable to refuse to operate in some fashion, if, after knowing the truth as to the hopelessness of the condition, a patient demands that an operation be done. In these cases the psychical effect of even an imperfect, partial removal of the offensive cancer sometimes is very beneficial, and puts off for months the inevitable morphine syringe which we are compelled to use during the last weeks.—A. C. BERNAYS, *Philadelphia Medical Journal*, November 18th.

Fractures of the Bones of the Leg.—Of 232 fractures of the bones of the leg, 41 were simple fractures of the tibia, 53 were simple fractures of both bones of the leg, 24 were simple fractures of the fibula, 14 were Pott's fracture of the fibula, 17 were compound fractures of the tibia, 7 were compound fractures of the fibula, 71 were compound fractures of both bones, 2 were simple fractures of both bones of both legs, and 3 were compound fractures of both bones of both legs. —W. L. ESTES.

To Avoid the Harmful Effects of the X-Ray from either a static machine or a coil as an exciter one should never have the tube near the patient; it should be two or three feet away when using the fluorescent screen, and should be three feet or more from the plate when taking *x*-ray photographs. Between the patient and the Crookes tube there should always be placed a thin screen of aluminum, which should be grounded by connecting it to the gas-pipe with a proper wire.—F. H. WILLIAMS.

Sequelæ to Herniotomy.—(1) The wound may not unite by first intention, and if the sac has been very adherent the disturbance of the cellular tissue may cause some sloughing. In such cases the wound should be reopened and stuffed with iodoform gauze. (2) Diffuse general peritonitis may set in; this is known by the persistence of the vomiting, the continuance of the pain, distention, and tenderness of the abdomen, with elevation of temperature. This may be due to leakage from a perforation, to a gangrenous condition of the gut, or to the introduction of septic matter from without at the time of operation, as in any other abdominal section. Immediate laparotomy should be done. (3) The reduced gut, which has been returned as suspicious, may become gangrenous and obstruction of the bowel may still continue. If this condition be suspected, the abdomen should be opened and the gangrenous bowel sought for, and either resected or incised, and kept outside the abdomen with the object of forming an artificial anus. (4) The bowel may not be gangrenous, yet be so injured that it may not be able to resume its proper functions, and the patient may die in consequence if not relieved by a laparotomy. (5) The bowel may be temporarily paralyzed by local inflammation so as not to be able immediately to resume its functions, though after some days it may recover completely its normal condition. In such cases there is obstinate constipation, without vomiting or other signs of peritonitis. (6) Cases of acute mania have followed the operation for strangulated hernia, some of which have proved fatal.—SHEPHERD, "American Text-Book of Surgery."

Hemorrhage from the Diploe.—The use of a ten-per-cent. solution of olive oil and beeswax, sterilized, to control the hemorrhage from the diploe, has proved most satisfactory. The wax is pressed into the bleeding surface and allowed to remain.—GEORGE W. CRILE.

Intestinal Perforation in Typhoid.—Operate unless the patient is moribund or not likely to stand the shock. Suture by the insertion of a series of fine silk sutures, after Lembert's method; free the peritoneum of all contamination; close partially, leaving in a gauze drain down to the region of sutures.—WARING.

Intubation is Unsuitable for the following conditions: Obstruction caused by the presence of a foreign body; active ulceration (whether syphilitic or tuberculous) of the larynx; obstruction caused by new growths, whether simple or malignant; obstruction due to pressure by goitre or other tumor of the neck; obstruction by post-pharyngeal abscess.—BERNARD PITTS.

Surgical Hints.—NEVER USE MORPHINE BEFORE ANÆSTHESIA in patients who are in a state of stupor or traumatic shock. In these the drug has a distinct tendency to increase these conditions.—NEVER HAVE ANY MORE ASSISTANTS at an operation than are absolutely necessary. They are apt to get into each other's way, and the more people help you, the greater the difficulty of securing asepsis.—EXCEPTING IN EMERGENCY CASES, every patient about to be operated on is entitled to as careful an examination as if he were applying for life insurance, and to treatment before the operation for any complicating condition.—THERE ARE CERTAIN PATIENTS in whom it is very desirable that they shall make no violent movements while they are being anæsthetized, as for instance in certain fractures. In these cases a full dose of morphine an hour before the anæsthesia will contribute a great deal to secure a quiet etherization.—WHEN USING COCAINE hypodermically, it is seldom necessary to use a solution stronger than one per cent., and then always have the patient in a recumbent position. The danger of cocaine lies in the possibility of syncope from failure of the heart's action, and lying down is the best preventive.—WHEN OPERATING, never put too many instruments in one tray, as it becomes more difficult to find just what you want. It is best to have several small trays, and to put the cutting instruments in one, the artery forceps in another, and the special instruments required in the particular operation you are doing in a third.—DURING THE REMOVAL OF TUMORS having many attachments, it is a good principle to free first all the points that are easily detached, and to pediculate the tumor, as it were, where it is most difficult to free it. This will usually result in the largest vessels being included in the pedicle, so that with your ligature or clamp you may safely secure the most dangerous region, and cut above it without danger.—IN OLD OVARIAN LESIONS, it is often a fact that the patients show a decided insufficiency in the secretion of urea. It is well to subject such patients to preliminary treatment for this condition, for two reasons: The first is that if the proper treatment increases the excretion of urea the patient will have a better chance of recovering from the operation, and the second is that if the patient's urine shows no improvement, the prognosis is rendered more serious, and forewarned is forearmed. —*International Journal of Surgery*, November.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Stated Meeting, March 12, 1900.

CHARLES N. DOWD, M.D., CHAIRMAN.

Round Ulcer of the Duodenum.—DR. PERCY BOLTON read this paper (see page 494).

DR. ALEXANDER B. JOHNSON said that his personal experience had been limited, and so far as he knew there had been but three cases of perforating ulcer of the duodenum which had been subjected to operation in Roosevelt Hospital. In one of these, operated upon by Dr. McBurney two weeks ago, the diagnosis was made of an abscess probably originating in the appendix, and evidently an abscess of a good many days' duration. The individual was an elderly man. Unfortunately there was no previous history, and no distinct causation of the disease could be obtained. When admitted to the hospital he was perfectly septic. There was a considerable-sized mass on the right side of the abdomen, situated a little higher than usual for an appendicular abscess, and was evidently localized. The history he gave was that he had been suddenly seized some days previous to admission to the hospital with general abdominal pain. An operation was performed, and a large abscess was found containing a considerable quantity of foul-smelling pus. Further exploration showed the existence of a perforating ulcer of the descending portion of the duodenum and coils of intestines adherent to one another. There was some difficulty in getting to the ulcer, and the condition of the patient put further treatment out of the question. The individual lived five days and died septic. In the second case, operated upon last summer, the symptoms also began without warning on the right side; there was a distinct alcoholic history. This case gave pretty much the same history as referred to as occurring in the Hudson Street Hospital. There was more or less localized tenderness found. The ulcer was a solitary one and situated in the first portion of the duodenum. It was sutured, but the patient did not survive. In a third case, operated upon last April by him, the individual was a healthy, vigorous man, thirty-one years of age. He gave a history of having been upon a prolonged alcoholic debauch for several weeks. He had continued at his work. Three days before his admission to the hospital he was suddenly seized with a moderate pain in the epigastrium, but this did not interfere with his work. He continued to work during the next forty-eight hours, although he was conscious of a certain degree of discomfort. At one o'clock of the morning of the day he was admitted he was awakened from sleep by intense pain in the right side. He then was given an emetic of mustard and water, and vomited. When he entered the hospital his condition was good; there was no fever; he had general abdominal rigidity, more or less marked upon the right side. There was one point of extreme tenderness, situated about three inches above the umbilicus, one and a half inches to the right of the median line. That tender point persisted until the time of operation. The speaker saw him about ten o'clock. The temperature had risen to 101° F. or more, the pulse was almost of normal frequency. The abdominal rigidity and local tenderness were marked. He felt certain that there was present some intra-abdominal lesion, although there was no distention or liver dulness. An incision was made on the right side of the abdomen. The appendix was found to be normal. There was a peculiar appearance of the peritoneal exudate and the contents of the gut. There was considerable amount of fluid, which was bile stained, and contained flocculi of grayish lymph. The diagnosis of a probable perforation of the duodenum was made, and the duodenum was examined. In the anterior portion of the descending part, about where the duodenum disappeared between the transverse colon layers, there was an oval perforation about one-half an inch long and one-quarter of an inch wide. There were no adhesions. From this hole in the gut there was escaping a considerable quantity of dark bile and digested blood. The ulcer was plugged and the entire abdomen washed thoroughly with saline solution; into it was poured hot water in great quantities. The patient suffered absolutely no shock, and he went from the table in as good a condition apparently as he came on. The speaker objected greatly to the evisceration of the abdominal contents, which added so much to the shock. The abdomen was dried and the ulcer was sutured by means of a purse-string suture; this was reinforced by four or five Lembert sutures. The patient recovered without any special complication except a moderate superficial infection in the skin wound. Thirty-eight days after the operation the patient was presented to the Surgical Society. The diagnosis of this condition Dr. Johnson considered very difficult, and one that was very rarely made. He was unaware whether any surgeon in New York had ever made a positive diagnosis or not.

DR. ROBERT T. MORRIS said the subject of suppurative peritonitis was a very important one. Regarding the treatment of the ulcer, it seemed to him that if the ulcer was a small one, without a great amount of serous infiltration of the walls of the bowel, the method employed by Dr. Johnson should be successful. But if the ulcer was a large one, the longitudinal suture, or angulation of the bowel, should be the method of choice. Regarding the matter of general suppurative peritonitis, he believed it was a physical impossibility to remove any large quantities of adherent lymph or serous exudate by washing and stripping the bowels; that procedure he considered to be wrong. In the earlier days the subject of hyperleucocytosis was not understood. If a number of very small incisions were made, if we did not handle the bowel much, if we did not draw the bowel out from the abdominal cavity, then we avoided shocking the patient. If we used long glass tubes, carrying them through various small incisions into the various cavities, and washed out the abdomen with saline solution, so getting rid of the chief toxin-bearing fluid, then we did what was best for the patient. This treatment should be supplemented by distention of the circulatory system with saline solution, using one or two quarts by the intravenous method. Theoretically this caused an evacuation of the fluid by the emunctories, carrying with it the toxins. Distention of the blood-vessels caused a high tension in such cases when there was no hemorrhage, and the evacuation of the fluid certainly appeared to carry off the toxins from the circulation rapidly. The speaker had had several apparently dying patients who had recovered by means of this combined method of treatment. He had two patients in the hospital with flooding of pus from the pelvis to the liver, with pulses of 144 and temperatures of 104° F. at the moment of operation; after operation their pulses fell to 120 and their temperatures to 101° F., and remained there since; he was sure they would get well. He advised that more statistics should be obtained. It was wrong for one man to teach evisceration; wrong to teach filling the abdominal cavity with saline solution, etc., unless statistics proved it to be the better method. The plan of multiple incisions and large intravenous injections should not be advised unless it could be shown to be the best plan of treatment to-day. It was a life-and-death matter to the patient.

Dr. Alexander B. Johnson said he was firmly persuaded that the method of Dr. Morris of refraining from eviscerating the cavity, and washing out by means of Chamberlain's tubes, was a good method of treating extensive purulent peritonitis. Next winter he intended reporting a good many such cases—twelve in number—in which there was quite extensive purulent peritonitis following perforation of the appendix; they were very extensive cases. Several had processes of different types. The treatment employed was precisely the same, *i.e.*, Chamberlain's tubes through small incisions and gallons after gallons of hot sterilized solution thrown into the cavity until the fluid returned clear. Out of this number of patients only two were lost. One died of pyæmia about four or five weeks after the operation. The pyæmia resulted from an abscess situated in a mass of lymphatic glands which lay just above the kidney. The second died of sepsis in spite of irrigation. . In most of the cases that resulted in recovery it was strange that the temperature fell almost to normal and did not again rise. The speaker referred to a patient who had a lesion of the intestine which required suturing. About five days after the operation the patient continued vomiting, and was in such a weakened condition that he thought there was probably a necrosis of the intestine taking place at the site of suture. The abdomen was opened and inspected. In suturing there were pulled out about one and a half feet of small intestine. These one and a half feet of small intestine were as distinctly different from the rest as two things could be; that part which had been outside was dark red and did not react, and was probably paralyzed. The part that was not removed was apparently healthy. The impression made upon the speaker was so strong that he decided he would avoid any extensive handling of the intestines in the future.

Laryngectomy for Carcinoma.—Dr. A. T. Bristow presented this case. The patient was a man, thirty-seven years of age, who first came under observation October, 1899: he then complained of hoarseness which had existed for two years. The growth was intrinsic, and a total extirpation was advised. There was no glandular infection. He was offered the choice between the palliative treatment by tracheotomy, or the possibly curative treatment by extirpation; he chose the latter. Early in 1900 he complained of dyspnœa, a symptom which he had not complained of previously. He was removed to the Long Island Hospital, and a tracheotomy under cocaine anæsthesia was performed. He was then placed in bed and prepared for operation. The teeth were scrubbed every three hours to prevent pneumonia. Nitrous-oxide gas was administered. The speaker considered this the best anæsthetic for the following reasons: It was much less depressing than chloroform, and in a great measure eliminated the danger of sudden death upon the table. It avoided the irritating effects upon the throat and the refrigerating effect upon the lung tissue itself. Again, if the patient showed signs of collapse, the anæsthetic could be at once stopped and the patient was conscious in a very few seconds. This gas prevented vomiting. The technique of the operation was the one described by Keen. The anæsthetic was given through the tracheotomy tube. The larynx was removed entirely with the epiglottis. He noticed that when strong lateral traction was made upon the larynx there was a tendency in the patient to stop breathing. Seventeen days after operation the patient was shown to a medical society. He believed that many cases of cancer of the larynx could be cured by excision if performed early. Glandular infection occurred quite late in these cases.

Dr. D. Bryson Delavan was pleased at the excellent condition of the patient at this early date. He was particularly interested in the views the speaker held regarding the choice of an anæsthetic. It was very desirable that the disease should be recognized early, and early submitted to operation. Partial laryngectomy did not show any more valuable statistics than the complete operation, and the result of the complete extirpation was so much better that there could be no choice between the operations unless the disease was so far advanced that it did not admit any choice. He regretted the failure of many operators to report their cases.

Dr. George E. Brewer said the mortality of this operation was something like fifty per cent., although he thought it would be higher than that if every case was reported. One surgeon had recently stated that if all cases were reported the mortality would be over ninety per cent.; this was probably due to the fact that one was not permitted to operate until the œsophagus and surrounding tissues had become involved. If one could operate upon these patients when the disease was confined to the larynx, the mortality would be much less. Regarding an anæsthetic, he referred to the use of chloroform and oxygen: chloroform was preferred to ether on account of the fact that ether affected the bronchial mucous membrane. This combination had resulted very satisfactorily. He referred to one case of malignant growth; its malignancy was made manifest by the fact that the growth recurred three times in three months; since the last operation the patient was apparently well. He said it was very important in the technique that the areolar tissue surrounding the superior laryngeal folds should be removed, because this removed the lymph channels and so prevented infection.

Extraperitoneal Rupture of the Bladder.—Dr. A. T. Bristow also reported this case, which was a very unusual one. The patient, a woman, aged twenty-four years, fell down-stairs. Forty-eight hours afterward she came under observation. She could pass no urine and was tormented with the desire to urinate. Examination showed a bruise upon the abdomen, and some muscular spasm was present. There were no signs of peritonitis. The house surgeon catheterized her and drew off about two ounces of urine. Six ounces of sterile saline solution was then introduced, and the same amount was recovered. An examination of the urine failed to show the presence of albumin or urea. On the following morning the condition of the patient was about the same; it was not possible to get more than two ounces of urine by means of the catheter. The abdomen was opened in the median line, but no intraperitoneal rupture was found. The peritoneum was closed, and the space of Retz, or retropubic space, was examined, and here urine was found which distended the area between the peritoneum and pelvic cavity. Trendelenburg's transverse incision was made, which gave an excellent exposure of the parts. Air was pumped into the bladder, and a rent in the bladder was found in its antero-lateral wall; the walls were much bruised and ecchymotic. This patient had an extraperitoneal, but not an intraperitoneal, rupture. Such an accident usually occurred in older persons. In a series of ninety cases reported only three existed without fracture of the pelvic bones.

Sarcoma of the Tibia.—Dr. John B. Walker presented this specimen. The patient was a woman, aged fifty-five years, who eighteen months ago slipped and sprained her knee; her physician recognized the condition as one of synovitis, from which she recovered. A few months later, while walking she again slipped and received an injury which also was diagnosed by her physician as a synovitis. The swelling refused to go down. Three months later she was seen by a well known man, who diagnosed the condition as Charcot's joint. A plaster-of-Paris splint was applied with extension, which relieved the pain, but the swelling still persisted. An x-ray photograph was shown. A diagnosis was made of sarcoma, and amputation was performed.

New Instruments.

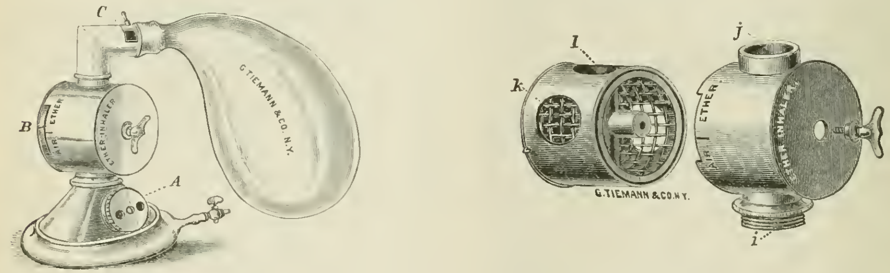
NEW ANÆSTHETIC APPARATUS.

By THOMAS L. BENNETT, M.D.,

ANÆSTHETIST TO NEW YORK HOSPITAL, ROOSEVELT HOSPITAL, ETC.

THE accompanying illustrations represent inhalers for the administration of ether, nitrous oxide, or these agents in combination or succession. They have been devised by the writer after more than ten years of extensive experience in the administration of anæsthetics, during which time many different forms of inhalers have been employed and the principles involved carefully investigated. They have been so constructed as to meet the requirements which have been found essential to the most exact and satisfactory plan of administering the agents in question, and their use in a large number of cases has demonstrated their practicability.

The ether inhaler, Fig. 1, consists of three parts—the face piece, the ether chamber, and the bag. The face piece is cone-shaped; its base is oval and is notched at the nasal end. The apex is open and is threaded to screw into place on the ether chamber. It is of metal, and its free edge is provided with an inflatable rubber cushion, which may be removed at will. On the side of the face piece is an air tap, *A*, which may be opened or closed to any degree. When fully open, this tap has a large capacity—a desirable feature in a bag inhaler.[1]



A. B.

FIG. 1. A, Ether Inhaler; B, Sectional View.

The face piece is made in three sizes—small, medium, and large. The medium size will be found suitable for all ordinary cases, but small children and large men require special sizes.

The ether chamber, shown in the "sectional view," consists of two cylindrical metallic boxes, one fitting accurately within the other. The inner box presents four openings in its sides, two of which, *k* and opposite, are of large size; the other two, *l* and opposite, are smaller and are connected by a tube which passes through the centre of the box. This part of the ether chamber is provided with a cage of coarse wire netting, to hold the gauze which receives the ether. The cage is somewhat smaller than the box it occupies, the intervening space allowing the respired air to circulate freely around the gauze rather than through it, thus offering little or no resistance to respiration. The cage also prevents the gauze packing from protruding through the openings *k* and opposite, and thus interfering with the rotation of the inner chamber. On the closed end of the inner box is placed a revolving disc, presenting a small circular opening at one point near its periphery; this opening is surmounted by a short funnel-shaped chimney, and may be brought opposite any one of three openings in the end of the box. By this arrangement it is possible, when the patient's head is turned on the side, to pour ether upon the gauze without removing the inhaler from the face—a matter of great practical advantage under certain circumstances.[1] The outer box presents two large and opposite openings in its sides, and each of these is surmounted by a chimney, one of which is threaded to receive the face piece, the other being smooth and bevelled to receive the bag. On one side of the free edge of this box is a slot, which, in connection with a pin and pointer on the inner chamber, limits the rotation of the latter and indicates whether "air" or "ether" is being breathed. When the two parts of the ether chamber have been put together, they are held in place by the thumb-screw shown in the drawing, and this serves the further purpose of a handle for revolving the inner cylinder.

By referring to the sectional view of the ether chamber, it will be seen that a tube traverses the centre of the inner cylinder, its upper opening being marked *l*. Now if the two parts are put together in the positions they occupy in the cut, it is evident that the openings of the tube *l* will correspond with those marked *i* and *j* of the outer cylinder; and if breathing should take place through the inhaler so arranged, the air would pass directly through the tube *l* without entering the ether space proper. In this position it will also be noticed that the index pointer, seen directly below *k* in the "sectional view," occupies the lower end of the slot on the outer cylinder, indicating "air." If the inner cylinder is now rotated so that the index traverses toward "ether," it will come to a transverse line between "air" and "ether," and in this position the openings of the tube *l* are just beginning to pass out of the openings *i* and *j*, and the openings *k* and opposite are beginning to enter the openings *i* and *j*. Breathing through the inhaler in this position allows a very small percentage of air to pass through the ether space; further rotation increases this percentage, till finally the tube *l* has passed completely away from the openings *i* and *j*, and full ether is on, the index pointer being at the upper limit. In this way the ether may be turned on as slowly as desired, and any strength of ether vapor may be administered at will throughout the narcosis.

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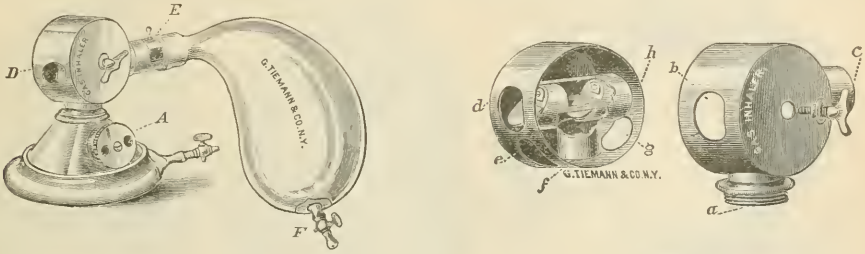
[1] In this respect the Ormsby apparatus is usually inadequate, the tap being too small, and in Clover's there is no air tap.

[1] In operations about the head or neck it is often desirable to cover the inhaler and the hand and arm of the anæsthetist with a sterile towel. Under these circumstances it is inconvenient to disarrange this every time it is necessary to add ether, and it was for this class of cases in particular that the arrangement was added. When this plan of adding ether is to be used, the inhaler should be so applied to the face that the revolving disc is uppermost.

The ether bag, shown in Fig. 1, A, is of large size, its capacity exceeding the most exaggerated respiration. It is attached to an elbow of metal tubing, by which it is connected with the upper chimney of the ether chamber when in use. In this elbow, near the attachment of the bag, is a large air tap, *C*, which may be opened to any degree.



A.

B.

FIG. 2.—A, Gas Inhaler; B, Sectional View.

The use of the ether inhaler may be briefly described as follows:[1] The wire cage is packed firmly with dry gauze, upon which one-half ounce or more of ether is poured; the index is now turned to "air," the taps *A* and *C* are closed, several expirations are caught to distend the bag, and the face piece is then kept applied; the index is now turned to the line between "air" and "ether" and is moved forward slowly toward the latter, an occasional breath of air being given by removing the face piece. Complete anæsthesia is present in from two to five minutes in average patients. The administration now consists chiefly in the regulation of two factors—the ether supply and the air supply.

The ether supply: In continuing the administration, it is best to allow the index to remain at full ether and to pour from one-half to one drachm of ether upon the gauze every two or three minutes as necessary. This may be done (1) through the face piece, (2) through the chimney, or (3) through the revolving disc on the end of the ether chamber; (1) is preferable in usual cases; (2) or (3) is of great advantage when it is inconvenient to remove the inhaler from the face.

The air supply: During the induction of anæsthesia enough air should be given to prevent more than slight cyanosis. In maintaining anæsthesia it is rarely necessary to exclude air to the extent of causing any cyanosis, and the air supply is to be regulated in accordance with the following facts: The tap *C* (Fig. 1) being closed, if *A* is opened slightly the patient will receive little air and much ether; if fully opened, he will receive much air and little ether. The tap *A* being closed, if *C* is opened slightly the patient will receive little air and much ether; if fully opened, he will receive much air and much ether.

The quantity of ether necessary in usual cases will average about four ounces for the first hour and about two ounces for the second hour.

The gas inhaler, shown in Fig. 2 and in the "sectional view," consists of three parts—the face piece, the valve chamber, and the gas bag. The face piece is identical with that of the ether inhaler, and is made in three sizes—small, medium, and large.

The valve chamber consists of two cylindrical metallic boxes, one fitting accurately within the other. The inner box contains a T of tubing, the longer or cross part of which traverses the centre of the chamber and is joined in the middle by the shorter or stem part of the T. The three ends of this T open upon the outer surface of the sides of the box. The longer of these tubes contains the valves mounted upon a skeleton tube, which may be removed at will. The valves themselves consist of thin rubber flaps, fastened at one end over fenestrated diaphragms set in an inclined position in the skeleton tube. Each rubber flap is reinforced by a thin piece of aluminum cemented to its surface. This keeps the rubber flat and prevents it being forced through the opening it guards, during violent respiration.[1] On each side of the opening of the short or stem part of the T above described is placed a similar opening communicating with the general box cavity.

The outer box presents three openings through its sides, two of which are provided with chimneys. One of the latter has a thread cut upon it for the screwing on of the face piece. The other is slightly bevelled for the twisting on of the gas bag.

The boxes are held together by a thumb-screw, which also serves as a handle for rotating the inner chamber, the rotation being limited by a slot on the outer box and a pin on the inner.

The gas bag is of pure rubber, and has a capacity of about two gallons when just full, but will distend to several times this capacity without bursting.[2] It is attached to a short metal tube, the free end of which is ground to fit the smooth chimney of the valve chamber. In this tube is placed a large air tap, shown at *E* in Fig. 2, A, which may be opened or closed by a lever. Working in connection with this air tap is a cut-off, placed between the air tap and the bag, and so arranged that when the air tap is fully open the gas is completely cut off and confined to the bag. When the air tap is closed the bag is opened into the tube. At the opposite end of the gas bag is a hard-rubber stopcock, through which the gas is admitted to the bag. By referring to the sectional view of the gas inhaler, it is apparent that if the two boxes are pushed together in the positions they occupy in the cut, the face piece screwed on at *a*, and the inhaler breathed through, during inspiration the valve at *d* will close, so that the air must enter through the chimney *c*, pass through the valve at the opening *h*, and down through the opening *f* into the face piece. During expiration the valve at *h* will close and the air must pass into the T and out through *d* and *b*, which are now together. The inhaler is used in this position in the ordinary administration of nitrous oxide. By revolving the inner box so that *d* is depressed and *h* elevated to the limit allowed by the pin and slot above referred to, the opening *b* will be closed and *e* and *g* will come together with *a* and *c* respectively. Breathing now takes place through the box cavity, the valves are out of action, and both inspiration and expiration pass through the opening *c*. This position is used for a short time during the administration of "gas and ether."

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[1] The plan of administration here described is termed the "close method," inasmuch as more or less exclusion of air is practised. Those who prefer the "open method" need only omit the bag.

[1] These valves may be replaced when necessary by cutting pieces of rubber bandage into proper shape and cementing the aluminum forms to them.

[2] A very practical point in view of the fact that such over-distention is common from inability or failure to turn off the gas in time, or from unexpected rushes of gas from the cylinder. Under these circumstances bags made from non-elastic material must burst, and this is a matter of alarm from the loud report, failure of the narcosis from inability to proceed, and expense from having to replace the bag.

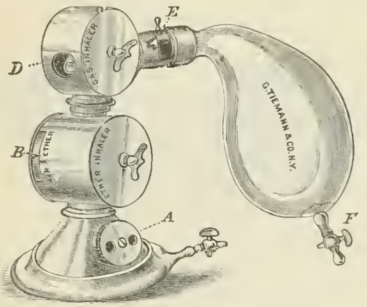


Fig. 3.—Inhaler for Gas and Ether.

The use of the gas inhaler may be briefly described as follows: The tap *E* being fully opened, the bag is filled moderately full of gas from the cylinder through the rubber tube supplied with the inhaler. The aperture *D* should be fully open. The face piece must fit the face perfectly. Inspiration will now enter at *E* and expiration escape at *D*. Upon closing the tap *E*, gas will be drawn from the bag on inspiration and escape at *D* on expiration. As soon as the inhalation begins, a flow of gas sufficient to keep the bag moderately full should be turned on from the cylinder. The inhalation should be conducted according to the principles of gas administration. Air in any quantity may be admitted through the tap *E*.

For "gas and ether" the inhalers are combined as shown in Fig. 3, and are used as follows: The ether inhaler is charged with ether, the index turned to "air," and the tap *A* closed. The gas inhaler is firmly attached to the upper chimney of the ether inhaler, the apertures *D* and *E* being wide open. The bag is filled with gas and disconnected from the tube at *F*. The face piece is accurately applied to the face, and *E* is closed. Gas is now breathed through the valves, and when the bag has been about three-fourths emptied *D* is to be closed. Gas is now breathed back and forth, and at this time the patient will be unconscious or nearly so. Ether should now be turned on gradually, though somewhat faster than when it is given without gas. The patient is now breathing gas and ether, and in about one minute from the beginning of the administration will show signs of complete gas anæsthesia if the face piece has been tightly applied.[1] It is unnecessary, however, to push the gas beyond the approach of these signs, upon which air should be admitted at *E* for two or three respirations. After a few more respirations of gas and ether, the gas inhaler and bag are removed, the ether bag is substituted, and ether is pushed to complete anæsthesia. This is accomplished in from two to five minutes as a rule, and usually without the least struggle or excitement, the patient having no knowledge of the ether.

These inhalers have been made as small and as simple as possible, in view of what they have to accomplish. They can be taken completely apart with great ease, and are capable of being thoroughly cleaned and sterilized. The only part of the inhalers that should not be boiled is the tube carrying the valves of the gas inhaler, which may be sterilized by soaking in carbolic solution. Before boiling the face piece and bags, they should be removed from the metal parts and the hard-rubber stopcocks taken out.

Fresh gauze packing should be used for every case. The inhalers should be handled carefully.

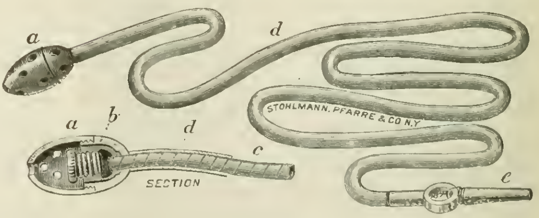
The successful working of these inhalers depends upon the accuracy with which many details of construction have been carried out, and while this has been well done by the makers, it has been found that from a practical clinical standpoint individual inhalers are apt to require certain corrections before they are perfect. For this reason the writer has arranged to examine each inhaler as soon as it is made, and when it is found perfect will issue a certificate to that effect. These will accompany the inhalers, each of which is designated by the number stamped upon it.

A MODIFIED EINHORN GASTRIC ELECTRODE.

By GEORGE ROE LOCKWOOD, M.D.,
NEW YORK.

The passage of the original Einhorn electrode into the stomach has, in my experience, proved an unpleasant if not impossible task for the great majority of patients. The large size of the capsule renders difficult the primary attempt at deglutition, and even after the capsule has actually entered the œsophagus the necessity of its dragging a long tail after it naturally impedes its progress.

To obviate these difficulties the following modification has been devised: The capsule (*a*) has been reduced in size to that of an ordinary five-grain gelatin capsule, as is shown by the cut. To the metal point (*b*) within the capsule is attached a spiral of flat steel (*c*), the flexibility of which corresponds to that of an ordinary stomach tube. This spiral is covered by thin rubber tubing (*d*), and is tipped by a binding pin (*e*) for connection with the battery. The spiral with its rubber sheath is of the diameter shown in the cut.



Such an electrode can be easily introduced into the stomach without discomfort. The small size of the capsule allows of its ready passage, while the spiral attachment is sufficiently resistant to enable the operator to push the capsule along, just as a stomach tube is introduced. The result of such modifications has been so satisfactory that no further excuse is offered for the presentation of the instrument.

The patient is the only one who will not trust you when you say you "don't know."

---

[1] The signs that accompany complete gas anæsthesia are cyanosis, jerky, snoring respiration, twitching movements in the extremities, and loss of reflexes.

A NEW, SIMPLE OPHTHALMOSCOPE.

By CHARLES H. MAY, M.D.,
NEW YORK,
CHIEF OF CLINIC, EYE DEPARTMENT, VANDERBILT CLINIC, AND INSTRUCTOR IN OPHTHALMOLOGY, COLLEGE OF PHYSICIANS AND SURGEONS, MEDICAL DEPARTMENT OF COLUMBIA UNIVERSITY, NEW YORK.

THE features of this ophthalmoscope (Figs. 1 and 2) are simplicity, compactness, excellent mechanical and optical construction, including accurate stops, perfect lenses, proper balancing, and reasonable cost; an important improvement consists in the regulation of size of the various openings, so that there is a minimum of annoying reflex from this source.

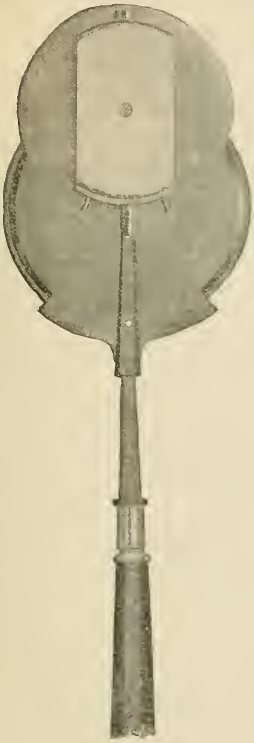


FIG. 1.

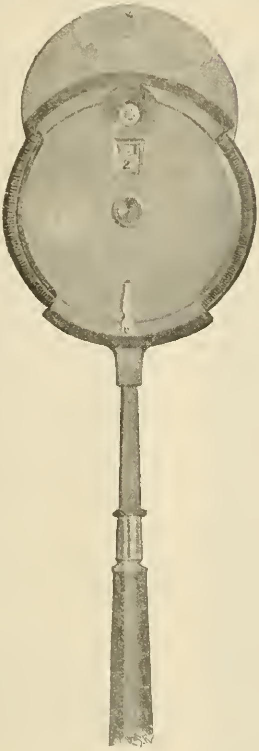


FIG. 2

The instrument consists of two superimposed plates —the front disc, 43 mm. in diameter, holding the convex; the rear disc, 41 mm. in diameter, containing the concave lenses. There are fourteen lenses in each set, the weaker ones being separated by half-diopters, as follows: 0.50 D., 1 D., 1.50 D., 2 D., 2.50 D., 3 D., 4 D., 5 D., 6 D., 8 D., 10 D., 12 D., 15 D., and 20 D., + and − respectively. A greater variety of lenses can be obtained by combinations, but it is not intended that they be employed in this manner, the number when used singly being sufficient for all purposes. The convex lenses are numbered in white, the concave in red, as in most instruments of American manufacture. The strength of the lens in use is shown in an opening in the rear plate.

The two discs can be moved independently of each other, with ease and certainty, through the following arrangement: The disc holding the convex lenses is slightly larger than its fellow, placed in front, and only its extreme edge is milled; the disc containing the concave lenses is slightly smaller, placed behind, its margins are thickened, and the milling of its edge is carried a short distance over the posterior aspect. The index finger should be applied to the lower part of the milled edges, thus avoiding contact with the face of the patient. The finger is placed upon the projecting front disc edge, or more posteriorly upon the rear disc edge, according to whether + or − lenses are desired.

The tilting mirror, concave, of the usual focal distance, is made of very thin glass, and has a 2.5 mm. aperture, the margins of which have been thoroughly blackened; it is supported upon a metal plate with a central defect of 7 mm. The opening of the back plate (sight-hole) is 4.5 mm. in diameter, bevelled 2 mm., so as to present a sharp edge. The lenses are 6 mm. in diameter and accurately centred. The opening in the front plate is 6.5 mm. in diameter, with a 2 mm. bevel. Thus all the openings are larger than those of the mirror and sight-hole—an arrangement which reduces to a minimum the annoying cloud-like reflex so frequently found in ophthalmoscopes.

The handle of the instrument is octagon, and the joint is square, on section, instead of round; both of these modifications contribute to easier and firmer grasp. By the introduction of the requisite amount of metal, concealed in the handle, the ophthalmoscope is properly balanced and not top-heavy; its entire weight is two ounces.

The instrument is supplied in the usual leather box with a biconvex lens of good size, or merely with a soft leather case for protecting the upper part. It is manufactured by W. T. Georgen.

The writer desires to express his appreciation of the manufacturer's courtesy during much experimental work and his painstaking execution of successive models.

Leprous Fever is essential and due to the bacillus or its toxins. It is always intermittent, if uncomplicated. It may occur at any period including the prodromal. It probably occurs in all forms in varying degree. When fever of a continued type is observed, it is due to the presence of other toxins acting either with or entirely apart from those of the bacillus lepræ. The essential fever simply shows that the disease is active and progressive.—ALEX. LEWERS, *British Journal of Dermatology*, October, 1899.

Scoliosis and Nervous Affections.—H. Oppenheim says that scoliosis is most common in syringomyelia and sciatica; lateral curvature is also observed in dystrophy and acute anterior poliomyelitis. Spastic conditions of a primary or reflex nature (pain) may also cause it; hysteria and traumatic neurosis may also give rise to the condition. Spastic infantile hemiplegia, diplegia cerebralis, congenital athetosis, and chorea occasionally produce it. Hemiplegia spinalis may give rise to it, and paralysis agitans rarely causes a severe grade of scoliosis. One theory of its causation is based upon a trophic disturbance of the osseous and ligamentous structure of the vertebral column, the other upon a paralysis and atrophy of the muscles of the back. Scoliosis of a severe degree may, by purely mechanical means, cause a neuralgia. Scoliosis may be congenital or acquired very early in life; in fact it may be transmitted from one generation to the other.—*Deutsche Aerzte-Zeitung*, January 15, 1900.

Medical Items.

Red Gill is reported to have attacked the bivalves of Chesapeake Bay. Red or "bloody" oysters, while they are not supposed to be especially harmful, are scarcely marketable. The red color is thought to be due to iron or other mineral in the water. Southern oysters are reported to be unusually scarce this season.

Regarding the Production of Uric Acid.—J. Weiss (*Zeitschr. f. physiolog. Chemie*, xxvii., 3, p. 216) contributes the results of his continued experiments with cinchonic acid as a factor in the production of uric acid. He proves that the ingestion of cinchonic acid, even in those cases in which special feeding was resorted to in order to increase the excretion of uric acid, was always succeeded by a decreased production of the latter. He concludes that the only way in which the uric-acid production can be increased is by proper feeding (such as with thymus, pancreas, etc.). Neither drugs nor the ingestion of uric acid itself or its prototype glycocol will produce the same result.

The Treatment of Leprosy with Antivenene.—Woodson (*Philadelphia Medical Journal*, December 23, 1899, p. 1231) has reported a case of leprosy in a woman, thirty-six years old, the diagnosis being confirmed by microscopical examination, in which marked improvement followed employment of the antivenene of Calmette. The serum was injected subcutaneously, as a rule in the interscapular region, in the loose tissues below the margin of the ribs, and in other selected regions. The dose varied from 33 c.c. at first to 20 c.c. at the close of the treatment. Besides, large doses of hoang-nan were administered. During the three months covered by the treatment, 500 c.c. of serum were administered in forty-seven injections. As a result of the treatment the patient was much improved, having lost her leprous expression and the infiltration in various parts of the body disappearing. The bluish color of the face changed to a healthy red. Some ulceration that was present disappeared, together with a number of tubercles. Anæsthesia that was present subsided, and the skin became softer and fairer. The patient gained fourteen pounds in weight

The Diagnosis of Adrenal Growths.—In Henry Morris' article on primary tumors of the suprarenals and their removal by operation (*British Medical Journal*, November 11, 1899), the author has the following to say about diagnosis: Granted that in any given case there is the following group of symptoms, the diagnosis of a primary adrenal new growth should be made, and will most probably be correct: 1. A tumor in the suprarenal or renal region with a kidney-shaped prominence on the surface of the tumor. 2. An unusual degree of motility of the tumor, so that it falls away from the loin on the patient rising or turning on to the opposite side. 3. Rapidity of growth of the tumor, and secondary growths in the skin, liver, or the temporal region. 4. Marked emaciation and rapid loss of strength. 5. Absence of any change in the urine, and of any alteration of the normal temperature. 6. The presence of some pigmentation of the skin, or of marked or rapid growth of hair over the body. 7. Some gastro-intestinal symptom, such as nausea, vomiting, diarrhœa, or constipation. 8. Pain, deep seated in some part of the abdomen; or an ill-defined, unexplained pain in some joint or distant part of the body. It is, however, the exception to find the whole, or even the majority, of these symptoms present in any given case. If several of them are absent, and most especially if there is no tumor, a positive diagnosis is quite impossible.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended March 17, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Alabama, Mobile	February 24th to March 10th	11	
Florida, Jacksonville	March 3d to 10th	2	
Indiana, Evansville	March 3d to 10th	5	
Kentucky, Covington	March 3d to 10th	6	
Louisiana, New Orleans	March 3d to 10th	79	22
Michigan, Detroit	March 5th	12	
Grand Rapids	March 3d to 10th	1	
Minnesota, Minneapolis	February 25th to March 3d	10	2
Missouri, St. Louis	February 17th to March 10th	8	
Nebraska, Omaha	March 3d to 10th	1	
Ohio, Cincinnati	February 26th to March 9th	17	
Cleveland	March 2d to 10th	15	2
Tennessee, Nashville	March 3d to 10th	1	
Utah, Salt Lake City	March 3d to 10th	4	
Virginia, Portsmouth	March 3d to 10th	3	
Washington, Centralia	February 26th	150	
Seattle	February 10th to 17th	1	
Tacoma	February 24th to March 3d	4	1
Walla Walla	February 21st	2	
SMALLPOX—FOREIGN.			
Argentina, Buenos Ayres	December 1st to 31st	6	4
Austria, Prague	February 10th to 17th	12	
Belgium, Antwerp	February 10th to 17th	6	3
Ghent	February 17th to 24th	..	1
Brazil, Rio de Janeiro	February 19th to 26th	20	15
British Columbia	February 8th to 28th	2	
Canada, Quebec, Gaspe Basin	March 2d to 9th	9	
Ceylon	January 13th to 27th	..	4
Egypt, Cairo	January 21st to February 4th	11	
England, London	February 10th to 24th	19	
France, Lyons	February 10th to 17th	..	2
Nice	February 14th to 21st	6	2
India, Bombay	January 31st to February 6th	..	225
Calcutta	January 20th to February 3d	..	28
Kurrachee	January 21st to February 4th	22	12
Madras	February 3d to 7th	..	1
Mexico, Chihuahua	February 24th to March 3d	..	8
Ciudad Porfirio Diaz	March 1st to 7th	2	
Mexico	February 11th to 18th	27	19
Vera Cruz	February 26th to March 3d	..	2
Russia, Moscow	February 3d to 10th	2	2
Odessa	February 10th to 17th	15	
Riga	December 1st to 31st	..	34
YELLOW FEVER.			
Brazil, Bahia	February 3d to 10th	3	1
Rio de Janeiro	January 19th to 26th	..	9
Santos	January 19th to February 9th	23	19
Colombia, Panama	February 27th to March 6th	2	1
Cuba, Havana	February 24th to March 3d	2	1
Mexico, Vera Cruz	February 24th to March 3d	..	2
CHOLERA.			
India, Bombay	January 31st to February 6th	..	7
Calcutta	January 20th to February 3d	..	76
PLAGUE—UNITED STATES, AND INSULAR.			
California, San Francisco	March 6th	..	1
Hawaii, Honolulu	February 17th to 24th	4	4
Kehei	February 21st to March 17th	1*	
Philippine Islands, Manila	January 20th to February 3d	10	6
	* Suspect.		
PLAGUE—FOREIGN.			
Argentina, Buenos Ayres	March 10th	Present.	
Australia, Adelaide	February 28th	Present.	
Brazil, Santos	February 4th	*	
India, Bombay	January 31st to February 6th	..	458
Calcutta	January 20th to February 3d	..	152
Kurrachee	January 21st to February 4th	38	37
Paraguay, Asuncion	January 8th to 15th	..	14
	* Last case discharged.		

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

THE CRIMINAL, a Scientific Study. By August Drahms. 8vo, 402 pages. The Macmillan Company, New York.

THE NOSE AND THROAT. Edited by G. P. Head, M.D., and Albert H. Andrews, M.D. 8vo, 274 pages.

MENTALLY-DEFICIENT CHILDREN. By G. E. Shuttleworth, M.D. 12mo, 173 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia.

LA PESTE ET SON MICROBE. By le Dr. Netter. 12mo, 121 pages. Illustrated. Georges Carre et C. Naud, Editeurs, Paris, France.

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Original Articles.

MUSCULAR RHEUMATISM.

BY I. ADLER, M.D.,

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PERHAPS there are few subjects in medicine on which more has been written than on rheumatism. Many endeavors have been made to reach an understanding of the morbid processes involved in this class of diseases, by clinical analysis, by anatomical and even experimental investigation, but as yet without complete success. It has not yet been possible to formulate either anatomically or clinically sharply defined types, nor has any one of the theories propounded succeeded in obtaining universal assent. Indeed, rheumatism, and especially muscular rheumatism, is still more or less a sort of diagnostic scrap bag, into which one is accustomed to throw promiscuously all those ailments accompanied by pain and which cannot conveniently be otherwise classified. Authorities still differ widely as to what is meant by muscular rheumatism, and what is the nature of the lesions which underlie its manifestations. In the first half of this century earnest efforts were made, especially in France, to arrive at an anatomical understanding of the rheumatic affections, and with that object even experimentation upon animals was resorted to, especially by Gendrin. In this manner the theory of rheumatic inflammation of muscles was gradually evolved, though, of course, curiously interwoven with the reigning humoral dogmas. On this basis Froriep finally elaborated the whole subject in his often-quoted book, "Die rheumatische Muskelschwiele." There is no doubt that Froriep describes as rheumatic inflammation and induration many conditions which to-day are known to depend upon altogether different lesions and to belong to quite different groups of diseases. But the book contains nevertheless much that is well worthy of attention even in our time. In 1847 Virchow finally gave a detailed and exhaustive anatomical and histological description of rheumatic inflammation of the muscular tissue, which, with some modifications, remains in full force to-day. On the other hand, the majority of clinicians and practitioners has at all times looked upon rheumatism less from the anatomical than from the etiological point of view, subject to the dominant theories of the time. Besides all sorts of morbid humors and diatheses, exposure to cold and draughts, the influence of weather, chill and damp, were held responsible and dominated the whole subject of rheumatism perhaps to a greater extent than any other department in the whole field of medicine. Even to this day opinion differs as to whether muscular rheumatism is dependent upon structural lesions or is merely functional. The very latest writer on this subject, Lorenz, in Nothnagel's "Handbook," defines muscular rheumatism, or, as he prefers to name it, "myalgia rheumatica," as follows: "Those diseases in which muscular pain is the prominent symptom, and as a consequence of the pain functional disturbances and even obstinate contractions are brought about, but which depend upon no structural lesions, and during life, with the exceptions of the contractions, offer no palpable objective symptoms, and which are due etiologically to cold (*Erkältung*)." This view of muscular rheumatism is probably at the present moment the one that is most generally accepted, though there are some notable authorities who differ in several essential points. It is not my intention to give a detailed and critical review of the literature on this subject. I propose merely to summarize in brief the convictions which have impressed themselves upon me in the course of years as the result of a careful study of the literature and abundant observation, in part on my own body. It will be noticed that the conclusions arrived at are in every point the exact opposite of those formulated by Lorenz.

It may be summarily stated at the very outset that the anatomical lesion underlying every case of muscular rheumatism, acute or chronic, is an inflammation, not necessarily altogether confined to the muscle, as will be shown later, but as far as the latter is concerned an interstitial inflammation. Muscular rheumatism may therefore quite generally be designated pathologically as a myositis interstitialis. This is the view held by many of the older authors, and especially urged by Virchow, and, it is believed, is entirely corroborated by all modern experience and investigation. I cannot here present any anatomical material. It is obvious that the difficulties of procuring proper anatomical material for adequate histological research are very great. People do not die of muscular rheumatism, and while it will subsequently be shown that it is very easy to demonstrate the myositic patches in the living, it is indeed wellnigh impossible to find such patches in the corpse. It is no doubt owing to this difficulty that our knowledge of these forms of myositis, especially of the finer histological detail, is still extremely and embarrassingly imperfect and incomplete. Without that, however, thanks to occasional excisions of diseased muscles in the living subject, and to opportune and lucky finds in the corpse, enough material has from time to time been available to enable us to arrive at some idea of the actual pathological conditions on which these muscular lesions are based. It is, moreover, possible to approach the subject experimentally. It is not difficult to produce in animals parenchymatous as well as interstitial muscular inflammation. The study of these lesions lends valuable assistance in the interpretation of the clinical observations. Lastly, it is permissible, with due precaution, to bring to bear upon our subject the result of histological work done upon other forms of myositis, which, while in many respects closely analogous to rheumatic inflammations, are more easily accessible and have therefore been more minutely studied. I refer particularly to the septic form of myositis, and to syphilitic interstitial myositis, especially as occurring in the heart.

Guided by these lights we may conceive the rheumatic process in muscles as follows: In one or more places of the muscular system hyperæmia with dilatation of the smaller vessels and capillaries, sometimes even accompanied by small hemorrhages, takes place.

This is at once followed by a more or less copious emigration of cells into the interstitial tissues, the leucocytes crowding between the bundles of fibres and even between the single fibrils. Very soon active proliferation of the interstitial connective tissue takes place, and thus in a comparatively very short time after the beginning of this process an infiltration of the muscle is brought about, which varies in extent and density according to the intensity of the process. During all this time the muscle fibres themselves are not very materially affected; they are pushed apart to some extent, but do not greatly suffer. In the milder type of cases the process ends here. In due time, usually after but a very few days, absorption of the infiltrating material takes place. The muscle returns to a condition practically, though perhaps never quite, normal. If, however, the inflammatory activity attains a higher grade of intensity, the process does not end with the mere cellular infiltration and at most a very slight degree of connective-tissue proliferation. More extensive new formation of fibrous tissue is inaugurated, sometimes to quite a considerable degree. The interstitial connective tissue proliferates vigorously; the muscle bundles and fibrils have been forced apart and compressed. They also begin to degenerate and are destroyed, exactly in the manner described for interstitial myocarditis. The result of this is a fibrous induration of the muscle. It is evident that when this stage of fibrous induration has been reached, spontaneous restitutio ad integrum is no longer possible. If left to itself, the induration will remain, impeding function, causing pain, and facilitating the recurrence of other acute attacks, thus leading over from acute to chronic muscular rheumatism.

In rare cases the indurative proliferation proceeds still further. Hard fibrous tissue is formed to a considerable amount. The muscular tissue is extensively destroyed. There results from this a white, hard, cicatricial mass of tissue in which the microscope can detect only occasional solitary remnants of degenerate muscular fibres, and which, in its general structure, closely resembles tendinous tissue. This is the genuine "Muskelschwiele." Before proceeding further it is well to emphasize the fact that what is usually termed muscular rheumatism is not necessarily confined to muscular tissue alone. It is of common occurrence that in cases of articular rheumatism the muscles in the immediate vicinity of the joint are also affected, and vice versa, that in muscular rheumatism the nearest joints also suffer, though usually but very slightly. But aside from articular affections it is a fact easily verified that the inflammatory process is, as a rule, not limited to the muscle, but involves the adjacent tissues as well: the fasciæ, tendons, the subcutaneous, fatty, and cellular tissue, and particularly—and this is perhaps not sufficiently recognized—the nerves. A typical rheumatic neuritis (sciatic, median, radial, etc.) has long been recognized, in which interstitial inflammatory processes, similar to those described in the muscles, are at work in the neurilemma. But aside from this typical neuritis of the larger nerve trunks which occurs as an independent rheumatic affection, it is safe to say that in most cases of rheumatic myositis more or less numerous larger and smaller nerves of the immediate neighborhood are also involved in the process of interstitial inflammation. It will be seen that not a few of the clinical symptoms associated with muscular rheumatism find their explanation in this affection of the nerve supply.

If the foregoing anatomical statements are based upon facts, if muscular rheumatism is in truth a localized inflammation associated with infiltration and swelling of the tissues involved, we might justly expect to be enabled to recognize these infiltrations by clinical examination, that is to say, by palpation. This is indeed true for every case. Scattered communications by various authors here and there (Opoltzer, Ewer, Lacquer, etc.) have repeatedly called attention to circumscribed patches of swelling and infiltration that could at times be felt in rheumatic muscles. These statements, however, have either been simply put aside as based upon error, or else the swellings have been accepted as an exceptional and unexplained occurrence, or else interpreted as the expression of partial muscular contraction. It is a particular merit of the masseurs (Metzger and his pupils, Helleday, Nostroem, Schreiber, and others) to have zealously directed attention to these conditions, though perhaps without adequate anatomical substantiation. But notwithstanding all that has been said and written about these things, notwithstanding the universally lauded success of Metzger in the treatment of these muscular affections, the great majority of practitioners have kept entirely aloof and have persistently ignored all advance in this direction. With some practice in palpating muscles, and after attention has once been directed to these muscular lesions, it is not very difficult to convince one's self of the existence of these infiltrations, indurations, and swellings in every case of muscular rheumatism. It must be borne in mind, however, that the infiltration is not necessarily found in the spot to which the patient refers his pain, and recalling what was said above with regard to the participation of the nerves in this process, this will not appear surprising. Take, for example, one of the most common forms of muscular rheumatism, the so-called lumbago. In some cases this is strictly localized, and the pain is referred to the precise spot where on examination the muscular infiltration is found. In other cases it is said by the patient that the pain is "all across the back," or radiates into the abdominal wall down to the groin. A superficial examination of the dorsal and abdominal muscles will in such cases fail to detect any lesion. Indeed, all these muscles are probably entirely sound, and it is no doubt that from such cases and from such examinations the conception of "myalgia without anatomical lesion" has been derived. Nevertheless a more careful palpation will without fail demonstrate in some one muscle or in several at the back, perhaps the gluteus, perhaps the quadratus or the spinalis longus, one or more, sometimes quite small areas of infiltration which are extremely sensitive to pressure, and from which the pain radiates in all directions along the track of larger and smaller nerves, and is referred, as is the case with every nerve pain, to the periphery of the nerve affected. The infiltration varies greatly in size, shape, and consistency according to the extent and intensity of the inflammatory process. It is impossible in very acute cases, on account of the intense pain produced by the slightest touch, to palpate the diseased muscle with exactness. After subsidence of this acute and violent stage, the infiltrations may be recognized by careful palpation in various forms of configuration. They may be round, fusiform, or flat. The surface may be smooth or somewhat broken and uneven. They may be quite hard and firm, or rather soft and doughy. It is to be noted also that, while normal muscles react upon a certain vigorous grip with a contraction of the part touched, the diseased muscular tissue will either not react thus at all, or with plainly diminished vigor. The diseased parts of the muscles appear besides distinctly less elastic than the normal. After the acute inflammatory stage has passed, the muscle, as a rule, resumes its functions without pain or any subjective inconvenience. Nevertheless, palpation of the diseased and infiltrated area even then is without exception quite painful, and this sensitiveness to touch is of great service in detecting the foci of the lesion. When examining for these muscular lesions it is necessary to compare the suspected area with the corresponding place on the other side. Aside from differences in consistency, elasticity, size, etc., it will be found in every case that the diseased portion is sensitive to a degree of pressure which is not at all painful at normal places. A thorough appreciation of these facts and a sense of touch developed and educated by practice will enable us to demonstrate muscular infiltration or induration in every case of muscular rheumatism without exception. More than that, it will very often be possible by the detection of such diseased areas in muscles and their vicinity, to arrive at a correct interpretation of entire groups of symptoms past and present, especially in cases in which the acute initial stage was very mild and has passed entirely from the recollection of the patient, thus affording us no anamnestic data whatsoever.

The clinical picture presented by muscular rheumatism varies according to the intensity and extent of the process, and according as it assumes an acute or chronic character. There are cases which convey altogether the impression of acute infectious disease and are accompanied by fever, seldom, it is true, above about 102° F., but in exceptional cases rising to 104° F. and over. The muscular swelling extends in these cases over a considerable area, the cutis is tense and shining, and the slightest motion or touch causes almost intolerable agony. Even when the diseased parts are entirely immobilized and protected from all harmful influence, very severe spontaneous pain is as a rule present. In these cases the disease usually affects a number of muscles lying in more or less close vicinity, but is, as a rule, confined to one region alone. We rarely see this acute and intense affection appearing simultaneously in different regions of the body. Very often, too, the joint nearest to or surrounded by the diseased muscle is also somewhat, though possibly but very slightly involved in the inflammatory process. This corresponds to the generally recognized fact that in acute articular rheumatism the muscles adjoining the diseased articulation are also more or less inflamed. This form of muscular inflammation which appears in the train of acute or chronic articular rheumatism is considered by some authors as the true and only myositis rheumatica. This view is entirely unfounded, inasmuch as these forms of muscular inflammation differ in no essential respect from the form of interstitial myositis as typical for the ordinary muscular rheumatism. Another feature in these acute cases of muscular rheumatism which suggests very vividly infectious disease is the not infrequent occurrence of endocarditis and of cutaneous lesions, petechia, erythemata, and urticaria, the so-called peliosis rheumatica.

Another group of cases presents an entirely different type. I include under this heading those forms of muscular rheumatism which are usually of short duration, more transitory in character, extending over a very limited area of tissue, and which, while at times appearing in various and widely distant regions of the body simultaneously, may, on the other hand, cling obstinately to one spot and occur again and again always in the same place. Such affections are the common lumbago, the rheumatic caput obstipum (*vulgo* stiff neck), certain forms of intercostal pains, usually designated as intercostal neuralgia, but in fact nothing else than rheumatic myositis of the intercostal muscles, and similar affections in the various muscular groups all over the body. These affections are so well known and of such frequent occurrence that the mere mention of them would appear sufficient. There are nevertheless some points in this connection which are not generally recognized and are of some importance. The first is the question of fever. The general conviction is that these mild and strictly localized cases of muscular rheumatism are not associated with rise of temperature, and it is undoubtedly true that in many cases there is no fever. Nevertheless Leube's statement that in very numerous instances, even in these mildest cases, there is a slight rise of temperature is entirely borne out by closer investigation. As a rule, the temperature in these cases is not taken, as the patient is about, is not conscious of any fever—the skin appears cool, there are no objective symptoms of febrile temperature. But systematic thermometric measurements have shown that even in these mild cases, in common lumbago or stiff neck, slight elevations of temperature, 100°, 100.5°, 101° F., are much more frequent than is commonly supposed. A further point that deserves mention is the question of endocarditis in muscular rheumatism. The occurrence of endocarditis in the train of muscular rheumatism is altogether denied by many observers. Now, it is beyond doubt that endocarditis, while of frequent and almost regular occurrence in acute articular rheumatism, is but rarely observed in muscular rheumatism. But it certainly does occur. In this respect, too, the facts bear out entirely Leube's statement. Endocarditis is met with not only in those severe cases associated with considerable elevation of temperature as mentioned above, but also now and then in quite mild cases of lumbago, stiff neck, etc. Endocarditis is occasionally found in children apparently without history of rheumatism. Closer investigation elicits a story of transitory pains (growing pains) here and there in the legs, the arms, over the back. The joints are absolutely normal, but careful palpation detects recent and painful infiltration in one or more muscles. In the case of adults, too, it is by no means rare to find a valvular lesion without any satisfactory etiology to account for it. There is no history of articular rheumatism, pneumonia, typhoid, syphilis, or other infectious diseases. Careful palpation, however, demonstrates in various muscles sometimes quite numerous more or less hard patches of infiltration as the residue of former attacks of muscular rheumatism, which, while not severe enough to have dwelt in the memory of the patient, sufficiently account for the endocarditis and resultant valvular defect. One other point deserves mention: It is customary to look upon lumbago, stiff neck, and other similar very sudden myalgias as caused by traumatism, as due to muscular strain or distortion. It is indeed certain that in very many of these cases, though by no means in all, the acute attack of pain appears to be brought about by some sudden and abrupt motion (stooping, lifting, rapid turning of the head, etc.). Leube, who is of the opinion, as I am, that even these cases of so-called myalgia must be considered as genuine rheumatic infections, admits that this apparent connection of traumatic injury with the outbreak of an acute attack of rheumatic affection is at present entirely unexplained. From the point of view advocated in these pages the symptom is, however, not difficult of solution. In all of these cases interstitial myositis with more or less infiltration, which, as has been shown above, may lie dormant without objective symptoms for an indefinite time, is present and may have existed for a long time. The myositis is in every case the primary affection. Under these conditions a sudden violent and abrupt motion simply lights up a renewed and acute attack of inflammation and pain, possibly by causing a slight intra-muscular hemorrhage, or by rupture of bundles of already well-degenerated muscle fibres or of infiltrated and degenerate nerve branches, etc. All this is not mere speculation, but can easily be proven. There are numerous persons who suffer, sometimes for many years, from recurrent attacks of this form of rheumatism, for instance from lumbago. In every one of these cases it is possible in the interval between the attacks, and at times when there are absolutely no subjective symptoms, to demonstrate muscular infiltration in the quadratus, longissimus dorsi, or other muscles of the trunk, and it can be shown that in every attack the pain unfailingly takes its origin from those spots which have been recognized as the seat of the infiltration. Let it be stated plainly once more, however, that numerous instances are observed in which the attack comes about without any traumatic influence whatsoever.

Rheumatic myositis can occur practically in almost every part of the body where there are striated muscles. But very few localities have thus far been found exempt. It may perhaps be of some interest to dwell on some of the rarer and less generally appreciated localizations. The muscles of the head are more often the seat of rheumatic inflammation than is commonly supposed. The disease occurs not only in the muscles of mastication, the temporal, and, though quite rarely, in the masseter, but also and very frequently indeed, in the occipital and the small muscles at the base of the occiput. In these latter localizations it is common to find the cutis, especially the galea, and the nerves equally involved, and the pain caused by these foci of rheumatic inflammation is usually diagnosed as an ordinary cephalalgia or headache, or as neuralgia. Palpation readily detects patches in the muscles, the skin, and also about the nerves. The occipital nerve, just at its exit, is a favorite locality. Many cases of headache, occipital, supraorbital, and other neuralgia, many cases of so-called migraine, are nothing else than rheumatic inflammations easily to be recognized by proper examination. There are, however, other localizations which occasionally may render the proper interpretation and diagnosis rather difficult. I wish to speak particularly of those cases of rheumatic myositis localized in and about the abdominal muscles, which are not generally recognized and may be of considerable clinical importance, inasmuch as they may simulate cholecystitis, appendicitis, and other affections of the abdominal viscera. With reference to cholecystitis the following case may serve as an illustration:

Mrs. H. I——, forty-five years old, was very suddenly seized with excruciating pain. The pain was distinctly localized in the region of the gall bladder and radiated from there into the back and epigastrium. The entire region was extremely sensitive to the slightest touch, and even the ordinary respiratory movements caused pain. The rectal temperature ranged from 100° to 101° F.; the pulse was normal. All the other organs were normal. The suddenness of the attack, the strict localization in the region of the gall bladder, the fever, suggested a possible acute cholecystitis, perhaps with incipient peritonitis. On the other hand, it could be urged that the woman had never before suffered from biliary colic, while she had at various times been subject to rheumatic affection. The very slight pyrexia as compared with the extent and acuteness of the pain seemed to tell against the assumption of a severe and deep-seated lesion. Further observation seemed necessary before a positive diagnosis could be made, though rheumatism was thought most probable. After a few full doses of salicylate of sodium the sensitiveness of the area affected had diminished to such a degree that a thorough palpatory examination could be made, which demonstrated fresh inflammatory infiltrations in the muscles just below their insertion at the right border of the ribs. A few months later the same patient was seized with an entirely similar attack, the difference being merely that the inflamed area of muscle was located in the right quadratus lumborum.

Localization of myositic patches in the recti abdominis is rather frequent and may lead occasionally to errors in diagnosis if not carefully considered. This is particularly true, too, of rheumatic myositis in the obliqui, and especially when located in the internal obliquus in the region of the right iliac fossa. It is at times extremely difficult to distinguish between an incipient appendicitis and a rheumatic affection of the deep muscles and fasciæ. The occurrence of this class of cases is by no means generally appreciated, and indeed the very possibility of rheumatic myositis in the abdominal muscles is not taken into account by the majority of practitioners. It may be well, therefore, to say a few more words on this subject, the more so as the impression seems justified that in the present state of nervousness concerning appendicitis which obtains among the profession as well as among the laity, not a few cases have been diagnosticated as appendicitis, and not a few perfectly normal appendices have been removed, when the actual lesion was merely abdominal rheumatic myositis. The following observation well illustrates some of the points in question:

Mr. S. J——, forty-seven years old, complains of general malaise, loss of appetite, and pain, which latter, gradually growing more severe, is located by the patient in the right side of the abdomen. The family physician finds rise of temperature, ranging from 100° to 101.5° F., and a diffused sensitiveness on pressure all over the right abdomen. No positive diagnosis is made. Ice bag to the painful parts, mild saline laxatives, and rest in bed, together with strict diet, are ordered. In a few days the pain moderates, the temperature is almost normal, and the general condition much improved. The patient is then advised to take a week's rest out of town. While away from the city he feels comparatively well; appetite improves, vigor returns, but he is never quite free from pain. On his return I find a slow, regular pulse, somewhat coated tongue, the viscera of the chest perfectly normal. There is a distinct and intense painfulness on pressure over the region of the appendix. The appendix itself cannot be distinctly made out. There is also a slight sensitiveness just below the right arch of the ribs about the region of the gall bladder. The liver is not enlarged. Jarring and percussion of the liver are not painful. Pressure over the region of the appendix causes the pain to radiate upward toward the epigastrium and gall bladder, and is so painful as to predominate over all other sensations. The rectal temperature is 100° F. No albumin, no sugar, no phosphates, and no biliary elements are found in the urine. A second examination next day after the bowels have been thoroughly evacuated led to exactly the same result. The conclusion seemed obvious that the case was one of mild subacute appendicitis. With a view to a possible operation a surgeon was consulted, who in turn was disinclined to entertain the diagnosis of appendicitis, but rather favored cholecystitis. Further observation of the patient showed the sensitive areas remaining about the same, with this difference: On one day the pain about the region of the gall bladder would be more severe, and the next the pain about the region of the appendix. In the mean while I had recollected that the same patient had at various times suffered from rheumatic myositis in the muscles of the neck, leg, back, etc. The somewhat uncertain and undetermined symptoms in the present trouble suggested the possibility of a rheumatic condition. Accordingly a careful palpation of the muscles was made, and the infiltrations in the obliquus externus and in the rectus, the latter under the arch of the ribs, were readily discovered. An energetic antirheumatic treatment rid him promptly and entirely of all pain and discomfort. If the possibility of rheumatic myositis had suggested itself to me, as it should have done at the first, and the proper examination of the muscles had been made at once, the patient as well as his physicians would have been spared much worry and anxiety. Some time afterward the same gentleman was seen with a new pain, but this time located distinctly in the right quadratus.

In the following case the condition was less perplexing:

Mrs. E. S——, twenty-nine years old, had for some time been suffering pain in the right iliac fossa. She was seen by a prominent gynæcologist, who found the uterus and adnexa normal, but diagnosticated incipient appendicitis, and sent her to bed, and ordered ice-bag and expectant treatment. Temperature, pulse, and digestion were normal, and the appetite was good. Pain on motion and on pressure was quite violent and strictly localized in the right iliac fossa about the region of the appendix. This patient, too, had at various times suffered from muscular rheumatism in various parts. Palpation showed a firm infiltration in both obliqui, and salicylate of sodium and massage effected a speedy cure.

Accounts of similar cases might be multiplied almost indefinitely. Examples might be adduced in which myositis of the recti simulated peritonitis or intestinal colic, when myositis of the quadratus and obliqui was diagnosticated as renal colic, but perhaps this will suffice to show that rheumatic myositis of the abdominal muscles must be taken into consideration as among the possibilities in all cases of painful abdominal affections in which the diagnosis is at all doubtful. It would transgress the limits of this paper to enter into details upon the numerous questions of differential diagnosis in this group of cases. It may be stated in a general way that the absence of progressiveness of the symptoms, the tendency to remain stationary, characterize most of these rheumatic affections. Moreover an attack of rheumatic myositis of the abdominal muscles is rarely the first rheumatic attack. Usually there are a history and physical evidence of preceding or simultaneous rheumatic affection in other parts of the body. The absence of fever or the very slight elevation of temperature, the absence of characteristic symptoms on the part of the abdominal viscera, are in many instances valuable hints. The main basis of the diagnosis, however, is in every case the demonstration of the muscular infiltration or indurations by palpation. This is at time extremely difficult. In very fat individuals or in hyperæsthetic and hysterical subjects it may be practically impossible. In every case a delicate and well-trained sense of touch is required. The recti and quadratus are, as a rule, more easily handled. When the patient is in the recumbent position or on either side with flexed thighs, it is not too difficult to grasp the rectus between the thumb and first two fingers, or between the two hands, and palpate all through the muscle. The obliqui, particularly the obliquus internus, present the greatest difficulty. Palpation here can never be properly carried out while the patient is on his back. It is necessary to turn him well over on either side and with muscles thoroughly relaxed. In every case palpation of the obliqui requires great practice and a delicate touch.

It has already been stated above that, no matter whether the acute initial symptoms are of considerable intensity or so very mild as to be barely noticed, muscle infiltrations remain in every case. These enduring infiltrations and indurations in the interstitial muscular tissue, the neurilemma, and the subcutaneous and adipose tissue form the basis of chronic muscular rheumatism. It is owing to these infiltrations that more or less severe relapses take place at all times and on the slightest provocation. But not only periodical relapses are caused by these anatomical lesions. Permanent disturbances of motor function, such as pain with certain motions, contractions of certain muscles or groups of muscles, are frequent occurrences. If the muscles involved are numerous and the indurations extensive and hard, really intolerable conditions, seriously affecting the working-capacity and the entire functional economy, may result. Besides this effect on motor function, other disturbances can be brought about by these indurative processes which have as yet received too little attention at the hands of the practitioner. I refer particularly to periodical attacks of pain simulating typical neuralgia. There are, for instance, certain forms of headache resembling altogether typical migraine which are entirely due to rheumatic lesions.

Soon after I had first begun to study the various forms of rheumatic myositis, a gentleman, Mr. S——, presented himself at my office complaining of periodical seizures of very violent hemicrania with all the symptoms of ordinary migraine. The attacks occurred at varying, entirely undetermined intervals, even as often as several times in one week. The suffering caused by the violent pain was not always mitigated even by large doses of antipyrin or phenacetin, and, moreover, was the cause of serious disturbance in the carrying on of his business. He had accordingly consulted numerous nerve and other specialists without relief. He stated that he had never been seriously ill, but had had frequent mild attacks of rheumatic pain in his limbs and suffered very often from lumbago. All internal organs were found on examination perfectly normal. In the small cervical muscles, however, in the cucullaris, temporalis, and in the scalp numerous rather hard infiltrations were found, as also about the trunk of the occipital nerve, which latter was particularly hard and painful. A very energetic and systematic course of massage extending over several months gave permanent relief from all unpleasant symptoms, and the patient has since then had no recurrence of his periodical attacks of migraine.

Since that time many similar cases with similar results have been observed. The following case may also be of interest:

A young widow, Mrs. P——, about twenty-seven years old, suffered for years from violent attacks of headache which lasted for days at a time, confining her to her room and practically keeping her from all social duties and pleasure. The father of the lady, it is stated, had been subject for years to similar attacks, and finally died, according to the reports of the autopsy, from hemorrhagic pachymeningitis. The young lady, convinced that before long her father's fate would overtake her, had fallen into a condition of hopelessness bordering on melancholia. Careful examination showed all internal organs, including the brain and spinal cord, to be perfectly normal. Examination of the eyes was also negative. She positively denied ever having suffered from rheumatism or rheumatic pain anywhere; notwithstanding this most positive statement numerous infiltrations were found, as in the previous case, in the muscles of the neck and head and about some of the nerve trunks. In this case also proper massage permanently relieved the headache and restored the patient to a rational enjoyment of life.

Similar conditions can prevail in other regions of the body, particularly in the extremities. There are cases which present all the symptoms of chronic sciatica. Indurations are found in the gluteal muscles or in the neighborhood of the sciatic notch, and the removal of these by massage or excision (Straus) at once relieves all sciatic symptoms. Numerous other instances might be cited and corroborated and illustrated by clinical histories. It will be proper, however, to let these few hints suffice, and proceed to a brief consideration of the etiology of muscular rheumatism.

It is the almost universal opinion at present, as is manifest also in the above-quoted statement from Lorenz, that exposure to cold is the most frequent, in fact the sole, cause of muscular rheumatism. A discussion of the rôle of "cold" as an etiological factor in disease would lead me too far. But it may be stated in a general way that a survey of the history of medical science demonstrates clearly the indubitable fact that with every advance toward a more intimate knowledge of disease, cold as an etiological factor is less frequently heard of. Compared to twenty-five years ago but very few diseases are to-day considered as in any way attributable to cold, and it is significant that these are such as to whose etiology but little is definitely known. Muscular rheumatism is the last stronghold, as it were, of this once so universally dominant etiological concept. But here, too, it has outlived its usefulness. Sahli has shown that articular rheumatism is most probably caused by infection with cocci, staphylococci, or streptococci of attenuated virulence. We have seen how closely related muscular rheumatism is to articular rheumatism. They are not only frequently associated, but the facts that in pure muscular rheumatism fever is often present, endocarditis is not infrequently observed, and erythematous eruptions, peliosis, are not rare, seem to suggest the inference that muscular rheumatism must also be classified among the infectious diseases. The old and well-established observation of the migratory tendency of rheumatism, its appearance in different regions of the body simultaneously, or now here, now there, in rapid succession, points in the same direction and is best explained by the infection theory. I conclude, therefore, in accordance with Leube, that rheumatic myositis is an infection, caused most probably, according to present lights, by cocci (streptococci), still less virulent than in rheumatic arthritis. Assuming this to be so, we have gained a uniform basis for the entire group of infectious muscular diseases. First in order and of least virulence would stand the rheumatic interstitial myositis; next and more virulent those graver forms of myositis associated with a severe type of articular rheumatism. Of greater virulence still are the true septic types of myositis, those forms which result in extensive interstitial proliferations and formation of pus, which lead to muscle abscesses. We must further classify under this general heading those more specific forms of interstitial myositis which occur so frequently in the course of infectious fevers, especially in typhoid. These are, however, no longer pure types of interstitial inflammation, inasmuch as, probably caused by specific toxins, a primary degeneration of the muscle fibre takes place, as a rule, simultaneously with the interstitial process. Syphilitic interstitial myositis may possibly also belong to this group, though to me this seems doubtful. It must be candidly and unreservedly confessed that this entire conception as just stated has as yet not been strictly proven, and is still more or less hypothetical in character. The cocci have not yet been demonstrated, and even if we assume their existence we are in utter ignorance of their mode of entrance into the system, the conditions which influence their invasion, etc. Nevertheless it can safely be said that this view has the advantage of gathering a large group of pathological processes under one uniform conception, and of affording a more logical and plausible explanation of observed facts than the entirely inadequate theories that are based on hypothetical effects of cold, damp, etc. But even if we assume the above-stated views to be correct, it cannot be denied that there remains much that is as yet unexplained. Though we cannot admit that colds or exposure can cause an interstitial myositis, no one can doubt the truth of the empirical observation, as old as the history of medicine, that climatic conditions exercise to a certain degree a disposing influence upon rheumatic affections. Just in what way we are to explain this remains for the present an unsolved problem. Again, it seems certain that diet and general mode of living may furnish a disposition toward rheumatic muscular affections. This fact may perhaps be not entirely inexplicable. Observation has shown that vigorous muscular activity affords considerable protection against rheumatic infection, while indolent and sedentary habits favor a direct disposition toward this class of disease. The same can be said of excessive and rich feeding and of even moderate abuse of alcohol. Considering the extremely abundant blood supply of muscles, their intense and variable metabolism, and their ability to store up certain chemical substances, such as glycogen, lactic acid, etc., it becomes quite conceivable how, under the above-mentioned conditions, a favorable or unfavorable breeding-ground for infective germs may result.

In conclusion, some few words must be said about treatment. The acute cases with fever and severe pain are treated as any ordinary case of articular rheumatism. The patients are kept in bed and salicylates are administered. In a general way I am under the impression that salol and its compounds act more satisfactorily in muscular rheumatism than salicylate of sodium. In most cases, too, I see better results from the local application of cold (ice-bag) than from the hot fomentations and hot-water bags which are so generally favored. The old notion, still widely accepted, that acute rheumatism, whether muscular or articular, must be treated by hot applications, and that all cold must be carefully avoided, should at last be given up. We have seen that every attack of muscular rheumatism is essentially a proliferating interstitial myositis with more or less inflammatory infiltration of the muscles. After the subsidence of the acute stage these infiltrations remain, undergo further changes, and lead to recurrence of further acute attacks, to disturbances of function, and to many other painful and otherwise annoying symptoms. It should be the main object of our therapeutics to accomplish the removal of these infiltrated patches and reinstate normal anatomical conditions in the muscle. We have essentially local lesions which can be satisfactorily dealt with only by local measures. The well-known hot baths and springs, electricity, the internal administration of iodides, gymnastics, and the host of other remedial schemes that have been recommended, will produce no lasting result. Though I will not deny that they may be useful with regard to the general conditions, with reference to circulation, excretion by skin and kidneys, improving metabolism as a whole, etc., it is safe to say that they will scarcely touch the local lesion which is our main objective. The rheumatic infiltrations and indurations can be best dealt with by proper massage. Not every so-called masseur understands this, and I am far from indorsing the loose and unscientific handling that has of late years become rather too general under the collective name of massage. For our purpose the masseur must be possessed of a specially trained tactile sense in order to find even the slightest infiltrations, and a special technique is required in their treatment. Quite soft and recent infiltrations are handled differently from old and hard fibrous indurations. In the latter the object of the massage is the forcible breaking up of the fibrous masses and the production of reactive hyperæmia and inflammation which will gradually under persistent and judicious treatment end in absorption of the fibrous induration and in new formation of muscular tissue. In the former the procedure is simpler and easier, though the principle is the same. This is not the place to enter into further details. Very few masseurs understand, and are trained for, this special work. The well-known Dr. Metzger and his pupils have earned their laurels principally in this field. In our city Dr. Norström has devoted himself specially and successfully to this work. We know from careful and convincing microscopical investigation that, as the inflammatory products are absorbed, and under the influence of strongly stimulated blood supply, the muscle fibres are rapidly regenerated and take the place previously occupied by the inflammatory proliferation. It is astonishing to see indurations almost cartilaginous in their hardness still yield to persistent and properly applied massage. It is evident, however, that recent still well vascularized and cellular infiltrations will be absorbed much more quickly and easily than old, hard, and dense indurations. For this reason it is well to commence the mechanical treatment as soon as the acute stage of fever and intense spontaneous pain has passed. We will then be able very often to obtain complete absorption and restitution in a very short time. In every case the treatment requires some pluck and energy as well as persistence on the part of the patient, for it is obvious that this kind of massage is necessarily quite painful, especially at the beginning of the treatment. As the infiltrations are reduced the painfulness of the massage rapidly diminishes. The rare cases of genuine muscular cicatrization (*Muskelschwiele*) can, it is obvious, derive no benefit from massage. In these cases the fibrous cicatricial tissue must be excised. This has repeatedly been done with excellent result. Recently such cases have been again reported by Strauss.

Finally, reviewing once more the entire subject, I may briefly summarize the conclusions arrived at as follows:

The so-called muscular rheumatism is, according to probability and analogy, an infection with germs, most probably streptococci, possibly staphylococci, of attenuated virulence.

A certain degree of individual disposition toward this class of affection is recognizable. This disposition is augmented by indolent and sedentary habits, by improper nutrition, especially immoderate and rich eating, and alcoholic beverages. It appears, furthermore, that climatic influences may also, in a manner as yet unexplained, act favorably on the development of rheumatic affections.

Muscular rheumatism must be designated anatomically as an interstitial myositis, usually in conjunction with inflammatory processes in the adjacent tissues, the subcutaneous and fatty tissue, the fasciæ, and especially the nerves. In the latter the process is likewise that of interstitial neuritis.

As sequelæ of the inflammatory process, cellular infiltration, connective-tissue indurations, and sometimes even complete fibrosis of the muscles are produced. These changes in the muscular texture persist after the abatement of the acute inflammatory conditions and give rise to more or less frequent relapses and to manifold functional disturbances.

Mere medicinal treatment is indicated in the acute, more or less febrile stage. As soon as this stage is over, mechanical treatment, especially proper and adequate massage, becomes of paramount importance. It is the object of this method to bring about the absorption of the infiltrations and indurations and to restore the muscle to normal conditions.

Postscript.—Since the above paper was written, Wassermann has succeeded in isolating a streptococcus from the blood and various viscera in the case of a girl who died from endocarditis, nephritis, and chorea following polyarticular rheumatism. Injection of small doses of the pure culture of this streptococcus into the blood of rabbits invariably produces typical, usually fatal polyarthritis in the animal. The infectious nature of rheumatic polyarthritis, as caused by a specific streptococcus, can therefore be considered as certain. It will remain an object of investigation for the near future to determine if similar micro-organisms cannot be found for muscular rheumatism.[1]

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OBSERVATIONS ON THE TREATMENT OF CANCER.[2]

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A few years ago I read a paper before the Toronto Medical Society on the treatment of cutaneous malignant epitheliomata, and after a full consideration of the different forms of cutaneous cancers, and especially of their pathological anatomy and methods of extension, endeavored to show both from a theoretical and clinical standpoint that, in a majority of cases coming under the observation of the surgeon, certain caustics applied according to the principles laid down by me, principles based on the nature of the action of the caustic employed, the form of the epithelioma present, and the extent and direction of the invasion of the normal tissues, gave much more satisfactory results as regards the complete removal of the disease and the amount of deformity from the operation than could be obtained by the use of the knife; that in a certain number of cases the knife was the proper agent to employ; that in a few cases the knife, followed immediately afterward by a caustic, should be used; and, finally, that some cases were best treated by the curette, followed by a caustic.

This view I will to-day again maintain and defend, as I firmly believe it to be in the interests of those afflicted with this dreaded disease.

Three years ago I read a paper before this association on the importance of early treatment in all cases of cancer, an importance well known to the profession in theory long before I was born, but, I am sorry to state, strangely neglected in practice even to this day, if I may be permitted to judge from the knowledge which a rather large personal experience in the matter gives me. To this lamentable neglect allow me to attribute a considerable percentage of the cases of death from cancer, for it must be admitted that many cases of the malady which have proved fatal could have been treated successfully, provided the proper method had been followed at a sufficiently early stage. In that paper I endeavored to show from a pathologico-anatomical and etiological standpoint that treatment other than such as would promptly and radically remove or destroy all of the pathological tissue, generally only injured the patient and favored a more rapid extension of the disease.

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[1] *Vide* Westphal, Wassermann, and Malkoff: Berlin. klin. Wochenschrift, 1899, No. 29, p. 638.

[2] Paper read at the annual meeting of the Canadian Medical Association, held in Toronto, August 30, 31, and September 1, 1899.

Having thus gone over the subject on previous occasions, it was my intention, when I first concluded to write a paper for this meeting, to devote the whole article to a report of the observations and experiments made by me during the last twenty years with different drugs which had been previously lauded by others in the medical journals, or used by myself independently in the search for a something that can control or stop the growth of cancer wherever situated; also to report observations made on local treatment with different agents and methods of application, especially as regards caustics in those cases that have shown the mistakes I had made in the manner of using them, being followed by unfavorable results—results that, experience has taught me, would probably have been avoided had there been no fault in the method of treatment. Owing, however, to the statements contained in a recent article on the subject of cancer by one of the leading surgeons of England, I shall hasten over the report of these personal observations and studies, as I wish to join issue with some of the statements contained in the aforesaid article, believing it to be to the interest of medical science in general and for the benefit of cancer patients in particular.

As regards the effects of treatment by internal medication upon the life of a cancer, as far as my experience goes, I know of no drug or preparation, serum or toxin, single or combined, that is entitled to be regarded as a specific for cancer, or that gives hope of being of special benefit in any form of cancer at any stage of the disease. The use of any substance that makes a profound and disturbing impression upon the nutritive processes of the body usually has an inhibitory action on the growth of cancer, and temporarily there may be, as a consequence, a cessation in the growth of the tumor, or even a marked diminution in its size. For example, there is a case on record of the disappearance of a mammary cancer after an attack of typhoid fever. I have seen cases of superficial epithelioma disappear when the part was the seat of an ordinary infective dermatitis by pus organisms, and have also known of some which disappeared spontaneously after lasting years, the ground condition evidently having been unfavorable for a continuance of the morbid process. Such a result as that noted after typhoid fever should encourage studies in the direction of seeking an agent which would be selective in its destruction, and which would enable us to give a ray of hope to those cases now regarded as inoperable no matter in what stage they are observed. Personally I have no faith in the result of efforts made on the lines so successful in such diseases as diphtheria, diseases of limited duration; the result of immunity acquired by the tissues. Cancer is not a self-limited disease, and I cannot understand how one could expect to obtain an anti-cancerous serum in the same manner as anti-diphtheria toxin is produced, and count upon its having any influence on the disease. I might state that, as far as my studies and experiments go, I am no believer in a microbic origin of cancer.

I shall not enumerate all the drugs I have tried, nor give the reasons for using them, but for the present occasion I shall state that mercury, iodide of potassium, sulphur, sulphide of lime, turpentine, some essential oils, arsenic, chelidonium, nuclein, ovarin, thyroid extract, and suprarenal extract have been tried faithfully, and all have failed to stop the course of the disease. A few remarks on the observations made with some of these substances may be interesting. Although iodide of potassium has been of marked benefit in some of the few cases of blastomycetic dermatitis which have been observed, I have never yet in cancer seen the slightest beneficial action from its use, whether the drug was given in large or in small doses. This is, *a priori*, a point of some value and not to be forgotten by those who claim a blastomycetic origin for cancer before having the necessary scientific proof for this view.

Dr. Sherwell, of Brooklyn, from large clinical experience believes arsenic has such a decided beneficial action in cancer that it is wrong not to give it in every case under treatment, but I have never yet been able to satisfy myself that it has any special favorable action, even in the most superficial forms of cutaneous epithelioma, and my experience agrees with that of almost all observers.

The first case treated by nuclein was one of inoperable uterine cancer in an advanced stage, and the temporary change in the patient's condition was so satisfactory that had I not very soon placed several other patients under the same treatment, I might have formed a wrong opinion as to its possible value in this disease. This was at least six months before any literature had appeared reporting wonderful benefit from both nuclein and proto-nuclein. This first patient, after having been in bed several weeks and in consequence of pain and general weakness having been kept under the influence of morphine, was given nuclein, and in less than a month was able to leave her bed and do slight household duties. Gradually her general health and also the local symptoms improved, and for nearly two years she was in a comparatively comfortable condition, doing her own shopping as well as some housework. Then the disease took on new activity, commenced to extend rapidly, and death soon followed. During the last three or four months of her life I had tried other drugs. Further experience convinced me that neither in internal nor in cutaneous cancers is the drug of any special value.

The natural history of cases of internal cancer especially is so variable that one is not justified in forming even an opinion from a single instance.

I treated several cases of cutaneous cancer (inoperable, of course) with a dried extract of the skin of the pig prepared for me, but did not notice any effect on the disease. I have found the avoidance as much as possible of meat diet, and the drinking of large quantities of water, to have had decided beneficial effects in many cases of carcinoma. I have seen a mammary cancer diminish very much in size under a vegetable diet and the drinking of four quarts or more of water each day.

Thyroid extract, suprarenal extract, and ovarin have not benefited any of my cases, either uterine, mammary, or cutaneous, and yet I am inclined to believe that some gland extract will be the agent of the future for cancer, just as thyroid extract is to-day for certain diseases.

I repeat that I am not aware of any substance, whether drug, serum, or toxin, which, given internally, by the mouth or otherwise, can be regarded as a cure for internal or external cancers at any stage of the disease, and the moral I would draw from these observations is, that a physician is not justified in losing valuable time in operable cases by prescribing drugs, either in the hope of a possible value or because the patient hesitates to undergo proper treatment.

Local Treatment of Cutaneous Cancers.—In the interests of the regular medical profession and of the subject of cutaneous cancer, I feel it my duty once more to discuss the subject of local treatment, and to give the reasons why, in my opinion, the majority of cases of cutaneous cancer—and cutaneous cancers form the majority of all cases of the disease—should be treated by caustics, or very similarly acting agents, instead of by the use of the knife.

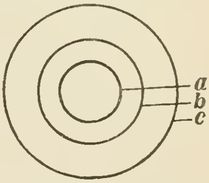
Let us consider the argument of those who think the knife should be used in all cases of the disease admitting of operation. A full discussion of the origin and method of growth of cancer would aid in making clear the grounds upon which I regard a caustic as usually preferable to the knife, but because my time is limited I shall be able to touch upon this only in a very general way. Let me here in passing remark that I believe a knowledge based on microscopical studies of the normal skin and of the pathological process in cancer is necessary for an intelligent handling of a case of cutaneous epithelioma.

In a late number of the *Practitioner*, a so-called "cancer number," there is an article on the treatment of cancer by Mr. Watson Cheyne, in which he states that all attempts to cure the disease by other means than operation by the knife "are almost invariably futile, for the reason that caustics and injections do not attack the outlying deposits." This view, in so far as it relates to certain caustics used by experts in the treatment of epithelioma, I regard as quite erroneous and not in accordance with the clinical experience of those who have had ample opportunities for study and observation of the results by the different methods of treatment; furthermore, I do not think it is to the interest of those afflicted with cutaneous cancer to allow this statement by such a distinguished and worthy surgeon to remain unchallenged. It may be labor in vain to ask the knife surgeon to consider carefully the other side of the question; to ask him to treat forty or fifty suitable cases of epithelioma in the manner they should be treated when caustics are used, and to compare notes with similar cases treated by the knife; but if he does make such a study he will find that outlying deposits—not distant infected lymph glands—can generally be attacked directly or indirectly with much more certainty, and with decidedly less deformity as a result, by proper caustics scientifically applied, than by the most skilful use of the knife.[1]

If Mr. Cheyne referred only to internal cancers, or to nearly every case of mammary cancer, or to cancers of any kind or location in which the lymphatic glands are already affected, then his statement would be about correct; but it is not correct for primary cutaneous cancer, except when it is located on certain parts of the body, to be mentioned directly.

Allow me to describe what can be accomplished by the use of a caustic, employed in the manner and on the principles already laid down by me in previous articles, and then judge for yourself as to the value of the statement made by Mr. Cheyne.

I have here a diagram in which I have represented a cancer as occupying, according to the naked-eye appearances, the area within the circle *a*. We all know, however, both from clinical experience and microscopical examination, that this area is not in reality the limit of the disease in any single case, but that there is always pathological epithelium beyond this line, and I have assumed that it invariably extends as far as the circle *b*; the infiltration being greater the nearer *b* is approached. We will also assume that some epithelia are often outside the area enclosed by *b*, but not outside the circle *c*. Let us further assume that we have to deal with the usual form of a cutaneous epithelioma of the face, a tumor usually of slow growth, with a tendency to extension in a horizontal direction in the skin more than in a downward one, and with very slight tendency to lymph-gland infection, especially in its early period of existence. My argument, however, will hold good for all the forms of cutaneous epithelioma, and this one form is chosen merely in order not to occupy too much of your valuable time, and also because it should be sufficient to enable you to form a judgment on the soundness of the argument I wish to make. If the surgeon operates with the knife in such a case, he makes the incision a considerable distance outside of the apparent margin at *a*, knowing that in reality the disease always extends beyond that margin. Suppose he make the incision at *b*; say, half an inch or more outside the apparent limit at *a*, and is careful also to cut deeply enough and has by such an operation removed all the pathological epithelium; the operation will be a success as far as the removal of the disease is concerned, and the only question remaining as regards the justice of the operation will be the consideration of the amount of mutilation necessarily resulting from the operation as compared with the resulting deformity after any other method giving complete removal of the disease; and when the cancer is situated upon the face the question is of much importance, for of two operations giving similar results as regards cure, the one causing least deformity should always be chosen if at the same time the danger from the operation is not greater. This point will receive attention from me later on in the address.



If pathological epithelia are present in the area between *b* and *c*, and from clinical observation we know that unfortunately they often do exist, let us say, more than half an inch beyond the apparent limit, as shown by the frequent so-called recurrences (really naked-eye reappearances and not recurrences, as the removal in these cases had not been complete even if the surgeon feels satisfied he has removed sufficient tissue), and the incision is made at *b*, the wound being kept in an aseptic condition, and healing by first intention, then being uninjured, those outlying epithelia will continue to proliferate, and in time will become visible to the naked eye or recognizable through the sense of touch. In other words, the disease has reappeared, and the operation was not a successful and radical one. Such a result will occur every time that an incision is made at *b*, and there is healing by first intention, if any pathological epithelia are outside the line of incision. In this case the knife has not attacked all of the outlying epithelia, and the aseptic method of treatment of the wound has left these epithelial cells uninjured and still possessed of all their inherent powers of proliferation. In my opinion such a wound should immediately after the operation be soaked with a solution that would penetrate for some distance into the open lymph channels and injure the epithelia within them, or destroy the microbe if the disease is a parasitic one. I have during the last few years used various agents with that object in view, and am still working on in that line, as I have been encouraged by apparently good results. It is a point I think worthy of consideration, study, and experiment, especially in connection with the treatment of cancers such as those of the mammary gland and rectum, and also in cutaneous cancers in which there is invasion of the lymphatic glands. It is not necessary that the solution employed should interfere with the healing-process.

If the incision with the knife were to be made at *c* and carried sufficiently deep, the disease would certainly be completely removed, as there would be no pathological epithelia left, and in this case we would have merely to consider the extent of the mutilation from the operation as compared with other methods giving as complete a removal of the disease.

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[1] I desire to state that some surgeons in New York City have been convinced of the value of caustics. At present I have three cases under treatment referred to me by a teacher of surgery in that city, and I know of other teachers here who do not in each and every case use the knife.

You will observe that I am discussing the treatment of a cancer of moderate size, capable of removal by the knife and also by caustics. Other forms of epithelioma as regards location and extent will be briefly referred to later on.

Now as to the action of a caustic in such a case as I have chosen for illustration; for the sake of brevity I shall limit the description to that of the action of arsenious acid, as that is the caustic agent most frequently employed in the treatment of cutaneous cancers. Probably the majority of those who use this agent in cancer believe that it possesses above all other caustics in this disease a special selective injurious action on the pathological tissue, a special antagonism to the epithelial structures comprising the new growth, or possibly the organisms if it be a parasitic disease. Hence it is preferred to the other caustics in nearly all cases in which it can be used with safety, that is, without danger of poisoning the patient. A paste made by adding sufficient water to equal parts by weight of arsenious acid and powdered gum acacia to give it the consistency of butter, and applied over the whole area as far as *c*, will cause, as a rule, within a period of from sixteen to eighteen hours a complete necrosis of all the tissue within *a*, provided the part is in such a condition as to allow the paste to act upon the pathological tissue, and this condition exists when a raw surface is present and the cancer does not lie beneath fairly normal epidermis. I state that usually such will be the action of the paste in that length of time, but naturally the extent of the action will vary in any given case according to the vulnerability of the part to which the caustic is applied, as well as to the duration of the application. A stronger paste, such as one made of two parts of arsenious acid and one part of gum acacia, would cause the same amount of necrosis in a less period of time, perhaps in from eight to ten hours. The operator must know the amount of destruction required in a given case and how much has occurred; that is, whether the desired action has been obtained from the application—otherwise the results will be unsatisfactory. Only experience will teach the proper handling of the cases. Sometimes the area *a* is completely necrosed in twelve hours, and in other cases not in twenty hours, but this amount of necrosis can and should be produced by the paste.

Permit me to emphasize the fact that the part to which the paste is to be applied must be in a condition to allow of the action of the caustic; for instance, if the epithelioma has started from a hair follicle and is still a deep-seated epithelioma, the epidermis over it is for a time in a fairly normal condition, and in this case the surface epithelium must be destroyed by means to be described later, in order to allow the paste to attack the pathological tissue, as normal tissue resists the action of arsenious acid very much longer than the cancer tissue. As I have stated, the result to be obtained, and which can always be obtained, is complete necrosis of all the tissues within *a*. With such action there is invariably an acute inflammatory process extending much beyond *c*, and increasing in intensity the nearer it is to *a*, since the tissue increases in vulnerability as the latter circle is approached. When you have obtained such a marked action from the caustic, you have secured what is demanded for the proper treatment of the case. A longer application would destroy more tissue than is essential and cause unnecessary deformity, while less destruction would probably not kill all the cancer deposits outside of *b*. That such action as I now describe as necessary can be obtained by arsenious acid needs no discussion here, and the statement that a caustic cannot directly or indirectly attack "outlying deposits," such as are usually present in cutaneous cancer, is not based on fact. The truth is that many times, especially with dispensary patients, I have destroyed much more tissue than was necessary, owing to the impossibility of having the patients under observation during the whole period of application of the paste, so as to be able to judge when the proper amount of action had been obtained.

Let us consider the effect of such an action as I have described as proper and necessary upon a cancer which has been treated by the caustic, and compare it with the result obtained when the knife was used.

All of the tissue within *a* has been destroyed, deprived of its vitality, and also some of the tissue beyond *a* on account of the very intense inflammatory process there, the tissue being much more vulnerable than normal tissue on account of the injury received from the epithelial invasion; hence the completely necrosed tissue always appears to embrace a larger area than the epithelioma seemed to occupy when seen by the naked eye. Beyond this completely necrosed area the inflammatory process becomes less and less intense the less the tissue is invaded by the epithelial cells, but if the caustic has been applied for a long period the inflammation will be sufficiently intense to destroy all pathological epithelia as far as *b*, and almost without exception as far as *c*: that is, the disease is removed as completely as if the incision by the knife had been made at *c*, although the normal tissue has been destroyed not even as far as *b*. Of course the favorable action exends in depth as well as outward in all directions from a centre. The proof that the outlying epithelial cells are destroyed consists in the fact that the disease rarely reappears after such a condition of necrosis and inflammation has been produced.

The destruction of these outlying cells depends, in my opinion, first, upon the existence of the acute inflammatory process destroying the pathological tissue quicker than it does normal tissue, according to a general law in pathology, and especially so in this instance, as the pathological epithelia lie in the lymph spaces, and can, therefore, be vigorously acted upon by the inflammatory lymph, thus changing quickly and very greatly the previous condition under which they lived; second, that arsenic has a specially selective antagonistic action on the epithelia in this disease; and third, that the toxins, the toxalbumins, from the necrosed tissue act distinctly upon the epithelia, or, if the disease is a parasitic one, upon the organisms present.

To repeat somewhat: from the proper action of this caustic, the same result as regards removal of the disease is obtained as if all the tissue within *c* had been removed by the knife, although normal tissue has been taken from a less area than that included within *b*; that is, that the caustic is in suitable cases a much more conservative agent than the knife, and therefore it should be employed in all cases in which it is an efficient one and deformity is to be avoided as much as possible, as in all face cases, for example, especially in cases of nose epithelioma. It must not be forgotten also that this method of treatment enables the surgeon to destroy the sometimes deep-lying cancerous tissue that cannot be excised for some reason or other.

The after-treatment of the wound consists in applications of an antiseptic ointment. I use subiodide of bismuth, gr. xx. to an ounce of vaseline, allowing the dead tissue to be thrown off by the natural process and the part to heal by granulation-tissue formation, and we know how well nature can repair such gaps in the tissues. The final result is the removal of the disease, and this often with such slight deformity that the patients themselves are astonished. It is not correct to endeavor to make the wound aseptic, for if no pus organisms are present the inflammatory process will be of less duration and possibly less destructive to the epithelia, and there will also be less granulation-tissue formation, and hence more deformity.

When we come to consider some cases of extensive superficial epithelioma, such as this one, the photograph of which I now show you, and which occupies the greater part of the upper portion of the scalp, or this case occupying the greater part of the temporal region, or this example of the early form of epithelioma which occupies the entire forehead, it must be evident to all that such cases are not favorable for a knife operation, and yet they are not very difficult to treat with caustics, nor is the prognosis especially unfavorable. The exhibition of such cases must convince you that as far as they are concerned the knife is not the only remedy; in fact, that caustics ought always be used in similar instances.

It would take up too much time to describe the different forms of cancer and the different seats of the disease in which, to secure removal, a caustic is preferable to the knife, or vice versa; but in general it may be stated that when the lymph glands are involved the knife is the proper agent; and also when the disease is on such a part, for instance, as the scrotum, where a large amount of tissue can be removed without causing annoying deformity. I would not think of treating an epithelioma of the scrotum with caustics. Most cases of cancer of the penis, some cases of cancer of the ear, and all cases of cancer of the lip except the very superficial ones, require the use of the knife.

A superficial epithelioma of the lip can generally be cured by caustic applications without causing appreciable deformity afterward. I have here the photograph of a case in a well-known surgeon, and it will be seen that not a trace of deformity is to be observed. This case was treated ten years ago and was an example of a rapidly growing papillomatous epithelioma. A reference to Mr. Marsden's work will show equally surprising results. In those rare cases of glandular carcinoma of the scalp the knife should be used to remove the tumor mass and a caustic applied immediately to the whole of the wound to attack the outlying epithelia. Unless these cases are operated upon early and thoroughly the prognosis is unfavorable, as the lymph glands are invaded early in the disease.

It may be asked, if the above statements be true, why it is that nearly every operative surgeon of reputation thinks that caustics are not to be relied upon in any case of cancer, that this method is both unscientific and useless. One reason is, I believe, and that based on good grounds, that very few surgeons have ever used caustics, although aware that the advertising charlatan's cures are not by any means always fake cures; and some surgeons whom I have seen using a caustic have not applied it according to the principles of procedure I have laid down, and consequently the result was generally a failure. The proper caustic and the proper strength of that caustic must be used, and the proper amount of necrosis and inflammation produced, otherwise the result is usually injurious instead of beneficial. Unless the outlying deposits are attacked the disease will spread with greater rapidity than if no treatment had been employed, as the circulatory disturbance and nutritive condition of the outlying parts after the injury from the caustic aid the growth and extension (locomotion) of the outlying epithelia. Even when the proper caustic is used experience is required to be able to recognize when the necessary destructive action has been obtained. Mild caustics, such as nitrate of silver, carbolic acid, etc., are dangerous agents to employ, and I regard the use of them as improper and meddlesome, injuring instead of benefiting the case, for the simple reason that with them you cannot attack outlying epithelia. Chloride of zinc should not be used except to remove the papillomatous portion of an epithelioma preparatory to the use of arsenious acid, as it produces a dry necrosis and destroys normal tissue unnecessarily, and the acute inflammatory process and toxalbumin action obtained from arsenious acid are absent. The danger of reappearance is much greater after the use of this agent, and it produces too much deformity. A small epithelioma can be destroyed in a few minutes with caustic potash, but a large one should not be treated in this way unless it be a superficial one of the lip, in which case it usually acts very well indeed. About fifteen years ago I used this agent in the treatment of a gentleman from Canada, in whom the epithelioma occupied nearly one-half of the mucous membrane of the lower lip; and I defy any one to recognize to-day that he has ever had any disease of that region. With the caustic potash you get the inflammatory process and toxalbumin action, but it destroys normal tissue to such an extent that it should never be used if arsenious acid can be employed with safety.

No reliances should be placed on methylene blue, resorcin, salicylic acid, or pyrogallic acid, when we have agents of decided action and virtue.

As already stated, it is useless to apply arsenious acid to cancer covered with normal epithelium; that is the reason why in some cases, especially the pearly form of the disease, curettage sufficient to make a raw surface should always be employed before the caustic is applied. In the deep nodular form the epithelium can be destroyed by caustic potash. Some surgeons rely upon the use of the curette alone, but I am absolutely satisfied from a consideration of the pathological anatomy of epithelioma, as well as from clinical experience, that it is simply an impossibility to remove all the pathological and leave the normal tissue intact, or to know when the sound tissue has been reached. The knife is far superior to such a method. The curette can occasionally be used to remove the mass of a large epithelioma in order that the arsenious-acid paste can be applied near the peripheral part of the growth.

If the surgeon has observed only cases treated in some of the ways I have just mentioned as being imperfect, useless, or injurious, then I can understand his belief in the knife as the only proper agent to be employed; but if he were to choose his cases and in the treatment of them follow precisely the principles and methods I have just given you, he would recognize that the proper treatment for a given case depends upon the kind of epithelioma, its size, its method of extension, and its location, and that for the majority of the cases of cutaneous cancer the caustic method properly employed gives the best results both as regards the removal of the disease and the minimum of deformity from the operation.

It is just as important that the pathological anatomy of the disease, the normal anatomy of the part, and the technique of the operation be well known by the operator as if the case were one of visceral cancer or of an abdominal tumor. Neither the knife nor the caustic should be blamed for the faults of the operator. There are some cases of cutaneous cancer that are incurable when first seen by the surgeon, the disease having progressed too far; other cases are fatal because the physician or surgeon has dallied with the case, relying upon ineffective or injurious agents; and finally not a few cases have a fatal termination because the patient is not seen often enough, nor for a long enough period after treatment has been commenced. I know of more than one patient I have lost because I failed to insist upon his remaining under my observation. In this respect medical men make the worst patients, and in the end are always dissatisfied if the disease reappears. A case should not pass out of observation for at least one year, whether operated on by the knife or by caustic, as there is always a possibility of reappearance which demands immediate attention.

In those cases in which there is a tendency to the formation of epitheliomata the complete removal of one tumor does not prevent the formation of new ones, and the treatment in this case is not deemed unsuccessful on account of the recurrence. These cases require watching as long as the patient lives.

It can be safely said that if cutaneous epithelioma is seen early and treated properly, either by caustics or the knife as the case demands, the disease is anything but the necessarily fatal one too generally believed by the medical profession, a belief that has been the cause of much dangerous advice to patients.

Finally, if the profession will study this subject as I have now presented it, and the works on surgery will represent facts as regards the results of different methods of treatment more than individual experience, the advertising "cancer specialist" will not be treating cases that should belong to the regular profession. These "specialists" will, however, continue to treat them just as long as the laity have proof that a caustic has cured many a case that has already been operated upon by the knife on orthodox principles, because the surgeon believed that "outlying deposits could be removed by the knife only and not by caustics."

Conclusions.—1. At present we know of no drug, animal extract, serum, or toxin, which, given internally by any avenue of the body, can be relied upon for the cure of cancer of any part of the system.

2. That the statement that the knife is the only reliable agent in the treatment of cancer is not correct.

3. That certain caustics judiciously chosen and properly applied may attack deposits of the growth inaccessible to the knife, and in these cases should be employed even if the knife is necessary to prepare the way for their use.

4. That in some cases both the knife and caustics should be used, and in some other cases curettage, followed by a caustic, is the proper procedure.

5. That the majority of cases of cutaneous cancer can be removed with the greatest certainty and with least deformity by caustics, provided the patients are seen before the lymphatic glands are invaded.

6. That the knife should be used when the lymphatic glands are invaded, and also in some other cases of external cancer.

248 West Forty-second Street.

THE CARDINAL PATHOGNOMONIC SIGN OF FRACTURE OF THE LOWER END OF THE RADIUS (COLLES').

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The erroneous teaching of the invariable occurrence of silver-fork deformity in Colles' fracture is still fostered by this ever-repeated stereotyped expression in the current text-books of surgery and special treatises on fractures, which accord undue prominence to this sign.

In an experience of three hundred cases of fracture of the lower end of the radius, this sign was encountered in less than ten per cent. of the cases, and for the establishment of the diagnosis in all of these instances reliance was placed on a far more logical and anatomical sign, which a careful perusal of the literature has convinced me is, to judge by its omission, unfamiliar to the greater number of surgical writers.

A comparison of the outlines of what various authors concede to be silver-fork deformities shows widely different impressions to be gained, and this be it said without belittling the significance of this sign when present; yet, granting that these variations may represent different degrees of this fracture, so variable and inconstant a factor ought not to be accepted as paramount in the diagnosis of Colles' fracture. It would, therefore, seem desirable to rely upon a certain and ever-constant anatomical landmark analogous to the Roser-Nélaton line, or to the bicondylar olecranon relations at the elbow. That such a landmark exists, a palpation of the topographical prominences of the normal wrist shows. The styloid of the radius is at a lower level than the styloid of the ulna. This is always the case, normally differing in degree according to the development of bones, being more marked in males than females, less so in infancy. With the hand in the prone position and on the same plane with the bones of the forearm, this sign is most readily ascertained by then impinging the thumb and index finger against the styloids; and, projecting a line between these two points, it will take an oblique course slanting to the radial side. This is the line I would take advantage of in interpreting injuries about the wrist joint. As, roughly estimated, in ninety-five per cent. of the fractures of the radius there is impaction, the shaft must be shortened, but this is so slight in the majority of instances that it cannot be measured with the tape.

It has been my experience that silver-fork deformity is the exception *par excellence* in Colles' fracture. More frequently many of the other signs, particularly localized tenderness alone, pointed to a suspicion of a fracture, but in every instance the one logical fact of the levelling of the styloids only justified the diagnosis. An estimate of the existence of the levelling or elevation of the radial styloid should be the first manœuvre in ascertaining a fracture, thus precluding any further manipulation until reduction is performed. It would suggest itself that this relation of the styloids ought to be an index as to proper reduction; this is but relatively so, as an absolute restoration of the normal relation of the styloids is impossible in the greater number of instances; at the best an approach thereto can be aimed at, since the comminution at the line of fracture has often been so great that even when the impaction has been broken up the subsequent absorption of bone causes a shortening which is again apparent in the relation of the styloids. The converse, however, may be held, that when there is an elevation of the radial styloid and a history of injury such as precedes fracture of the wrist, even in the absence of any other deforming signs, a verdict of previous Colles' fracture can be rendered. The persistence of the altered relations of the styloids is not to be interpreted as interference with the growth of the bone, for it occurs even after the age limit at which epiphyseal junction has taken place. Once I fell into error by crediting this altered relation to a fracture, whereas syphilitic epiphysitis was solely responsible for the condition.

I have tested this sign these past four years, and so unfailingly has it been present that I now, in conjunction with the corroboration obtained from some older literature, would accord it the dignity of the cardinal pathognomonic symptom of Colles' fracture.

The only mention of this sign in any English textbook occurs in Stimson's treatise on "Fractures and Dislocations." Both in the first and second editions he says: "If the surgeon marks the positions of the styloid processes by pressing the end of the finger into the side of the joint below and against the end of each, he will see that of the radius has risen so that instead of being a quarter of an inch lower (nearer the hand) than that of the ulna, as it usually is, it has risen to the same level or even above it." In the text these words are subordinated to other remarks bearing on this fracture, and in the paragraph on diagnosis this sign is entirely neglected, and sole reliance placed when in difficulties on localized tenderness. Recently, however, Stimson in connection with his radiographic studies called attention to the fact that "the prominence of the ulna was due to the ascent of the radius." Nowhere in the German literature is cognizance taken of this phenomenon.

In the *Archives of Roentgen Rays* (vol. iv., p. 22, 1899), Mr. J. Lynn Thomas says: "A line at right angles to the radius and ulna should always be drawn (when studying Roentgen photograms of old injuries to the wrist) immediately on the hand side of the articular surface of the ulna. This line is the only safeguard for rightly interpreting old healed-up fractures of the lower end of the radius. The whole of the articular surface of the radius when in its normal position is on a plane situated on the hand side of the diagnosticating line. When the radial styloid is on a level with that on the ulnar it is considered to be in itself of such importance as to establish the diagnosis of a Colles' fracture, and is known as the 'signe de Langier' in France."

Malgaigne looked upon the localized tenderness as a pathognomonic symptom.

Gosselin[1] says: "In the absence of the silver-fork deformity, what is above else the principal element in the diagnosis in fracture of the lower end of the radius, which I depend upon to establish the nature of the lesion . . . I have found that in such instances the styloid apophyses are almost on the same plane; in other words, that they are situated on a plane forming two right angles at the junction of a plane passing in the line of the axis of the forearm. You know, in fact, that in the normal state the radial apophysis is situated a little lower than the ulnar, and that a plane joining these two is obliquely intersected by the axis of the forearm."

Still more pertinent is the following quotation from Richet,[2] writing in 1882: "If you would avail yourself of palpating on the skeleton, the bony prominences in which the bones of the forearm terminate, viz., the styloid apophyses, one is struck by a peculiarity which is not mentioned by the classic authors, and which I have repeated in my clinics for ten to twelve years. . . . Embracing the apices of the styloid processes between the thumb and index fingers in a healthy wrist, one notices that these prominences are not on the same level, the radial being much lower than the ulnar. In a fracture at the wrist, on the contrary, one can see that the styloids are on the same level and that the radial apophysis is even higher. This is a sign that never fails. Moreover, since these prominences are well marked, being superficial, it is always possible, I should even say easy, to feel them, and consequently to attach the importance to them to which I have just alluded. I shall go even further, and I shall say that the confirmation alone of this deformity suffices to affirm this diagnosis."

Of still more recent date is the opinion quoted from the "Traité de Chirurgie"[3]: "In consequence of the penetration of the fragments the styloid apophysis of the radius, which normally descends below that of the ulna, ascends to the level of the latter. This is known as the 'sign of Langier.' It is of the greatest importance, and suffices of itself to establish the nature of the lesion."

In estimating this sign the normal wrist must always be taken in comparison. This sign antedates the use of x-rays; in addition it has stood the test of them, and so conspicuously does this altered relation of the styloids figure in skiagrams, that just herein lies the greatest confirmation of its practical service.

Its value may be summed up as consisting in the facility of its clinical application, wherefore x-rays may be dispensed with, and the patient spared the needless suffering of manipulation to learn the nature of the lesion. It rests on sound anatomical data, which makes it a logical sign. It is in part an index as to what has to be aimed at in reduction, and it is also ever after a landmark of the site of the healed fracture.

For these reasons I accord it the dignity of "the cardinal pathognomonic sign of Colles' fracture," in the hope that a consideration of the value of this sign will further the recognition and incidentally the treatment of a larger number of fractures.

LOCOMOTOR ATAXIA.[2]

By B. C. LOVELAND, M.D.,

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LOCOMOTOR ataxia, posterior spinal sclerosis, tabes dorsalis—these are synonyms for a progressive degeneration of the spinal cord, marked by more or less of anæsthesia, analgesia, paræsthesia, and inco-ordination, and later muscular paralysis. The only apology I have to offer for bringing such an old and well-studied subject before this society is that in its early or pre-ataxic stage it is often overlooked, while its various symptoms then presenting are treated as independent phenomena, and what hope there is in treatment depends largely on its early recognition.

It is not within the province of this paper to go into a detailed study of the etiology of this disease, and yet a few words as to its cause, or causes, should not be omitted. It is pre-eminently a post- or para-toxic degeneration. The toxic infection which has been found to furnish the soil for the growth of this form of degeneration in a vast majority of cases is syphilis. So frequent is the specific history in these cases that many authorities regard the exceptions as incomplete histories, and not as posterior sclerosis without the luetic infection. The percentage of cases with syphilitic histories varies with different authors from eighty-seven per cent. to ninety-three per cent., and yet it is conceded that such toxic conditions as ergotism and pellagra may furnish the predisposing cause, and there may possibly be others added to the list as our observation increases.

Pathology.—While the etiology of tabes dorsalis in most cases is inseparable from syphilis, the pathology is not the pathology of syphilis. It has a distinct pathology of its own. As one author has graphically expressed it, "The blackened and charred stumps and seared grass are not fire, but they mark the track where the fire has been." So posterior spinal sclerosis is not syphilis, but it marks the devastation which follows in its wake. It is a true degenerative process, beginning, according to various authors, either in the peripheral sensory nerves or in the ganglia on the posterior roots, which contain the trophic centres controlling these nerves. The degeneration is fibrous in character, compressing and finally obliterating the true nerve structure. Its course is from the periphery toward the centre of the nervous system, the degenerative process following each nerve affected from its peripheral end through its entire length, even after it enters the cord, till it reaches the nerve cells into which the afferent impulse is discharged, following the order of degeneration observed by Waller after the section of an efferent nerve fibre. The number of nerves at first involved may be small, and it may begin its work at the lower, the middle, or the upper or cervical sections of the cord, and the early symptoms will vary accordingly. As the disease progresses, more and more nerve fibres are implicated, and the hardened or sclerotic area in the cord is correspondingly increased. The same degeneration may also involve the medulla, and in certain cases it attacks brain structure, though rarely. It may be said, however, that the pathological change found in the brain in paretic dementia is identical in character with that found in the cord in tabes. It seldom if ever seems to attack the various sections of the cord with equal force at the same time. If the process is actively progressing in one section, it will check in another. The posterior columns of the cord are the ones affected, as the name implies, though in some advanced cases the degeneration spreads over into the lateral columns.

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[1] Gazette des Hôpitaux, 1879, lii., p. 697.

[2] La France Médicale, 1882, i. pp. 97–101.

[3] Duplay et Reclus: "Traité de Chirurgie," second edition, t. ii., p. 525.

[1] Donald T. Mackintosh: "Skiagraphic Atlas of Fractures and Dislocations," London, 1899.

[2] Read before the Onondaga Medical Society, March 6, 1900.

Symptomatology and Diagnosis.—It goes without saying that in this disease, in which the pathological changes are confined almost entirely to the sensory nerves, the subjective symptoms, or the feelings described by the patient, hold a strong place among diagnostic signs, but should always be followed up and verified, or set aside, by the physical signs. Among the most frequent symptoms complained of are a feeling of general weakness, a tendency to stagger at night when getting out of bed, a feeling of numbness in the limbs, a velvety or padded sensation in the bottoms of the feet, and sharp, shooting pains in the legs or lower part of the abdomen. Very early in the history of the case the patient will occasionally mention unusual sexual excitement; a little later, and comparatively early in the case, partial or complete impotence follows, and is often referred to by the patient as a result of his excesses, but from the pathology of the disease it will be otherwise accounted for. There may also occur as early signs the various crises so called, most commonly of the stomach, which consist of sharp, extremely painful attacks, sudden in their onset, equally sudden in their subsidence, and baffling relief by any of the ordinary remedies. The gastric crises are accompanied by severe and intractable vomiting, increased by anything taken into the stomach. Entire rest to the stomach and the use of hypodermic injections of morphine may be required. The laryngeal crisis is less frequent, but quite as distressing, by reason of its paroxysmal and uncontrollable coughing and dyspnœa. Occasionally hemiplegia is an early symptom, recovering after a short time. Sometimes also we see a paralysis of single muscles, notably those of the eye, also transitory in nature. The pupils may be unequal in size; may respond to accommodation, but not to light (Argyll-Robertson symptom); or may be sharply and firmly contracted. Sometimes among the early symptoms we find a contracted visual field, a narrowed or diminished color field, and optic neuritis or atrophy. Muscular strength may remain good, and the ataxic gait may not appear for a long time, or possibly never appear in rare cases. Among the cerebral symptoms noted early are insomnia, vertigo, depression, more rarely melancholia, and very rarely general paresis. Bearing in mind that the degenerative process may begin in any part of the central nervous system, the early symptoms will vary in their manifestations according to the portion of the cord or medulla affected. The practical identity of the pathological processes in paresis and tabes would almost warrant the statement that the diseases are essentially one, except that in the former cerebral symptoms predominate, while in the latter spinal symptoms have the lead. No one symptom can be called pathognomonic, but any of the symptoms noted should prompt investigation, and if a fixed pupil as regards the light reflex, absence of knee jerk, and lightning pains are present, a diagnosis may be made with certainty, even though the gait is not ataxic.

Prognosis.—Of course in a disease based on such fixed pathological conditions a cure, or the restoration to normal conditions, is an impossibility, therefore we must be satisfied with relief of distressing symptoms, and must consider as a success any treatment which will check the progress of the disease. The length of time required for this disease to run its course is in different cases from three to thirty years, and in most cases death ensues from intercurrent affections. By some authors it is divided into two classes, severe or malignant, and benign. The severe cases run a more rapid course and manifest a more persistent tendency to progress than the benign cases. An early diagnosis adds much to the favorableness of the prognosis, for all that is done must be by way of preventing the progress of the degeneration, as reorganization of the diseased tissue cannot be accomplished.

Treatment.—Much of the treatment must be directed toward relieving the distressing symptoms and increasing the patient's general health, and may be divided into medical and hygienic, including mechanical and hydrotherapeutic.

The medical treatment at first should be directed to the relief of the lightning pains if they exist, and for that purpose powders containing phenacetin gr. v., citrate of caffeine gr. ss., given as occasion requires, will be found useful. Next considering the probability of a specific history, and the possibility of effusion in the spinal canal as a provoking cause, it is well to use some pronounced specific treatment for a few weeks, unless you are sure that such a course has been taken quite recently. If good results follow, such a course may be repeated every three months. It must be borne in mind, however, that the general effect of heavy doses of mercury or iodide of potassium is depressing to the nutritive system and may do harm; therefore, if no positive good results, they are best abandoned. Strychnine and tonics generally do not hold the strong place that they are supposed to hold in the treatment of many of the functional nervous disorders. Any specially troublesome symptom may require special medication.

The hygienic treatment includes, first and most important, rest. This should be thorough, and it is sometimes advisable to institute a systematic "rest cure." At all events the patient should refrain from any exertion which would exhaust him, and also from worry and anxiety. Next in importance, and at present growing in popularity, is exercise. This should be so prescribed as to get the patient to perform with care and precision, aided by sight, those motions which, owing to his inco-ordination, can no longer be done automatically. It is not necessary here to give the movements in detail which have been prescribed, as any one with ordinary ingenuity can work out a reasonably useful set of exercises. Massage, for its general effect in aiding tissue change, is often very useful, and the same may be said of electricity. The faradic current for general application helps to prevent the atrophy of muscles, while the galvanic current applied after the manner called central galvanization, or a simple spinal application, often helps to improve the circulation in the spine. Stretching the spine has been found to give some relief to the pains, and also, temporarily at least, to increase the sexual vitality. Stretching of the spine was at first accomplished by suspension in the Sayre apparatus, but the same results without the dangers can be obtained by flexing the body strongly on itself. The modus operandi advised by Church and Peterson is to seat the patient on the floor, and ask him to bend forward as far as possible, keeping the knees straight, while the physician presses down on his head, graduating the pressure according to his judgment. This position is supposed to increase the size of the openings between the vertebræ through which the nerves and blood-vessels pass, thereby increasing the circulation in the spine. By the method of extension in one case I was surprised to see the patient, who had for a long time been obliged to use two crutches to get about at all, so far improve that he went to work in a shop, and was able to walk back and forth to work by the aid of one cane, sometimes two, and the improvement remained for several months while he was where I could observe him. The warm or tepid bath is also of much use in relieving the pains, and is best given as follows: A tub is filled two-thirds full of water at 92° to 94° F.; the patient, disrobed, sits in the tub for twenty minutes. He is then taken out, wrapped, without drying, in a flannel blanket, and laid on a couch, while an attendant gently rubs the limbs through the blanket for the space of another twenty minutes.

We are all sufficiently familiar with the disease in its later or more pronounced development, but I shall report for illustration one or two cases that belong to the benign variety.

CASE I.—Hon. J. Q. A. B——, October 26, 1897; age, fifty-five years; weight, 160 pounds. The disease had been recognized ten years before, when he began to have the padded feeling in his feet. He had been much depressed. He was of a constipated habit, and his lancinating pains had been most severe and unyielding.

Present condition: No knee reflex was obtained; Argyll-Robertson pupil; the gait was not ataxic; the Romberg symptom was not marked, but slight; there was analgesia on the outer surfaces of both legs and outside of both arms below the elbow; the lancinating pains were frequent and severe. The diagnosis was plain, although there was no sign in his walk.

Treatment: He was given proto-iodide of mercury, gr. $\frac{1}{6}$ t.i.d., and a pill containing strychnine, gr. $\frac{1}{50}$, after each meal, together with the warm sitting-bath described above. As a result, his spirits had much improved, and he had escaped the lancinating pains for nearly two weeks when he left my observation. From the fact that no systematic and prolonged treatment had been pursued, I think that this case was a benign one, and stopped its progress spontaneously. The relief of pain following the treatment described was, however, very marked, and may perhaps be credited to the treatment.

CASE II.—Mrs. F. A. G——, forty-four years old; June 3, 1898. Her history was as follows: She was married and had two children, the youngest seven years old; no miscarriages. She had had malarial fever each spring for several years. Heredity was good. She began to have shooting pains in her limbs two years ago, and was treated for sciatica, and later for neuritis. She became sleepless, greatly depressed, and suspicious, especially of her husband. She cries a great deal. She eats little; has lost about thirty pounds of flesh. She still has severe pains in her legs.

Physical examination: The tongue was coated; the pulse and respiration were normal; the bowels were regular. Urine, specific gravity 1.030, acid, with oxalates. Blood showed hæmoglobin eighty per cent., red corpuscles 5,680,000. There was no knee reflex. She had Argyll-Robertson pupil. She walked well, but showed slight unsteadiness when the eyes were closed. Diagnosis, tabes in the first stage.

Treatment consisted in removal from family, with rest, massage, warm bath, and bromide and salicylate of sodium of each gr. x., well diluted, three times a day. Her pains improved rapidly; sleep returned, and the depression disappeared to a large extent. Proto-iodide of mercury gr. $\frac{1}{6}$ before each meal, with salol gr. v., and phenacetin gr. iiss. when required for pain, were substituted for the bromide and salicylate of sodium. At the end of a year she reported as having been practically free from pain nearly the whole period. She had continued the proto-iodide a large portion of the year. On examination she showed a slight knee reflex, better in her left knee, and a very slight reaction of one eye to light. Other signs had remained the same, except that she had gained some flesh. This case it seems to me profited by a fairly early diagnosis, and received much benefit from treatment, though it was not of the worst type as regards rapidity of progress.

Cæsarean Section in the Moribund. — Anton Prokess says that in sudden death the results of section are bad, because the fœtus dies before the mother. It has therefore been suggested not to wait for the actual death of the mother before operating. A case is added to the statistics of successful performance of Cæsarean section under these conditions.—*Centralblatt für Gynäkologie*, March 3, 1900.

The Pathogenesis of Cyclic Albuminuria.—Dr. Rudolph says the centre of disturbance in this affection is still unknown, and there is no sure method of cure. The best one can do is to spend a number of months in Southern climates. A case is related of a boy who showed albuminuria when active, but which disappeared when he was in bed. Still rest did not effect a cure. Two girls recovered without the rest cure. The various theories of causation are reviewed. —*Centralblatt für innere Medicin*, March 3, 1900.

Expanded Metal, a New Splint Material, Especially for Use in Military Surgery.—C. Hubscher recommends a new metallic substance used in building and largely employed in the Paris Exposition structures, for use in making splints with plaster or cement. It can be moulded to any part, and padding is scarcely necessary. Its advantages in field surgery are its lightness and ease of transportation.—*Centralblatt für Chirurgie*, March 3, 1900.

Electrolysis as a Means of Curing Chronic Glandular Urethritis.—George Walker has employed the method learned in Kollmann's clinic and found it satisfactory chiefly when the glands of Littré and crypts of Morgagni are involved. The treatment was originated by Oberländer, and consists in inserting a fine needle into each opening. A decided urethritis is set up by the process. Strictures have resulted, but can be avoided by care in application.—*Maryland Medical Journal*, March, 1900.

Changes in the Skin in Paralysis Agitans.—Robert Reuling speaks of the addition to our knowledge of pathology by Fraenkel's discovery of changes in the skin in paralysis agitans. The frontalis symptom recently described is best brought out by getting the patient to look upward for two minutes and then downward. The deep wrinkles require three or four minutes to disappear. Fraenkel thinks it due to thickening of the skin and loss of elasticity, though there may be little change in appearance. A case is reported with microscopical examination showing increased connective-tissue growth in the true skin and subcutaneous connective tissue. Skin changes were found in four out of six cases examined, but no direct relationship is traced between them and the tremor. The author regards them as trophic phenomena.—*Maryland Medical Journal*, March, 1900.

Surgery of the Lungs.—A. Parozzani, referring to operations upon wounded lungs, says that owing to their gravity in patients already weakened by traumatism, to the action of chloroform upon respiration performed by one lung only, and of the possible induction of purulent pleurisy, surgical intervention should be resorted to only in cases in which the blood comes out in spurts, and there is forcible blowing in the bronchi. In other cases rest in bed in a half-sitting position, liquid diet, an ice-bag on the chest, and injections of morphine and ergotin, and caffeine for cardiac adynamia will be the best treatment.—*Rivista Medica della Regia Marina*, December, 1899.

Modern Surgical Treatment of Infantile Spinal Paralysis.—A. Codivilla gives a long theoretical discussion of the methods to be adopted in the treatment of muscles left in a condition of contracture by paralysis. His work is based upon the results of forty transplantations and plastic operations on tendons.—*Il Policlinico*, February 15, 1900.

Exstrophy of the Bladder from Ulcerative Destruction of the Scar of a Suprapubic Cystotomy.—L. Kolipniski relates a unique case in a man after suprapubic removal of calculi. After about four years there was a swelling about the cicatrix due to urinary infiltration. An incision was made, but sloughing occurred and was followed by protrusion of the superior and posterior walls of the bladder. Death took place on the fifth day.—*Maryland Medical Journal*, March, 1900.

Movements, and Relative Change of Form and Position in a Human Fœtus of Five Months.—Fabio Rivalta incised the thorax of a five-months fœtus, and found the heart pulsating at the rate of twenty-four times to the minute. The contraction of the four heart cavities was not simultaneous but successive. Although there was no blood current, the movements of rotation of the heart in relation to its longitudinal and transverse axes, the uplifting of the apex, and the downward drawing of the apex of the pulmonary artery and base of the aorta were exactly the same as under physiological conditions.—*Rivista Critica de Clinica Medica*, February 24, 1900.

Causes for the Weakened Virulence of Vaccine in Hot Climates, and the Remedies Therefor.—M. Hervieux gives the causes of the attenuation and destruction of the power of vaccine, as heat, especially damp heat, winds such as the sirocco, and age. Vaccine, as soon as prepared, should be placed in a refrigerator, transported in one, or else wrapped in wet cloths, kept moist and placed in a draught of air in the shade. In the hot seasons it should be used as soon as possible after its reception.—*Bulletin de l'Académie de Médecine*, February 13, 1900.

Mucous Polypi of the Nasal Septum.—Oliviero Barrago-Ciarella reports a case of this rare affection. The left nasal fossa was completely filled with the polypi; in the right one was an oblong tumor, about the size of a bean, pedunculated and inserted on the septum. It was at once removed by the use of Wilde's snare. There was no hemorrhage. The chief symptoms given by the neoplasm were headache of the right side and obstruction of the nose, sometimes to a slight extent, sometimes total.—*Giornale Internazionale delle Scienze Mediche*, January 15, 1900.

A Rare Complication of Progressive Locomotor Ataxia.—P. J. de Bruïne Ploos van Amstel believes, from the literature on the subject and from personal observations, that the following conclusions can be drawn: (1) Progressive locomotor ataxia is not an essential malady, but a sequel of syphilis, and may be considered either a "nachkrankheit" or a post-syphilitic intoxication; (2) aneurism and insufficiency of the aorta in the ataxic patient are not accidental complications, but they are also caused by syphilis; they are also the "nachkrankheiten" of syphilis.—*Lyon Médical*, January 14, 1900.

Acute Rhinitis.—W. S. Fowler says that from the notes of the last hundred cases of acute rhinitis which have passed through his hands, seventy-six showed clear and unmistakable constitutional symptoms as the cause; six were due to external local irritations, mostly occupation irritants; sixteen were recorded tentatively as due to contagion. The author has found that treatment addressed to the underlying cause has given the greatest success, and thinks that many physicians have fallen into a habit of treating the symptoms only, neglecting to give proper value to temperament and diathesis.—*Southern California Practitioner*, January, 1900.

Chyliform Ascites.—F. Micheli and G. Mattirolo describe a series of experiments conducted for the purpose of ascertaining to what is due the opalescence noticed in certain ascitic effusions in which there is but little fat. Their conclusion is to the effect that in many cases lecithin is the cause of this milky appearance.—*Rivista Critica di Clinica Medica*, January 27, 1900.

Total Ossification of the Choroid; Sympathetic Irido-Choroiditis; Sanguineous Infiltration of the Cornea; Blindness.—Carlo Fruginele reports a case in which blindness of one eye, due to corneal ulcer, was followed eight years later by sympathetic inflammation of the other eye. A slight blow received upon the latter in its enfeebled condition must have caused laceration of some blood-vessel, for an infiltration of blood followed. Total blindness was the final result. —*Gazzetta Internazionale di Medicina Pratica*, February 15, 1900.

Lumbar Puncture in Pediatric Practice.—Carlo Giarrè considers this procedure valuable for the diagnosis of meningeal hemorrhage, serofibrinous, purulent, and tuberculous meningitis, the extracted fluid differing in its physical and chemical properties from that obtained in some other conditions. With increased knowledge of the pathogenesis of acute serous meningitis and the nervous troubles known as "meningism," it is probable that lumbar puncture will give better therapeutic results than any other measures known. Quincke's operation is especially indicated in many of the diseases observed, especially in infancy.—*Rivista Clinica di Critica Medica*, February 3 and 10, 1900.

Chorea of the Larynx.—A. Onodi says that this affection has nothing to do with general chorea. He briefly describes our present knowledge concerning the latter affection, and reviews the literature which has appeared since Ziemssen's article upon chorea of the larynx so-called, in 1875. A special analysis is made of the case reported by Preysz, which is the first publication concerning the pathological alterations of the vagus and recurrent nerves in this affection. Onodi collates the views of several prominent laryngologists, and believes that the term "chorea of the larynx" should be given up, as most if not all of the cases hitherto thus described can be included under other clinical groupings, and because the condition is not a true chorea. Some are cases of hysterical cough, some are phenomena of imitation, and others are simply spasmodic habit. He would admit the designation for some cases of "choreiform movements of the vocal cords." A valuable bibliography is given, and also a discussion of the paper before the Medical Society of Budapest.—*Revue Hebdomadaire de Laryngologie, etc.*, January 13, 1900.

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INTER-STATE RECIPROCITY IN MEDICAL LICENSING.

THIS is a somewhat complicated subject, and is hedged in by so many intricate points that a lucid and wholly intelligible presentment of its "pros and cons" is a far from easy task. Any man of ordinary intellectual capacity can understand that until there is a uniform standard of medical education in all the States, it would be manifestly unfair to place the graduates of the various schools throughout the country on a perfectly equal footing. The States which maintain a high standard of medical education have undoubtedly the right to protect their own physicians. In fact this course is incumbent upon them. Therefore the State of New York, for instance, in which such a standard is insisted upon, requires that outside physicians, without any discrimination, who may wish to practise within its borders, shall undergo a further examination as a proof that they possess the requisite medical knowledge.

This decidedly just procedure is, however, a matter for grave complaint to many regular physicians from other States, some of whom have raised the question as to its legality, contending that the Constitution of the United States by its very words protects them from the necessity of being subjected to this further examination. The provisions referred to read thus: "Article IV., Section 1. Full faith and credit shall be given in each State to the public acts, records, and judicial proceedings of every other State. Section 2. The citizens of each State shall be entitled to all privileges and immunities of citizens in the several States." To deal with these points in all their ramifications would necessitate the writing of a pamphlet, but at the same time it is possible to indicate briefly why these constitutional provisions do not exempt the outside physician from the need of complying with the particular regulations of the State to which he goes. The "full faith and credit clause," so called, cannot be relied on in support of the contention, as this clause is construed only to refer to the judicial proceedings of the several States. A physician's license is not such a judicial proceeding as the clause of the Constitution contemplates. Therefore there is no need to dwell upon this phase of the matter at greater length.

A more serious question, however, is involved in the words included in Section 2. It is natural for a physician duly licensed in another State to ask why the assumed privileges and immunities as a physician of that State do not protect him from the necessity of passing a further examination when he comes to New York to practise. A full comprehension of this question in all its bearings depends upon a proper understanding of the history of the United States. Before the several States adopted the Constitution of the United States in 1789, each of these several States was a complete independent sovereign. When the Constitution was adopted, the national government was thereby created with certain powers; and those powers resulted from the surrender by the individual States of certain features of their own sovereignty. In order that the sovereignty of the different States should not be altogether merged in that of the central government, the following amendment was added to the Constitution: "The powers are not delegated to the United States by the Constitution, nor prohibited by it to the States respectively or to the people."

It has thus resulted that the individual States were in no wise divested of their sovereignty by the adoption of the United States Constitution except so far as that instrument shows an express surrender of their sovereignty. In all other respects they have retained it. Every State, for example, has retained unimpaired its original power to make police regulations, included among which is the right to make laws concerning the regulation of the practice of medicine. This proposition has been fully determined by the supreme court of the United States, and the courts of the individual States have uniformly sustained the power of their States to pass legislation of this character. Consequently the State of New York is undoubtedly within its rights in requiring physicians to pass an examination before they can be licensed or registered. When a physician comes from another State to New York he brings with him all the rights which he enjoyed "as a citizen," but his right to practise medicine in another State never was possessed by him merely because he was a citizen. He enjoyed that right because he had conformed to the regulations and laws of the State in which he lived. The fact of being a citizen of New York confers no right to practise medicine merely because of the citizenship. In a few words, if a man goes to another State he carries with him only his bare rights as a citizen, and must conform to the police laws of any State he may choose to enter.

These views have been upheld times without number by the supreme court of the United States. There are other solid arguments in support of the contention that every State possesses the indisputable right to regulate the practice of medicine within its jurisdiction, but these are too lengthy to be presented in a single article. The pith of the matter has been given, and enough has been said to exhibit the situation in a clear light. The laws of New York State were designed with the intention of excluding physicians whose medical education did not reach the standard required of its own citizens. Probably when some kind of uniformity in medical education has been reached in all or even in a majority of the States of the Union, the legislature of New York State may see fit to revise or modify its present stringent regulations relating to medical practice, but until that day arrives it would be in a high degree foolish as well as unjust to alter the existing condition of affairs.

NEW DISINFECTING STEAMER FOR HAVANA.

The United States Marine-Hospital service is about to despatch to Havana a new disinfecting steamer designed under the supervision of its bureau. The *Sanator*, the appropriate name of the vessel in question, has just been completed in Philadelphia, and would appear—from the description given of her in *Marine Engineering*, March—to be up-to-date in every particular. It is claimed for her that she is the most complete floating disinfecting plant in the world. The value of a floating disinfecting plant has already been amply proved, the efficient services rendered by the disinfecting barge *Protector* of the Marine-Hospital service, in disinfecting troops and troop ships returning from Cuba in 1898 during our war with Spain, being a case in point.

The disinfecting equipment of the *Sanator*, as a matter of course, is of the most modern and perfect type. There are a formaldehyde apparatus, sulphur furnaces, and bichloride of mercury apparatus. Probably there is scarcely a harbor of the world where the services of such a vessel as the *Sanator* are more urgently required than that of Havana. Doubtless, however, the efforts being put forth on land and sea will have the effect of regenerating from a sanitary standpoint that most unsavory town, and in wholly removing the stigma which is now attached to its name. In this good work the *Sanator* should play a prominent part.

INTERNATIONAL ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, ARTS, AND EDUCATION.

The suggestion has often been made within recent years that the formation of such an association would greatly tend to the furtherance of science, arts, and education, but until the meetings of the British and French associations for the advancement of science at Dover and Boulogne in 1899 no steps had been taken to bring these ideas to a practical conclusion. At the aforesaid meetings, however, the resolution was come to that the time was ripe for action, and with this end in view influential committees of Englishmen and Frenchmen were formed, the first meeting of these joint committees being held in London in October, 1899. M. Léon Bourgeois was elected first president, and Paris was fittingly chosen as the seat of the inaugural meeting of the association.

The association, according to a pamphlet published on the subject, has been legally incorporated in Britain and in France; offices have been opened in Paris, London, and Edinburgh, and in other European cities; while Professor Geddes, secretary to the British section, has spent upward of two months in the United States endeavoring to enlist recruits. His labors would appear to have been attended with a fair measure of success, as he announces that a committee has already been formed in Chicago to carry on the work of the association, and to co-operate with those already existing in Paris, London, etc. Similar committees have been organized in Boston, Philadelphia, New York, etc. W. T. Harris, LL.D., United States commissioner of education, has also set the seal of his approval upon the scheme, and in a letter to Professor Geddes signifying the same he makes use of these pregnant words, the truth of which will strike every unprejudiced person: "It is evident that intimate relations among the educated classes lead to solid, mutual benefits; while on the other hand it is a matter of common observation that the meeting of the uneducated masses of one nation with those of another nation often results in misunderstanding and mutual distrust."

The organization of the American group has not as yet been decided upon. The proposal has been made that its members should join hands with the British, but these matters of detail will be settled later. There can be no doubt that nothing but good can come of an association formed upon lines so broad.

TUBERCULOSIS AMONG THE POOR.

The unhealthy conditions under which a very large proportion of the working classes are compelled to live is a matter too notorious to be treated lightly by any intelligent person. The subject, especially in these days, has been taken as the text of many a medical sermon, and the importance of both preaching and putting into practice everywhere the gospel of cleanliness has been so constantly dinned into the ears of members of all grades of society that even the most selfish or careless plutocrat is being forced to the conclusion that the affairs of the poor and the need of hygienic dwellings for them are questions not altogether outside his sphere of interest. Municipalities and house-owners are becoming daily more and more impressed by the gravity of this aspect of the situation, and are beginning, though tardily in some instances, to recognize and to assume their responsibilities with regard to the physical welfare of their fellow-men.

As has been pointed out times without number, insanitary houses are not only a fruitful source of danger to those who live in them, but a standing menace to the inhabitants of the entire neighborhood. For example, leaving out of the question the well-known fact that a virulently contagious disease will spread with the greatest rapidity amid a filthy environment, the foremost physicians and scientists hold the view that tuberculosis is undoubtedly disseminated by the agency of dirt and overcrowding and of unsalubrious surroundings generally. The extent to which supporters of this theory carry their belief varies considerably, but all are agreed that the proper housing of the poor will play a conspicuous part in checking the inroads of tuberculosis, and that until the methods prevailing in many large cities undergo a radical change the disease will continue to flourish. The Charity Organization Society of New York has of late been attacking with praiseworthy zeal the disgracefully lax manner in which the tenement district of New York City is ordered in respect to the unhygienic state both of the old buildings and of the new. Attention has been called on several occasions in the Medical Record to the fact that the portion of New York in which the poor most do congregate is probably more densely populated and constructed upon worse sanitary principles than is a similar district in any other part of the civilized world. It is said that there are at present over forty-four thousand tenement houses in the old city of New York, and new tenement houses are being erected at the rate of about two thousand a year.

The Charity Organization Society of New York has recently published an address which was delivered by Dr. S. A. Knopf before the Tenement-house Conference held in New York on February 20th ult., dealing with the connection between the spread of tuberculosis and the tenement house. This address is upon the whole an able and fair presentation of the case.

The question of successfully treating incipient consumptives in the poor is surrounded by many difficulties, but Dr. Knopf, in his advocacy of healthy dwellings for the toilers of the city, gives voice to the opinion of the entire medical profession. It is by such judicious and rational preventive measures that the scourge of consumption can be most effectually checked.

SLEEPLESSNESS.

Inability to sleep is merely a symptom, though of extremely varied origin. It may, however, be of such serious import as to require especial consideration and treatment. The first indication naturally is always to determine the cause, but this is sometimes obscure. In the failure to do so symptomatic measures may, for a time at least, be required. The subject of sleeplessness as constituting the especial complaint for which the patient seeks advice is discussed in an interesting manner by Broadbent (*Lancet*, January 27, 1900, p. 215) in a recent clinical lecture. Opiates or sedatives may be employed when the brain has been overtaxed by engrossing work, or the nervous system has been upset by a profound shock or exhausted by overwhelming anxiety or by excitement, or the habit of sleep has been interrupted by long and anxious vigils over a sick-bed.

Fresh air and exercise are among the most important influences that tend to bring the nervous system into a state favoring sound and refreshing sleep. In some persons sleep is disturbed by exceedingly slight influences, such as a change of bed, the faintest noise, the presence of light, and the like. If restlessness be present also, chloral may be employed when the pulse exhibits high tension, and paraldehyde or bromides, or morphine and hyoscyamus, when the tension of the pulse is low.

Sleep may be prevented by coldness of the feet, and relief may be afforded by hot bottles or by enveloping the parts in warm flannel. A little hot and strong beef tea or hot milk on going to bed will favor sleep when the circulation is sluggish. Sometimes vigorous local friction may be required, possibly given after making the patient stand in cold water. Sleeplessness may, on the other hand, be due to a sense of heat and burning in the feet, the patient being awakened rather than prevented from going to sleep. There may be actual objective heat, as well as the subjective sensation. The condition is sometimes associated with gout, rheumatism, or deforming arthritis, or other local disorder to which treatment should be directed.

Defective elimination of the products of proteid metabolism may cause high arterial tension and sleeplessness, and the indication then is to regulate the diet and stimulate excretion. Mercurials and salines, and drugs of this class, are useful in this connection. Low arterial tension also may interfere with sleep in the recumbent posture, although the patient may be unduly drowsy in the erect position. Tonic treatment will then be required.

Indigestion in its various forms is considered a most common cause of sleeplessness, and flatulence, especially gaseous distention of the stomach, is looked upon as one of the most active factors. In addition to treatment of the fundamental conditions, a glass of hot water at bed-time may be effectual in preventing interference with sleep. Should this not be sufficient, it may be preceded by aromatic spirit of ammonia and sodium carbonate, or an alkaline carminative draught may be given. Sodium carbonate or sulpho-carbolate with aromatic spirit of ammonia, compound tincture of cardamom, or ether and peppermint water or camphor water, and sometimes sodium bromide or ammonium bromide, may be added with advantage for a time. Friction over the abdomen or between the shoulders may aid in dissipating flatulence. This treatment should, however, not be persisted in longer than necessary. When tea or coffee gives rise to sleeplessness, its use should of course be abandoned.

For the sleeplessness accompanying or following influenza, opium or morphine with hyoscyamus or atropine may be required, should tonics such as arsenic, phosphorus, strychnine, and quinine fail to bring relief. Sleeplessness due to alcoholic excess requires, in addition to withdrawal of the stimulant, the administration of strychnine or nux vomica in considerable doses.

The Crotte Method of Treating Tuberculosis.—It was announced some time ago that this method was on trial in the wards of St. Luke's Hospital, and some curiosity was felt as to the result. The system was faithfuly tried for a period of three months, and was found to be of no value whatever. M. Crotte's attempts to exploit his tuberculosis "cure" in this country have not met with an unqualified success among the physicians of New York or the members of the American Medical Association. This field in the United States has been already somewhat overworked by native—or we might rather say, resident—talent.

News of the Week.

For the Improvement of the Milk Supply.—At a meeting of the Keystone Veterinary Medical Society, held at Philadelphia on March 20th, a discussion of questions relating to the milk supply was held. Dr. C. J. Marshall read a paper entitled "Certified Milk." He made a plea for a system of milk inspection that would provide for bacteriological examination of the milk, veterinary inspection of the cattle, and medical supervision of the attendants at regular intervals. Dr. F. A. Packard presented a communication detailing "The Plans of the Philadelphia Pediatric Society with Reference to the Milk Supply." This society has appointed a commission of five to select a bacteriologist, a veterinarian, and a physician for the purpose of thoroughly inspecting milk and noting all of the conditions under which it is obtained. Any farmer or producer of milk who permits monthly inspection of his product is to be furnished with a certificate if the milk comes up to a standard fixed by the society. Such milk should command a better price than the ordinary product. Dr. M. P. Ravenel read a paper entitled "The Part of the Bacteriologist in the Production of Pure Milk." He advocated the use of tuberculin in herds in which tuberculosis is suspected. Dr. Robert Meade Smith read a paper entitled "The Pasteurization of Milk," Dr. George S. Woodward one on "Practical Bacteriology on the Farm," and Mr. Walter R. Cuthbert one on "The Improvement of the Milk Supply of Philadelphia."

Erratum.—In the issue of this paper of December 23, 1899, was published an article in which charges were made by the writer against the so-styled Keeley cure for alcoholism, which statements we have since found to be untrue.

For the Suppression of Rabies.—Ninety-two sheep in the flock of a farmer near Erie, Pa., have been found by the State veterinarian to be suffering from rabies, and have been condemned to death. Fifteen of the animals had been bitten by a rabid dog.

A Commendable Movement.—It is stated that efforts are being made by the borough overseers of Sunbury, Pa., toward purchasing a poor-farm for the maintenance of dependents. It is hoped that within ten years the venture will pay for itself and become self-sustaining, and eventually prove a means of lowering the tax rate.

Pathological Society of Philadelphia.—At a stated meeting held March 22d, Dr. J. A. Scott presented specimens from a case of hemorrhagic pancreatitis. The symptoms so closely simulated those of intestinal obstruction that abdominal section was performed, and the patient died in the course of the operation. In addition to the lesions of the pancreas, multiple fat necrosis of the mesentery and the omentum was found. Dr. Scott presented also specimens of sarcoma of the anterior mediastinum. This had caused effusion into the right pleural cavity and was associated with metastatic neoplasms at the angle of the jaw and in the neck and the axilla. Drs. W. S. Wadsworth and W. G. Spiller presented a specimen of sinus thrombosis. The layers of the falx cerebri had become separated, and the superior longitudinal sinus, which was partly occupied by a clot, was consequently greatly enlarged. Further, a communication had been established with the straight sinus, in which a globular thrombus had formed. Drs. Wadsworth and Spiller presented also specimens of hemorrhage into the pons Varolii. Dr. Spiller presented a slide exhibiting malarial parasites in the central nervous system. The organisms of the æstivo-autumnal variety were present in extraordinary number. Bacilli and cocci also were found, but these were attributed to post-mortem infection. Dr. J. F. Schamberg presented a communication on "Tuberculosis of the Skin of the Hand from Accidental Inoculation." A nodular tumor was removed from the thumb of a laryngologist, who had probably become infected in the treatment of cases of laryngeal tuberculosis, but suffered no especial annoyance. Examination of the tissue failed to disclose the presence of tubercle bacilli, but inoculation of guinea-pigs therewith resulted in the development of tuberculosis. Drs. Joseph Sailer and M. P. Ravenel presented a specimen of aneurism in a chicken. The formation, which involved the subclavian and the axillary artery, was of considerable size, and was believed to be of traumatic origin. It was not a true, but a false aneurism. Dr. J. H. Jobson presented a communication entitled "Hernia of the Vermiform Appendix," relating a case in which such a condition was found. Dr. F. A. Packard presented a specimen of malignant disease of the rectum, with copious metastasis to the liver.

Smallpox is more than ordinarily prevalent throughout the South and West, due to neglect of vaccination, and the different local health officers are anxious and busy accordingly. In no disease do proper precautionary measures more effectually pay than the one in question. The anti-vaccination cranks have had their day, and in the face of the object-lessons before the public in the localities mentioned the time has arrived for the enforcement of the other side of the argument, and the sooner it is done the better.

Vital Statistics of Philadelphia.—The prevalence of influenza and respiratory diseases is responsible for an increase in the death rate. There were reported to the Philadelphia bureau of health for the week ending March 24th, 637 deaths—57 more than for the preceding week, and 106 more than for the corresponding week of last year, and 131 more than for the corresponding week of the year before. The largest number of deaths were due to the following causes: Pneumonia, 111 (congestion of the lungs, 12); pulmonary tuberculosis, 7; diseases of the heart, 41; convulsions, 27; apoplexy, 26; old age, 22; diphtheria, 21. Eleven deaths were attributed to influenza.

Pure-Food Congress.—The *New York Produce Review* of March 21st, reviewing the recent congress held in Washington, comments on pure-food legislation as follows: "The Brosius bill, which received the sanction of the congress, is weak in its executive provisions, which offer every opportunity for inaction and practical evasion of its proposed objects; also in relieving dealers of responsibility for selling fraudulent goods under certain specified conditions, which are very likely to result in the same methods as are now practised by the oleomargarin men, who guarantee retailers of their goods from loss by legal prosecution. Another bill introduced in the House of Representatives by Mr. Babcock to serve the same purpose as the Brosius bill overcomes these defects, and, with two or three slight amendments, would seem to provide far more efficient legislation in this direction."

The Canadian Medical Association.—The next annual meeting of this association will be held on September 12th–14th at Ottawa. The address in surgery will be delivered by Mr. Edmund Owen, of London. The president is Dr. R. W. Powell, of Ottawa, and the secretary Dr. F. N. G. Starr, biological department, Queens Park, Toronto.

The Tri-State Medical Society of Iowa, Illinois, and Missouri will meet in annual session at St. Louis on April 3d and 4th, under the presidency of Dr. O. Beverly Campbell, of St. Joseph, Mo. The secretary is Dr. J. C. Murphy, of St. Louis. The meetings will be held at the Planters' Hotel, which is also the headquarters of the society.

A New Well at Nauheim.—Dr. Schott, of Nauheim, writes us that an artesian well has been sunk there, an abundance of water being struck at a depth of about six hundred and seventy feet. The water is strongly saline and highly carbonated. The temperature is at present 89° F., but it is thought it will rise to about 95°, as that is the temperature of the water at the bottom of the boring. By this enterprise Nauheim has now obtained an ample supply of its curative resources.

The Plague is reported to be practically at an end in Honolulu, only one case having been found since March 3d. In San Francisco three Chinamen are said to have died of the disease, but there is no longer any alarm. Many inspectors, both lay and medical, have been appointed, and Chinatown is inspected daily. In Bengal the disease is on the increase, 4,725 deaths having occurred there during the week ending March 21st, 744 of these having been in Calcutta. The number of cases of plague at Sydney, N. S. W., is reported to have reached thirty-six on Monday last. There have been thirteen deaths from the disease. Eight thousand persons have submitted themselves to preventive inoculations.

Prize for a Paper on the Tropical Army Ration.—To Captain E. L. Munson, assistant surgeon United States army, has been awarded the prize offered by Dr. L. L. Seaman through the Military Service Institution for the best thesis on "The Ideal Ration for an Army in the Tropics." The value of the prize is $100.

Smallpox Throughout the Country.—According to a despatch to the New York *Times* from Chicago, a tabulated list of smallpox cases throughout the various States shows an increase for the week ending March 23d of 1,272. The figures for the week ending March 16th, in thirty-six States and Territories, show 3,952 cases, as against 5,224 for the succeeding week. The State showing the largest number of cases is Louisiana, with 2,015 cases. California is the least affected, having only three cases. New York has eleven cases.

A Trap for Sportive Physicians.—A correspondent requests us to warn the physicians of this city against two men, whose plan is to call at a doctor's office to make an appointment for a well-known jockey who is said to have been recommended to the victim for treatment of a severe disease. Just as they are leaving, one of the jockey's alleged friends says, as if on sudden thought, that there is to be a horse race that day which is a pretty sure thing from inside information, and they will help the physician place a little money—$5 or $10. They can arrange for no more, as it is hard to place it so late. The race proves to be one of money rather than horses, and the innocent but would-be sporty doctor's $10 bill goes so fast it is out of sight in a second.

Ptomain Poisoning.—About one hundred persons were poisoned by chicken salad recently at an entertainment given by a church missionary society at Lima, Ohio.

A Suit for Fees that Might Have Been.—A physician in this city recently brought suit against a builder for the loss of fees for prospective medical services. He was spattered with mortar while passing a building in course of construction. His coat and trousers were ruined, and he claimed that he lost a patient and a $15 fee owing to the time lost in drying his clothes by the boiler of the hoisting engine. The judge refused to allow his claims for contingent fees, but gave him a judgment for the assessed value of the ruined garments.

New State Hospital Districts.—A bill providing for the division of the two State hospital districts in this city into five has been approved by the judiciary committee of the State senate. The Long Island State Hospital district is divided into two, the Kings Park and the Flatbush. The Manhattan Hospital district is divided into three parts. The part located on Ward's Island, known as the men's department, shall be known as "Manhattan State Hospital East," the part located on Ward's Island, known as the "Women's State Hospital West," the part located at Central Islip as "Manhattan State Hospital at Central Islip."

Contagious Diseases in School and College.—There seems to be an unusual prevalence of infectious diseases in various educational establishments throughout the country at the present time. At Yale students are ill with smallpox and measles; at Columbia, in this city, a case of smallpox was recently discovered; one of the students at the Lawrenceville School, N. J., was recently taken with diphtheria and was removed to a Trenton hospital for treatment; several cases of measles have occurred among the students at the Naval Academy at Annapolis; the board of education has closed the public school in Bellmore Village, L. I., because many of the children were suffering from measles; and the Phillips Academy at Andover, N.

H., has been closed on account of the prevalence of measles and diphtheria among the boys.

Epidemics of Rabies are reported in the southern part of Richmond Borough in this city, where many dogs and horses have been bitten, and some, which have showed symptoms of rabies, shot; and also in the upper part of Hunterdon County, N. J., where a number of dogs, cattle, and swine have been bitten.

Regulation of Medical Practice in Italy.—The latest phase of the agitation in Italy against foreign medical practitioners is the approval by the government of a bill now before the chamber of deputies, in which it is forbidden to any one not possessing Italian qualifications to practise anywhere in the peninsula. To this there are two exceptions: The law is not effective against a foreigner who may be summoned in consultation in any special case, or who is in attendance upon a family or individual travelling or temporarily resident in the country. The second exemption is in favor of those who confine their practice strictly to foreign visitors, with, however, the fatal proviso that these practitioners are citizens of countries which accord the same privileges to Italian physicians.

Where Red Tape Worked Well.—The English papers tell a funny story of how one of the younger civilian surgeons, now serving as special consulting-surgeon to the army in South Africa, received his appointment. He was anxious to go to the war, and so one of the older surgeons already appointed made application for permission to take him as assistant at a nominal salary. This request perturbed greatly the fossils at the War Office, who could find no precedent for appointing an assistant to a civilian consulting-surgeon, and so they refused. But they didn't want to offend the important man who had asked the favor, and they accordingly appointed the would-be assistant at a nominal salary a full-fledged consulting-surgeon on a salary of $25,000 a year. Mysterious indeed are the workings of the official cerebrum.

Changes at St. Luke's Hospital.—The Rev. Dr. George S. Baker, pastor and superintendent of St. Luke's Hospital, has resigned his charge and has been appointed by the board of trustees pastor emeritus. Dr. Baker has been superintendent of the hospital for twenty-two years, having succeeded Dr. Muhlenberg, the founder of the institution, upon the latter's death. The cause of the retirement is stated to be ill-health and the need of rest. Dr. Baker was an indefatigable worker during his incumbency of nearly a quarter of a century, and the hospital owes not a little of its present prosperity to his labors. Mrs. Quintard, the directress of nurses in the hospital, resigned recently to take charge of a hospital in Cuba. The interne staff of the hospital has been enlarged by the appointment of a resident pathologist.

The American Medico-Psychological Association.—The date of meeting of this society has been again postponed, and announcement is now made that it will be held at Richmond, Va., on May 22d, 23d, 24th, and 25th. The change is made because the leading hotel in Richmond has been engaged for the week of May 7th to 12th.

The University of Hamburg.—A movement is on foot for the establishment of a new university in Hamburg. The medical department would enjoy exceptional facilities in connection with the great hospital at Eppendorf.

"The University Medical Magazine."—The control of this journal has been acquired by the board of trustees of the University of Pennsylvania, and from now on, beginning with the March issue, the magazine will be the organ of the medical department of the university, of the recently organized University of Pennsylvania Medical Society, and of the William Pepper Laboratory of Clinical Medicine. A new cover, bearing the seal of the university, has been adopted, and a board of editors has been selected by the trustees to conduct the journal.

The Mosquito Question.—In the course of a lecture recently delivered at a meeting of the Colonial Institute in London, Dr. Manson described two experiments which are to be carried out with the view of proving the practicability of preventing malaria in intensely malarial localities, and of demonstrating in an easily understood and irrefutable manner the fact that the mosquito carries malaria. For the first experiment a hut would be built in a specially malarious part of the Roman Campagna. This hut would be provided with screen doors and windows, and every precaution would be taken to maintain it mosquito-proof. Four men would sleep there this summer from May to October, and if they escaped, it would show that man could easily be protected from malaria. In the second experiment a number of virgin mosquitos (that is, insects which had been raised from the egg in the laboratory, so that they could never have got the malarial plasmodium from plants or water or earth) would be caused to sting men suffering from benign tertian fever. They would then be transported to London and be made to bite men who had never had malaria or been outside of England. If these men acquired malaria and the plasmodium could be found in their blood, this would be proof positive of the possibility of the transmission of the disease through the instrumentality of mosquitos. Of course the experiments would be conducted with the knowledge and consent of the subjects, and, the disease being benign tertian fever, there would be no danger whatever.

The Alumnæ of the New York Post-Graduate Training-School for Nurses will hold an Easter fair at their club house, 143 East Thirty-fifth Street, on March 30th and 31st, afternoon and evening. The object of this fair is to aid in the support of the club-house, which has been established only about a year, and is still something of an experiment. The club-house furnishes a home and registry for the members of the Post-Graduate Alumnæ Association, and is also a meeting-place where lectures are delivered and where business and social gatherings can occur.

Navy Department, Bureau of Medicine and Surgery, March 24, 1900.—Changes in the medical corps of the United States navy for the week ending March 24, 1900. March 16th.—Surgeon J. D. Gatewood detached from the *Lancaster* and ordered to the Bureau of Medicine and Surgery, Navy Department. March 19th.—Pharmacist F. Wood retired from active service, March 20, 1900. March 23d.—Assistant Surgeon E. Thompson detached from the *Celtic* and ordered to the *Nashville*. Assistant Surgeon M. K. Johnson detached from the *Nashville* and ordered to the *Celtic*. Assistant Surgeon H. H. Haas detached from the *Baltimore* and ordered to the *Don Juan de Austria*. Assistant Surgeon W. B. Grove detached from the *Brooklyn* and ordered to the *Scindia*. Assistant Surgeon F. L. Benton detached from the naval hospital, Yokohama, Japan, and ordered to the naval hospital, Cavite, P. I. Assistant Surgeon J. S. Taylor ordered to the *New Orleans*.

The Late Dr. Hans Rudolph Hoffmann.—At a special meeting of the North Hudson County Medical Society, held at West Hoboken, N. J., March 19, 1900, the following preamble and resolutions were unanimously adopted:

"*Whereas*, In this early history of our society, we are called upon to record the death of Hans Rudolph Hoffmann, M.D., one of our prominent, honored, and useful members. As an expression of our sentiment in the loss which we have sustained, be it

"*Resolved*, That we, the North Hudson County Medical Society, deeply regret the death of our esteemed colleague, and desire to express the sense of the great loss suffered not only by the community but by the medical profession; and be it also

"*Resolved*, That we tender to his bereaved family our heartfelt sympathy in the great loss they have sustained; and be it further

"*Resolved*, That a copy of these resolutions be sent by the society to the family, and be published in the daily papers and medical journals."

Committee, RICHARD JAHR, M.D.; A. J. WALSCHEID, M.D.; WILLIAM MENGER, M.D.

The Late Dr. John Cargill Shaw.—The New York Neurological Society records with sorrow the death of Dr. John Cargill Shaw, one of its members and its third president, serving for the two years 1878–1880. Dr. Shaw was of English stock and came to this country at the age of seventeen years. Following his graduation from the College of Physicians and Surgeons in 1874, he served in the Long Island and St. Mary's hospitals of Brooklyn, and for four years he filled the office of superintendent of the Flatbush Asylum with signal honor, and here laid the foundation of his profound knowledge of psychiatry. As president of the New York Neurological Society he was an indefatigable worker, and his untiring energy was of great service in the early days of the society. His many professional duties of late years forced upon him a less prominent position in the affairs of this body, but his literary work has made him known at home and abroad. We desire to record our appreciation of his talents and his never-failing co-operation in the interests of neurology and psychiatry. SMITH ELY JELLIFFE, LANDON CARTER GRAY, B. ONUF, committee.

Obituary Notes.—DR. AMY S. BARTON died at Philadelphia on March 19th, at the age of fifty-nine years. She was a graduate of the Woman's Medical College in 1874, and has for some time been professor of ophthalmology in the same institution.

DR. ROBERT M. GIRVIN died at Philadelphia on March 17th, at the age of sixty-five years. He was gradated from Jefferson Medical College in 1862 and became a surgeon in the United States army. He was obstetrician to the Philadelphia Hospital from 1865 to 1876, and was one of the founders of the Presbyterian Hospital, of whose medical board he was president at the time of his death.

DR. WILLIAM YANDELL, of El Paso, Tex., killed himself on March 24th. He had been in ill health for several years, and recently had become much worse and was very despondent. He was a graduate of the Gross Medical College, Denver, in 1868, and was State quarantine officer at El Paso at the time of his death.

DR. HENRY B. CARPENTER died suddenly at his home in Rochester, N. Y., on March 23d. He was a graduate of the College of Physicians and Surgeons, New York, in the class of 1890.

DR. I. S. BIGELOW died at his home in Buncombe, Iowa, on March 21st, of pneumonia. He was born at North Washington, Pa., in July, 1819, and had practised medicine for sixty years.

DR. WILLIAM WELSH VIBBERT died from heart disease at his home in this city on March 26th. He was twenty-seven years old. Dr. Vibbert was a graduate in arts of Trinity College and in medicine of the College of Physicians and Surgeons in this city in the class of 1898.

DR. DANIEL J. BUCKLEY, of Kingston, N. Y., died at the State Hospital at Middletown on March 27th. He was forty-two years old.

Progress of Medical Science.

Journal of the Amer. Medical Ass'n, March 24, 1900.

Mental Fatigue.—Edward Thorndike sums up his conclusions as follows: Mental work is not a simple matter of mental energy, of quantity of positive or inhibitory nervous discharges, but of their direction as well; mental fatigue is not like physical fatigue and requires different treatment; its warning signs are more complicated, less efficacious, and therefore more often neglected; the warnings that we do have are not measures of the degree of inability, but indefinite and at present ill-understood signs of danger; the degree of mental inability does not vary proportionately to the amount of work done without sufficient rest, but increases much less quickly up to a certain amount of mental work, and then may increase much faster, so that one straw of mental work may then break the camel's back.

What are the Most Efficient and Practical Means for Limiting the Prevalence and Fatality of Pulmonary Tuberculosis.—N. S. Davis says we must continue to take care of the infected sputum and cattle, and provide as good sanatoriums as possible for those already tuberculous; but our success for the future will depend mainly on the efficiency of our efforts to restore and maintain in their full vigor the natural conditions and processes of vital resistance to toxic agents possessed by the living human body.

The Frequency of Rickets in Infancy in Boston and Vicinity.—John Lovett Morse, from an examination of four hundred children under two years of age, considers it is a justifiable conclusion that eighty per cent. of the children under two years old, of the poorer classes of Boston and the adjacent cities, have rickets. The cause in Boston and vicinity is to be found in improper hygienic surroundings rather than in race or diet.

Thyroid Feeding in Obesity.—A. W. Sherman says that during the past four years he has used thyroid extract in a number of cases to reduce obesity with results satisfactory to both himself and his patients. He believes that in properly selected cases it is of great value, and in ordinary cases, if thyroid tablets are used occasionally after regular treatment has been stopped, the weight can be kept down almost indefinitely.

Prevention of Tuberculosis.—Homer M. Thomas considers in detail the different ways in which tuberculosis may be spread, and says that the most fertile source of infection is from the sputum, which, when dried, finds an entrance into the body. This being the case, all patients should be taught to destroy the sputum before it passes from their control.

Shoulder-Humero-Scapula Articulation.—Thomas H. Manley discusses some of the complications and sequelæ attending or following reducible or irreducible dislocations, with a brief review of the various modern operative measures now employed for their treatment.

Philadelphia Medical Journal, March 24, 1900.

Case of Cæsarean Section.—George G. Hopkins and Earle E. Woolworth report a case of Cæsarean section performed on a woman who had had one living child and four still-born children. The operation was resorted to because of the parents' desire for a living child. The woman recovered, but the writers neglect to say whether the child was alive or dead when extracted.

A Preliminary Report on the Etiology of Scarlatina.—R. H. B. Gradwohl reports the results of a bacteriological examination in seven cases of scarlet fever. These results confirm those of Class, whose work (published in the Medical Record, vol. lvi., pp. 330 and 513), the writer says, inspired him to undertake the investigation.

The Etiology and Pathology of Major Epilepsy.—William House regards the paroxysms of idiopathic epilepsy as due probably to an increase of cerebrospinal fluid, this being perhaps due to lymphatic spasm or to disturbance of equilibrium between lymphatic and general circulatory activity.

Reflex Neuroses from Phimosis.—J. Orton Edie reports two cases of insanity, one of emaciation and pallor, one of retention of urine, and one of paroxysms of apnœa, all of which were relieved after circumcision, an elongated foreskin being present in each instance.

Clinical Memoranda on Chronic Suppurative Otitis Media.—John F. Oaks, in a clinical lecture on this subject, says that the indications are to promote asepsis, insure drainage, and remove the etiological factor of the chronicity.

A Medico-Legal Case in Alaska.—Henry B. Fitts reports a case in which a woman was accused of having injected a corrosive poison into a child's gullet with a glass urethral syringe. The woman was acquitted.

A Case of Addison's Disease with Autopsy.—William Fitch Cheney reports a case of this disease in a man thirty-seven years old. At autopsy both adrenals were found enlarged and cheesy.

Radiograph of a Bullet Seen through Osseous Tissue in the Femoral Trochlea, Two Lines from the Surface of the Bone.—Charles Verge pictures this case.

Parotitis Complicating Croupous Pneumonia.—James Ely Talley reports an instance of this rare complication occurring in a woman seventy-six years old.

New York Medical Journal, March 24, 1900.

Gout and Rheumatism; their Etiology and Dietetic Treatment.—W. H. Porter attributes both of these affections to sub-oxidation due to the prolonged intake of a larger amount of nutritive pabulum than can be perfectly oxidized; also to the action of bacteria on the intestinal proteid contents. Dietetic treatment should consist in reducing the ingesta to a point where the amount taken can be perfectly oxidized. The diet should be free from an excess of the saccharine elements and all substances tending to excite putrefactive fermentation. The best results are obtained with plain diet largely composed of animal food.

What Precautions shall we Take to Avoid Leaving Foreign Bodies in the Abdomen after Operations?—H. A. Kelly gives histories of one or two cases which have come under his notice, and formulates the rules which govern his operations with reference to the avoidance of such accidents. For keeping track of the number of gauze pads and sponges used during an operation he has devised a wire frame, an illustration of which is given.

Eructation, Regurgitation, and Rumination.—H. W. Lincoln suggests, for the first, suggestion with possibly a small dose of bromide; for the second, compelling the patient to swallow back the food as fast as regurgitated, proper diet, ice pellets, bromides, and electricity; for the third, the use of foods which remain in the stomach as short a time as possible, a bitter at meals, avoidance of contraction of the abdominal muscles, internal faradization, and alkalies or hydrochloric acid, as suits the needs of the individual case.

A Case of Acetanilid Poisoning.—O. R. Summers had as his patient a woman, aged twenty-six years, who had taken only eight grains of the drug. The symptoms were those of collapse with strong convulsive movements, partial loss of consciousness, and great retching. After prolonged administration of whiskey, nitrate of strychnine, and, for two hours, artificial respiration, the patient recovered.

Cerebral Complications Caused by Extension from the Accessory Cavities of the Nose.—R. H. Craig finds a tendency to these complications from congenital defective formation in the bony walls of the nares, partial or complete closure of the normal apertures of these cavities, and pronounced virulence of the infectious material. Illustrative clinical histories of several cases are given.

The Administration of General Anæsthetics.—C. A. Temple describes the various combinations which have come into use during recent years, and names the various emergencies which may arise, together with the means of meeting them.

The Treatment of Retro-Displacements of the Uterus.—I. L. Watkins gives a general description of this condition, and enumerates the various plans of treatment which have been proposed for its relief.

Boston Medical and Surgical Journal, March 22, 1900.

Clinical Cases.—C. B. Porter reports the following: Sarcoma of tonsil, which was successfully removed by operation.—Slipping patella: An incision was made on the inside, and an elliptical piece of internal lateral patellar ligament one-half inch wide removed. The joint was not opened. The patient was discharged well fourteen days after operation.—Cysts of both ovaries, hydatidiform mole: abdominal section, removal of cysts, incision of uterus, removal of tumor; curetting; wound of uterus was closed with animal-tendon sutures. Good recovery.—Dislocation of internal semilunar cartilage: Removal. Distention of the joint with fluid that was proved to be sterile, caused a rise in temperature and in the white blood count on the sixth day after operation. Good recovery.—Ununited fracture of olecranon: Fragments were wired, arm put up on straight anterior splint reaching from finger tips to axilla, a large pad at the elbow holding the arm slightly flexed. Good recovery.—Floating cartilages in both knee joints: Incision was made on inside of left knee through capsule. Twenty-five pea-sized, hard, irregular, slippery bodies were removed.—Fracture of right patella: Curved incision made over the joint, which was found to be filled with blood clots. The joint was washed, and the fragments were wired. Recovery.—Comminuted fracture of humerus: Bone comminuted into four fragments. Operation resulted successfully, with no shortening.—Fracture of surgical neck of humerus, with displacement of head of humerus: Open section with wiring of fragments was performed. Excellent results followed.

Intermittent Gastric Hypersecretion.—Arthur W. Elting, in the treatment of this rather rare affection, uses the stomach tube and lavage with weak alkaline solutions or 1:1,000 silver-nitrate solution. Morphine hypodermically or cocaine internally is indicated when the pain is very severe. Constant tonic treatment of the nervous system is indicated during the intervals between attacks. Strychnine, nux vomica, quinine, phosphide of zinc, arsenic, etc., are indicated. Over-indulgence of all kinds and psychical excitation are to be avoided, and a carefully arranged diet is insisted upon.

Clinical Cases.—J. C. Mumford reports the following: Acute general peritonitis: The condition, due to appendicitis, was cured by operation and washing of pelvis and abdominal cavity with six gallons of hot sterilized salt solution. Good recovery.—Chopart's amputation, with tendon implantation and tenotomy: A slight limp remained, but the stump was painless.

Traumatic Rupture of Echinococcus Cyst of Liver.—C. A. Porter reports a case, relieved by operation. Incision of the right rectus muscle was followed by escape of three quarts of bloody fluid.

X-Ray Plates of Traumatic Separation of Epiphysis.—Charles L. Scudder showed tracings, and advocated open treatment of closed fractures and epiphyseal separation.

Strangulated Diaphragmatic Hernia.—S. J. Mixter reports a case. Operation was performed, but the patient died of shock.

Medical News, March 24, 1900.

Neurological Observations in the Hawaiian Islands.—Daniel R. Brower, in speaking of leprosy, says that the physicians in the islands who are experts on the subject have abandoned the hereditary etiology and regard it as contagious. They account for its rapid spread among the natives by their lowered resistance, a consequence of the great prevalence of syphilis, and their socialistic tendencies. They eat out of a common vessel and smoke each other's pipes. Climate has considerable influence over the progression of the disease. Prophylaxis is the great problem, difficult to meet on account of the long incubation period and insidious onset. Zambico believes that progressive muscular atrophy, Raynaud's disease, Morvan's disease, and syringomyelia are simply modified forms of leprosy.

A Case of Transverse Presentation; Double Uterus.—A. H. Hayden reports this case. The patient was a woman aged forty years, multipara, ninth pregnancy. She had been in labor thirty-six hours when the writer first saw her. He delivered her of a dead child. She died on the tenth day, evidently from exhaustion, as there was no other factor to account for her failure to recover.

The Thrush Fungus as a Cause of Gastritis.—W. A. Bastedo cites a case of this kind in a woman aged twenty-six years. Lavage was resorted to, which on the fourth day showed no fungus, and the patient improved from that time.

The Lancet, March 17, 1900.

Some Remarks upon External Urethrotomy.—R. Harrison describes a case, and adds that he believes the operation to be applicable, (1) in resilient and rapidly contractile strictures in the deep urethra; (2) in cases in which the wound made by an internal urethrotome is out of proportion to the natural drainage possibilities of the urethra; (3) in stricture complicated with urinary fistulæ and sinuses; (4) in cases of stricture with extravasation; (5) in some rare cases of stricture in which operative treatment is rapidly followed by acute symptoms of impending death. He would attach importance to the use of a guide, the utility of the internal operation as immediately preliminary to the external, and the more efficient provision for urine and wound drainage.

The Surgery of the Stomach.—In this lecture, A. Mayo Robson discusses perforation, gastric fistulæ, perigastritis and adhesions, hour-glass contraction, dilatation, and congenital stenosis of the pylorus, giving various statistical tables of the several operations which have been devised for the conditions above enumerated. Hour-glass contraction he regards as more common than is usually believed. He has seen one case in which the normal viscus was divided into three distinct compartments.

A Loose Foreign Body in a Hydrocele Sac.—J. R. Benson found in the sac a small, hard mass of fatty tissue which he thinks may have been a detached piece of an appendix epiploica, or may have arisen from a clot of fibrin from a previous tapping.

Unusual Ending of a Case of Empyema.—In this case of an Arab child of three years under the care of J. Cropper, the empyema of the right chest opened either into the stomach or duodenum. In spite of operation, death resulted on the sixth day.

Medical Examination of Personal-Injury Claims.—A. Benthall gives an account of his experience in the line of claim adjuster for accident insurance, and mentions certain principles of ethical and medico-legal importance.

Medical Press and Circular, March 7 and 14, 1900.

The Causes and Treatment of Movable Kidney.—Mansell Moullin draws a distinction between movable and floating kidney. The theory that the kidney is a fixed organ is incorrect. The normal range of movement is from 3 to 5 cm. The failure of the kidney to reascend on tranquil expiration, the patient standing erect and first driving the kidney down by forced inspiration, is a fair test. The anatomical relations are considered at some length. The choice of treatment lies between the application of an abdominal belt and nephrorrhaphy. Only in the milder cases does the former succeed, and then it must be combined with massage and exercises to strengthen the abdominal muscles. A belt cannot press the kidney back into place or retain it on deep inspiration in the erect posture. Pads are useless. Nephrorrhaphy never fails when properly carried out, if the symptoms have not already lasted so long as to produce an indelible impression upon the nervous system.

The Surgical Treatment of Tuberculous Kidney.—König says two different conditions must be distinguished: isolated foci in the gland substance, and the pyelitic form. Very different symptoms are presented. The so-called hæmatogenous form is difficult of diagnosis, and can but rarely be controlled. Tuberculous pyelitis can always be diagnosticated. The only possible operation is extirpation. There are no certain means of diagnosing whether the second kidney is healthy. According to Tuffier, we may operate when the other kidney is diseased, and simultaneous disease of the bladder, testicle, or prostate is not a contraindication. The author has operated eighteen times with eleven recoveries. In many cases operation prolongs life.

The Dilatations and Deviations of the Œsophagus.—John Knott concludes his article, taking up the third or hernial class of Rokitansky's arrangement. He calls special attention to Hoffmann's method for œsophageal dilatation. Gastrotomy should be performed some time before excision of the œsophageal sac, so that the patient can be fed into good condition, œsophageal rest obtained, and inflammation allowed to subside, permitting the sac to be washed out before the second operation is attempted. The writer looks upon this as the most hopeful procedure in dealing with all dilatations and diverticula of the œsophagus.

Ovarian Tumor of an Unusual Character.—T. Jason Wood records an operation upon a large universally adherent cyst with foci containing fetid green pus. The wall gave way in places. There was no trace of a pedicle. The end of the alembroth gauze packing was brought out of the wound. This was removed in forty-eight hours and a tube substituted. Good recovery followed. The absence of pedicle was accounted for by the ovary becoming detached and undergoing cystic change.

Some Surgical Cases Illustrated by Radiographs.—Noble Smith illustrates the value of the *x*-rays in a case of old Pott's fracture, in which the weight of the body was transmitted so as to impinge upon the edge of the astragalus. Immediate relief was given by cutting through the fibula, dividing the tendo Achillis, and securing better position. In a child supposed to have bowed leg, a fracture of the tibia was shown. In congenital dislocation of the hip, aid has been given; also in dislocation of cervical vertebræ.

British Medical Journal, March 17, 1900.

The Treatment of Rheumatism, with Special Reference to Prophylaxis and to Cardiac Complications.—William Ewart states that lesions of the joints are easily recognized, but not always the early beginnings of the cardiac lesions, which may develop murmurs only at a late stage. Cardiac lesions may accompany every form of arthritis down to febris rheumatica sine arthritide (Hawthorne), but their frequency and their degree are not proportionate to the degree of the joint affection nor to the intensity of the rheumatic attack. The writer then speaks of the treatment by vesication and serotherapy. It may be possible that prophylaxis may demand in predisposed subjects the application of blisters for the threatenings of an attack.

The Practical Applications of Largin in Diseases of the Eye.—Sydney Stephenson says that the application of largin, even when concentrated, is painless; if prolonged beyond a few weeks, it may stain the conjunctiva. It acts well in blepharo-conjunctivitis and in some cases of dacryocystitis. It is an efficient substitute for silver nitrate in any of the conjunctival inflammations associated with the Koch-Weeks bacillus.

Some Cases of Belladonna Poisoning.—George Scott reports the cases of three lads who took some "horse" medicine, and afterward exhibited all the signs of belladonna poisoning. He administered emetics and purgatives. To one of them, whose pulse was very weak, he gave a mixture of ammonium carbonate and spiritus chloroformi. They all recovered.

Remarks on the Holmgren Wool Test: is it Adequate for the Detection of Color Blindness?—Thomas H. Bickerton declares that the Holmgren wool test is by no means a certain discoverer of the lesser forms of color blindness. To insure certain detection of all color defects, a quantitative test for color is required in addition.

Detachment of Corneal Epithelium (?).—J. Acworth Menzies reports such a case of five years' standing, caused by a blow. He scraped the part with a sharp spoon, removing the epithelium for some little distance around the affected area, and recovery was complete.

Foreign Body in the Male Urethra.—Arthur Hawley withdrew a hatpin from a male urethra by means of a pair of curling tongs, all other methods having failed. This proved successful.

Wiener klin. Wochenschrift, Feb. 22 and March 1, 1900.

Suture of the Bladder in Suprapubic Lithotomy.—Georg Lotheissen declares that the time for recovery is considerably shortened by this method. Bierstein found this to be in the open treatment thirty-one days; with suture, from eleven to thirteen days. There seems no greater danger on the whole than in sectio alta. Angerer always employs the suture and has never lost a patient directly through the operation. In recent literature many cases are reported with excellent results. The author finds, in one hundred and thirty-seven cases, ninety-six healed primarily without fistula, *i.e.*, seventy per cent., which is even not so favorable as some others report.

A Rare Form of Aneurism of the Descending Thoracic Aorta.—Maximilian Weinberger and Arthur Weiss present this case of saccular aneurism, in which there was erosion of the upper dorsal vertebræ and the fourth and fifth ribs, with a growing together of the aneurismal sac with the upper lobe of the right lung, and the rupture of the latter into a bronchial tube. There was aspiration of blood in the right middle lobe, with chronic endarteritis of the ascending and descending aorta and ectasy of the first, eccentric hypertrophy of the left ventricle, and fatty degeneration of the myocardium. Fatty heart and fatty infiltration of the liver were found.

Alimentary Glycosuria.—Emil Raimann states that this condition does not depend on a local disturbance, but on the lowered capacity of the body to assimilate dextrose. The continued constitutional lowering of the assimilation limit is like a sign of degeneration in a chemical sense. Since by means of simple experiment on individuals a quantitative expression of glycosuria can be made, it will be possible from a mass of material to formulate the laws which cause the predisposition to this affection.

Therapeutic Studies on Sanatogen.—Eduard Rybiczka mentions as advantages of sanatogen the high nutritive value of the preparation, easy assimilation, non-irritating qualities, indifferent taste; its happy influence on the appetite in different kinds of illness, on nervous troubles, viz., sleeplessness in neurasthenics; its influence on the body weight and in some cases on the hæmoglobin; and the increase of subjective good health in patients, resulting from its use.

Berliner klinische Wochenschrift, No. 10, March 5, 1900.

Acute Non-Purulent Encephalitis.—H. Oppenheim treated a boy aged seventeen years, who suffered from cerebral symptoms following an old chronic otitis media. High fever supervened with stupor and a slow pulse. Later there appeared cortical epileptic attacks and right facio-brachial monoparesis with complete motor aphasia. The patient finally recovered as to life, but six months after subsidence of acute symptoms still had slight paresis of the right side of the mouth, weakness in the right hand, and complete motor aphasia. A diagnosis was made of acute hemorrhagic non-purulent encephalitis of the left frontal lobe, more particularly of the third left frontal convolution, including the base of the central convolution.

Nephritis without Albuminuria in Young Children.—Cassel has recently seen a series of such cases, all being under two and a half years of age. Of the nine children, the anasarca followed varicella twice, and digestive disturbances five times. In one no cause could be assigned, and in one it preceded an attack of measles, which did not, however, alter the course of the renal symptoms. In all scarlatina could be positively excluded. Most careful uranalysis failed to discover at any time the slightest trace of albumin or cell elements. Reference is made to similar cases previously reported.

Münchener medicinische Wochenschrift, March 13, 1900.

Contribution upon the Management of Infants Prematurely Born.—O. Rommel says that more than one-third of all children who die in Munich in the first months of life do so because of lack of vitality from premature birth. A series of observations upon artificial means of nourishment and supplying the requisite warmth are given, with tables showing the curve of increased weight.

A Strange Accident.—Dr. Peters saw a boy one year after he had fallen, a piece of wood of lead-pencil size having penetrated the eye, causing loss of sight upon this side, and momentary cerebral symptoms. Upon examination and incision a previously undiscovered splinter of considerable size was found penetrating the orbit.

Oxycamphor.—Hans Neumayer describes this new preparation (see MEDICAL RECORD, vol. lvii., p. 515) with tests upon the respiration and pulse in health, giving tabulated results. He finds it a trustworthy remedy in many cases of dyspnœa. The dose of gtt. xl. of oxaphor (1 gm. of oxycamphor) is recommended with considerable water given on a fasting stomach.

Œdematous Sclerema Neonatorum in Connection with Extensive Bleeding from the Lungs.—Joseph Esser relates the interesting post-mortem appearances in a twin whose sister showed no abnormality. Death had occurred on the eighth day. The lungs were hemorrhagic, and the pathology is considered at length.

A Unique Splinter Injury.—Conrad Rammstedt relates a peculiar accident by which a splinter of wood was driven in beneath the orbit, fixing the jaws by being forced against the coronoid process when attempts were made to open the mouth.

Distortion of the Ankle Joint.—Heinrich Krapf directs attention to a peculiar form of injury, which may also have as a result a painful condition caused by lateral movements of the foot. A typical case is related.

Vratch, February 19, 1900.

Endothelial Neoplasms of the Gastro-Enteric Tract.—L. V. Soboleff reports the case of a woman, twenty-eight years old, who had complained for about a year of constipation, eructations, and pain at the pit of the stomach, and for three months of vomiting and loss of appetite. For a month before coming under observation she had œdema of the face and feet. He father, she said, had died of cancer. In the region of the pylorus was felt a hard tumor with uneven surface, connected apparently with a smooth, hard, easily movable body deep down in the right hypochondrium. A dense band extended downward from this body into the right iliac fossa. The urine was turbid and contained hyaline casts, many pus cells, and a few red blood corpuscles. A diagnosis was made of cancer of the stomach with extension to the right kidney and ascending colon, and inflammation of the bladder and renal pelvis. Treatment proved of no avail, and the patient died. At autopsy a new growth was found involving the stomach, duodenum, and large intestine; other findings were fibrinous peritonitis, acute cystitis, beginning right hydronephrosis, acute pyelitis in the left kidney, diphtheritic ileocolitis, and brown atrophy of the liver and heart. The gastro-intestinal new growth was a multiple interfascicular medullary endothelioma.

Phototherapy.—I. I. Makaveeff reports seven cases treated by means of light. He used an incandescent light of 50-candle power, with a current of 100 volts, thrown on the part by means of a parabolic reflector. The séances lasted from five minutes to half an hour in different cases, but usually from ten to fifteen minutes. The patient's eyes were protected by shades or dark glasses. The cases in which this method was employed were: Lupus, 1; rheumatic joint affections, 2; tuberculous arthritis of the elbow, 1; hysterical neuralgia, 1; intense pains accompanying recurrent inoperable cancer of the left breast, 1; traumatic orchitis and epididymitis, 1. The results in every case were most encouraging.

Schleich's Method of Local Anæsthesia.—A. I. Osloff reports nineteen cases in which he employed the Schleich method of local anæsthesia with entire satisfaction. The operations were of all sorts—Pirogoff's disarticulation of the foot, removal of the thyroid, removal of a lipoma of the shoulder, resection of the rib, gastro-enterostomy for cancer, castration for tuberculous disease, etc. In order to reduce to a minimum the pain of the first prick of the needle, the writer makes a primary injection with an ordinary hypodermic syringe, and employs the larger (10 gm.) syringe later. Osloff says that the influence of suggestion in most of these cases can hardly be denied.

Operative Treatment of Congenital Enuresis.—S. K. Mayer relates the case of a twelve-year-old girl who suffered since birth from incontinence of urine. Examination showed, with otherwise normal external genitals, a widely open urethral orifice. The urine was normal in character, but the bladder was constantly empty. The urethra was narrowed by operation, and the bladder soon became tolerant of water so that the child was not forced to empty it more than once an hour or hour and a half. Three weeks after operation there was perfect control over micturition, and the child slept every night from ten o'clock to seven without wetting the bed.

Consumption in the Russian Army.—N. K. Shchepotieff presents the statistics of pulmonary disease for the Russian army from 1890 to 1897 inclusive, and discusses its causes and the means for its prevention.

La Riforma Medica, March 2 to 9, 1900.

The Vagus in Relation to Malignant Forms and Complications of Measles.—Emilio Cioffi believes that the suffocating catarrh, pulmonary collapse, cough and pseudo-croup, vomiting, diarrhœa, nausea, and sense of satiety, kidney symptoms, anuria, oliguria, œdema with or without albuminuria, otitis, and meningeal inflammation, all met with in some cases of measles, are due to the effect of the specific toxins upon the pneumogastric nerve. He has reached these conclusions through laboratory experimentation.

Dermoid Cysts of the Anterior Fontanelle.—Emilio Curzio reports a case of this rare affection, which is congenital, but becomes visible a few months after birth. Removal is the only treatment, and is best performed when the fontanelle is diminished in size, when the child is about a year old.

Lesions of the Central Nervous System in Poisoning from Sodium Salicylate.—G. Paoli says that these lesions are easily cured upon removal of the cause.

Urinary Toxicity.—Umberto Baccarani holds that there is no relation between the elimination of sulphuric ethers and indican and the toxicity of the urine.

French Journals.

The Histological Diagnosis of Rabies.—A. Van Gehuchten and C. Nelis present the results of their experimental studies, which they look upon as important and which lead them to believe that in the future one will not have to search for an intervertebral ganglion. They find that the nodular ganglion of the pneumogastric presents the most deeply seated lesions. This is readily found in the upper cervical region against the base of the skull. Here we must look for the histological diagnosis. —*La Presse Médicale*, March 7, 1900.

Pruritus, its Complications and Treatment.—Dr. Du Castel, after reviewing the various forms, points out that there are many persons affected with more or less generalized symptoms, who are really only pruriginous subjects, badly cared for at the beginning. He calls attention to two internal remedies: lactic acid and beer yeast. The former may be given to children, beginning with gtt. vi., gradually increased to 2 gm. Good results have been reported from yeast.—*Le Bulletin Médical*, March 10, 1900.

Hysterical Neurasthenic Tympanites.—Henry Bernard finds that neurasthenia, the same as hysteria, provokes intestinal spasm manifest clinically by a simple colic. The treatment is general, attacking the nerve element, and local, but generally without effect, the tympanites disappearing spontaneously. Antispasmodics, especially opium and belladonna, may be employed, but purgatives should not be given.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, March 11, 1900.

Hereditary Tic Douloureux of the Face Cured by the Continued Current of Electricity.—S. Dubois is led by the statement of Gilles de la Tourette, that no case of cure of true tic douloureux of the face is known, to relate one case as cured and mention two others apparently cured by the continuous current. In one man, now seventy-seven years of age, there has been no recurrence in twenty-six years.—*Bulletin Général de Thérapeutique*, March 8, 1900.

Congenital Ranula.—Xavier Delore gives with illustration the history of an enormous branchial cyst of the floor of the mouth. The distinction is not always easy between sublingual ranula and dermoid cyst. Among the signs in favor of the latter was that of probable adhesion to the hyoid. Treatment consists in complete extirpation of the membrane; that is, of all epithelium.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, March 8, 1900.

Specific for Bacterial Diseases of Man and Animals.—Dr. Gaube believes that in a multiple salt discovered by him, the iodobenzoyliodide of magnesium, he presents to medicine the most powerful arm it has ever known in the defence of man. His remedy has always shown activity, often curative, principally in diphtheria, though tried in rheumatism, erysipelas, typhoid fever, pneumonia, etc.—*La Médecine Moderne*, March 7, 1900.

Opotherapy.—A. Vaquez follows the historic stages of organotherapy from antiquity through the Middle Ages, and into the renaissance of a few years ago. He finds that the ancients were right in believing, and the moderns in demonstrating, that organic secretions contain an infinite number of substances of remedial value.—*La Presse Médicale*, March 10, 1900.

Some Phenomena of Excitation and Mental Depression in Relation with the Attack in Epilepsy.—Maurice de Fleury relates a number of personal observations with comments from advance sheets of his work on "Clinical Researches in Epilepsy and its Treatment," which will shortly appear.—*Le Progrès Médical*, March 10, 1900.

Hypertrophic Length of the Tongue.—C. Girod gives with illustration notes of an enormously elongated tongue in a woman, which so seriously interfered with talking that one would at first examination take her for an idiot.—*Gazette des Hôpitaux*, March 3, 1900.

Archives of Pediatrics, March, 1900.

Analytical Study of the Clinical Phenomena Observed in One Hundred and Twelve Consecutive Cases of Chorea.—John Lindsay Steven gives a statistical report of these cases. Of 87 out-patient cases, 23 were males, 64 females; 43 were between the ages of six and ten years; 60 patients had one attack, 1 had six attacks; 7 had an attack of one month's duration and under; 1 had an attack of twelve months' duration. The etiology seems to be fittingly classed under the heading "emotional" in many cases. History of antecedent rheumatism was given in 26 cases. As to condition of the urine, there seems in chorea, on the whole, little tendency to derangement of the renal function. The author likewise tabulates 25 cases observed in the wards.

Dilatation of the Colon.—F. T. Stewart and Alfred Hand, Jr., report a case of congenital dilatation of the colon in a boy six years old. The child was fed from birth on condensed milk (1 : 5), with a few breast-feedings daily. The distention was noticed first when the child was three months old. There was no clew to the origin of the affection. Treatment consisted of massage of the abdomen with olive oil, the application of the galvanic current to the abdominal muscles, and the hypodermic injection of strychnine, gr. $\frac{1}{60}$, once daily in the abdominal wall along the line of the colon. Later they were given in the arm with quite as good results. The child, however, died, and the post-mortem showed a hypertrophic dilatation of the colon and rectum.

Two Cases of Idiopathic Hæmaturia.—T. J. Elterich, after reporting these cases, states that in the treatment of this trouble rest in bed is essential. Mineral and vegetable astringents, efficient in other hemorrhagic conditions, are said to have no effect in these cases, but they may be tried.

Jour. of Laryngology, Rhinology, and Otol., March, 1900.

Antiseptic Purification of the Meatus and Adjacent Parts both for Operations and as a Treatment in Chronic Middle-Ear Suppuration.—Urban Pritchard advocates the application of a more rigid antisepsis to the classes of cases named in the title. His plan consists essentially in flushing the meatus, scrubbing the auricle, packing the canal with antiseptic gauze, and covering the whole ear with an antiseptic pad, all this being done previous to operation. When the patient is under the anæsthetic, the whole dressing is removed, and when it is finished a fresh pad is applied. With these precautions, Pritchard finds that granulations and purulent discharges are avoided and that wounds heal up much more quickly. This purification treatment is adapted to those cases in which the membrana tympani is intact and there is no suppuration. Here its use renders the surfaces of the meatus aseptic and so allows the surgeon to operate on growths in the walls or to open into the tympanic cavity without infecting the deeper parts. The plan is also of service when suppuration exists with perforation of the membrane, whether we have simply chronic otorrhœa or polypi, granulations or necrosis requiring curetting.

Two Cases of Very Extensive Unilateral Angio-Elephantiasis.—Wolff reports the cases of this nature which have appeared in literature, and gives personal experience with those referred to in the title. One patient died, the autopsy showing thrombo-phlebitis of the right femoral vein with multiple embolism of the right lung.

The Laryngoscope, March, 1900.

Report of a Case Illustrating the Importance and Possibilities in the Early Recognition and Treatment of Malignant Growths of the Larynx.—The case is reported by W. K. Simpson, who by means of drawings gives a very clear presentation of its interesting features. The patient was a man, aged forty-four years, who has been under observation for the last three years and a half. Three points are brought out by the case: (1) That all laryngeal new growths in the adult, especially those of a recurring nature, should always be regarded with suspicion, the relation between benignity and malignancy being often so close that the line of demarcation is difficult to define. (2) The difficulty attending a positive diagnosis in very early cases, during an apparent period of transition, when the microscopical examination admits of some doubt. (3) The satisfactory results which may sometimes follow a thorough removal of the growth and destruction of the underlying tissues. In some cases of early recognition and removal, even when a diagnosis of malignancy has been substantiated, a cure may be effected without resorting to laryngectomy.

A Case of Fatal Sphenoidal Suppuration.—The patient was a man aged thirty-one years, under the care of S. Lodge, Jr. For six months he had constant pain in the right side of the face and in the ear. For two months the face was swollen and there was a continual discharge of matter (often bloody) from the right naris. Examination showed symptoms of pus absorption, and a sequestrum could be made out in the region of the cribriform plate. Syphilis of nine years' standing was present. Death from brain sepsis resulted in about three weeks. Autopsy showed that to the right of the sella turcica there was some necrosis of the walls of the sphenoidal sinus. There was a large free opening from the latter into the nose, while a probe passed freely from the base of the skull through the sinus into the nose.

The Silver Salts in the Treatment of Chronic Suppuration of the Middle Ear.—E. B. Gleason commends especially the use of protargol. In his cases of prolonged otorrhœa a hypodermic syringe full of a five-per-cent. solution was injected by means of a Blake's cannula as high up into the attic as possible. The parts then were massaged with Siegle's pneumatic speculum, in order, if possible, to force a portion of the solution into more distant parts than could be reached with the syringe. The ear finally was carefully dried by means of absorbent cotton. Before using the protargol the middle ear had been cleansed with the aid of Blake's cannula and dried in the usual manner.

Archives de Neurologie, February and March, 1900.

Psychical Disturbances in Degenerative Chorea.—P. Ladame says that while many patients suffering from Huntington's chorea threaten suicide, none of them really attempts it, the threat being merely a phase of a fit of anger, resulting from the nervous excitability of these patients. Hallucinations, delirium, and symptoms of paranoia are merely accidental phenomena in this disease, but irritability and a progressive weakening of the intellect are characteristic of hereditary chorea. Complete dementia may ensue, the clinical picture being absolutely similar to that of general paralysis, from which, however, a careful examination of symptoms will suffice to distinguish it.

Hysterical Polyuria and Pollakiuria.—Jean Abadie concludes that among urinary disorders due to hysteria there is an urgent pollakiuria with or without polyuria. This may be the only manifestation of an hysterically irritable bladder. Polyuria, simple and urgent pollakiuria may all be provoked by direct hypnotic suggestion, and possess the same characteristics as the spontaneous forms. Both varieties may be cured by direct or indirect suggestion.

The Sensibility of the Blind.—The popular impression that the blind possess a more acute sensibility for tactile impressions is not supported by the numerous and carefully made observations of Professor Greisbach, of Basle. The tips of the fingers of those who see are more sensitive than those of the blind. There is no difference between them in regard to the senses of smell and hearing. Those who can see can work longer and to better effect than the blind.—*Lancet.*

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

ARMY AND NAVY IN PARLIAMENT—GENERAL MEDICAL COUNCIL—THE WAR AND INSANITY—LORD PEEL AND THE DRINK QUESTION—PERFORATED NASAL SEPTUM—SCOLIOSIS—FALMOUTH—LEICESTER—UNIVERSITY—ILLUSTRATED JOURNAL—DR. OSLER—DEATHS OF DRS. MARCET, SCATTERGOOD, WHISTLER, AND GUY—MIDWIVES BILL AGAIN IN PARLIAMENT—A DIVORCE CASE—SOCIETIES—ENLARGED PROSTATE—COXA VARA—PATHOLOGICAL SOCIETY'S DEMONSTRATIONS—MORTALITY RETURNS—THE LATE DR. MASON.

LONDON, March 9, 1900.

IN Parliament ameliorations have been promised to the naval medical service. The numbers of inspectors and deputy-inspectors-general of hospitals and fleets are to be increased; the instruction at Haslar Hospital is to be extended and prizes awarded; study leave is to be granted; a professor of tropical diseases appointed; surgical instruments are to be supplied to all ships.

The estimates for the Royal Army Medical Corps are considerably increased, but it is by no means clear that the establishment is sufficiently provided for. Every available officer has been sent to South Africa, and numerous civil surgeons have been engaged for duties at home stations. It seems rather too previous for the minister to talk of great increase when he cannot find candidates to compete. Redress of grievances will have to be granted and the oppression by the War Office made to cease.

The General Medical Council seems to emulate the War Office in blundering. Perhaps I ought to say the law officers of the council. They have just lost another action, being ignominiously beaten by the notorious Alabone, who since he was removed from the Register has been practising. He was summoned for describing himself as M.D. Bellevue Coll., and M.D. Phil., U. S. A., and the lawyers of the council knew nothing about the bogus diplomas, but admitted them to be reputable documents of New York and Philadelphia. So the magistrate dismissed the case. These are the lawyers who muddled the case of Dr. Hunter.

Dr. Clouston, superintendent of the Edinburgh Royal Asylum for the Insane, has presented his annual report to the managers. As usual it is an interesting document. The proportion of cases due to alcohol is stated as 25.25 per cent., which is exactly the same as for the last five years. Influenza is also said to be responsible for many cases—more, in fact, than the excitement consequent on the war. But in regard to the last it is certainly too early to form any opinion, especially from the experience of one institution. Dr. Clouston thinks the selfish character observable to-day may be a reason for the little insanity attributable to the war. This seems a notion without any evidence in its favor, and in fact in direct opposition to the magnificent outpouring of help for the sufferers which has been shown in all directions and in every possible form.

The Times has published, as it has done for a number of years, the annual drink bill of the nation, the figures being, as usual, supplied by Rev. Dr. Dawson Burns. In 1899 there was an increased expenditure on intoxicants of no less than £6,169,455 above the amount of the previous year. The aggregate expenditure of the year was £162,163,474. This, Dr. Burns calculates, is equal to £3 19*s.* 11½*d.* per head, or for each family of five persons £19 19*s.* 9½*d.* Some people have begun to argue that the figures prove the prosperity of the country, but there is a darker side to be remembered. The royal commission sitting while this bill was being run up concluded that the "gigantic evil" called for a remedy, as it had become a "national degradation." These phrases were employed in the report indorsed by those engaged in the trade—the majority report, for, as you probably know, the royal commission resulted in two reports being made. The minority report was drawn up by Lord Peel, whose judicious impartiality as president of the commission had been extolled by the trade up to the last moment, but ever since his proposals he has been denounced by their organs in the press. Last week his lordship broke his long silence in a speech at Cambridge, when he asked the public "to judge between the two methods of solving the drink question" put forth in the two reports, and warned those who fancied they could take the good points of both as a basis for legislation that the differences were "vital," and if not very careful "they would fall into a trap." He said, too, "he gloried in belonging to the minority on the commission," for its report had "taken hold of the public conscience and intelligence." He added that "some extreme measures ought to be tried to make the trade subordinate to the public interests," and this object is "not only enjoined by Christianity and morality," but "enforced by the merest, lowest utilitarian principles of social and domestic expediency."

Such expressions from the man who was selected to preside over the commission on account of the conspicuous impartiality and ability with which he had filled the speaker's chair in the House of Commons are deserving of every consideration.

Among the cases exhibited at the Clinical Society was a young woman who had been previously shown in 1897, with a perforation of the nasal septum supposed to be due to tuberculous disease. In 1896 a growth the size of a filbert had been removed from the septum. Three months later the base broke through the septum. Active local treatment was employed and three injections of tuberculin were given, to which she reacted. The growth has increased in size, but otherwise the condition has improved. Sections show giant cells and caseation; no bacilli. Painting with iodine and iodide of potassium had been employed, and later guaiacol and olive oil.

There was a case of scoliosis in an infant, aged seventeen months, probably due to rickets. Three other children, surgical cases, were shown. One, aged three years, had tuberculous disease of the knee treated by dividing the patella, free exposure of the joint, removal of the affected membrane, and swabbing with pure carbolic acid. The child can now walk, though the movement of the joint is limited. Another child, aged twelve years, had necrosis of the shaft of the humerus. The sequestrum was removed, and the arm is gaining power. The other child, aged eleven years, had osteitis and periosteitis, treated by cutting down on the tibia, elevating the periosteum, and cutting a deep groove through the epiphysis and diaphysis. The pain has gone, and the child can stand.

Dr. Buchanan's report on last year's outbreak of typhoid at Falmouth has now been issued. He is not satisfied that the water supply was contaminated, but he recommends the company to adopt certain further precautions. He seems to think there was contamination through suction into the pipes at some part. He advises the town council to consider not only the disposal of the sewage, but the state of the drains and sewage, and further to provide an infectious hospital.

The Leicester Medical Society traces its pedigree through a medical book club back for one hundred years. On the 27th ult. its centenary was celebrated by a dinner which was attended by leading practitioners from various localities, including London.

The statutes recommended by the commissioners for the reorganization of the University of London have been laid on the table of both Houses of Parliament, and if unopposed for forty days will become law.

A new medical journal, illustrated, came out in February. It takes the title of *The Physician and Surgeon*, and is a weekly review of the medical world. It is illustrated and got up well, and takes a good tone. The price is 4*d*. I hardly see how it can pay.

You have probably heard that there is a movement in Edinburgh to get Professor Osler to accept the chair of medicine in succession to the late Sir Grainger Stewart.

We are not yet quit of influenza, though its effect on the death rate is less obvious. In fact, the total number of deaths registered in London last week was three hundred and thirty-four below the average for the corresponding weeks of the last ten years. Those due solely to influenza were fifty-two, and the number is falling.

The death rate of Dublin still excites considerable apprehension. After falling to 29.1 it suddenly rose to 51. But there seems a source of fallacy about this on account of the returns from one union having been delayed so that two weeks of that district are included in one.

Dr. William Marcet, F.R.S., died on the 4th inst. in his seventy-second year. He had been in feeble health for some time and sought winter climates. He died in Egypt. He was at one time physician to the Consumption Hospital, and wrote a small work on the larynx. He had been president of the Royal Meteorological Society, a fact which will show you one of his favorite studies. He delivered the Croonian Lecture for 1897, and took for his subject the "History of Respiration of Man."

Dr. Scattergood, of Leeds, died on the 22d ult., aged seventy-four years. He was dean of the Medical School, lecturer on forensic medicine, and consulting surgeon to the Hospital for Women and Children. He had been connected with the Leeds school for more than half a century, was chairman of the building-committee of the present school, and did great service in the negotiation for union with the Yorkshire College. His portrait by Sir G. Reid, subscribed for by his colleagues and friends, is nearly finished, and will probably be placed in the medical department of the college.

Dr. William MacNeill Whistler died on the 27th ult., aged sixty-three years. As a native of Pennsylvania he studied at the university of his State, and graduated there in 1860. He entered in the medical service of the Confederates. After the civil war he came to England, took the M.R.C.S. in 1871 and the M.R.C.P. in 1876. He was elected physician to the Throat Hospital in Golden Square, and at the great disruption of its staff went with the majority of his colleagues to establish the London Throat Hospital. His chief work is lectures on "Syphilis of the Larynx —Lesions of the Secondary and Intermediate Stages." He contributed the article on "Diseases of the Nose" to Quain's "Dictionary." He was a brother of the eminent painter.

The death is also announced of Inspector-General Thomas Guy, who entered the army in 1842 and had seen service in various countries. He retired in 1872. He translated Esmarch's treatise on "First Dressing on the Battle-field." He was a brother of Dr. William A. Guy, F.R.S., the author of the "Manual of Forensic Medicine."

LONDON, March 16, 1900.

THE midwives bill is not dead—it has attained a new lease of life by a snatch vote in the House of Commons after its advocates had given up all hope and introduced a measure into the Lords. Yet within two hours after this had been done, the government business in the Commons closed, one may say collapsed unexpectedly, and the way was left clear for private members. This bill accordingly came on for second reading. Mr. T. P. O'Connor led the opposition to it with skill and energy. He urged that the measure could only aggravate the evils it pretended to remove; that it would assuredly increase malpractices of various kinds; that ignorant women would be registered, and would undoubtedly carry on illegal practice, and that *The Lancet's* voting papers gave 5,000 against the bill out of 7,250 replies.

Mr. V. Gibbs stated that the General Medical Council and the two Royal colleges were in favor of the bill. This inaccurate assertion ought to have been contradicted at once; but, of course, no member was present who could do so, and the circumstance shows the mischief these bodies have done by paltering with the question. The Council of the College of Surgeons, a month ago, protested against the avoidance of the recommendations of the General Medical Council. Eventually the bill was read a second time and referred to the standing committee on law. It can be defeated at a later stage only by the most strenuous efforts, and there is a sad amount of apathy in the profession. As many as six hundred and forty men have not been ashamed to reply to *The Lancet's* query that they are indifferent. Their names should be published, as they are too selfish to consider their brethren.

Dr. Rentoul is again taking up arms. He proposes that every fellow who disapproves of the action of the Obstetrical Society in opening a back-door to practice should resign his connection with the society unless it immediately give up its diploma traffic. This is very well as far as it goes, but how about the indifferents? Will they trouble to resign even? And will the traitors who want to bring in an inferior order of practitioners of one branch cease their efforts? A more drastic measure is required to bring them into line; nothing less than the refusal to meet in consultation any man who approves of the diploma traffic. "I dissuade every woman within my influence from consulting any one of them." When the majority of the profession adopt this treatment, the "desired effect" will follow.

The case of Crook *vs.* Crook and Horrocks illustrates a danger to which medical men are specially exposed. Lawyers and doctors both know how often women have delusions as to their own chastity, and proceed to accuse some one of improper conduct with them. Dr. Horrocks has been subjected to the accusation of adultery on a confession of Mrs. Crook, which she afterward withdrew. She seems never to have thought of such a thing until a woman who practised palmistry told her she would be divorced and cause a scandal. The husband, himself a doctor, seems to have been first to the palmist and told his wife about her. The result of this palmistry has thus been most sad. A happy marriage has been made unhappy, and a respected, eminent physician subjected to a terrible ordeal. There was no evidence against Dr. Horrocks to corroborate Mrs. Crooks, and the jury dismissed him from the suit, but they could not agree as to her conduct. It is, therefore, possible that further proceedings may be taken. Much sympathy is expressed for Dr. Horrocks, and, although his costs have to be paid by the other party, that is only taxed costs, and the other expenses must be considerable. A subscription, in testimony of the feeling in his favor, has already been begun.

At the annual meeting of the Medico-Chirurgical Society I am told—for I was not present—that the president called for cheers for the relief of Ladysmith, of which news had arrived, and the grave and reverend fellows of this very sedate society responded heartily. The committee on suspended animation was requested to continue its investigations. The climatological committee has not completed its report on the baths and climates of England, but hopes to do so this year. The retiring president, Mr. Bryant, gave his address, which, according to custom, dealt chiefly with notices of the fellows who died during the year. These deaths I have reported as they occurred. The new president, Dr. Pavy, was then duly installed, and returned thanks for the honor of being elected.

The Medical Society of London celebrated its one hundred and twenty-seventh anniversary by a dinner on the 7th inst., at which the presidents of the sister societies, or, perhaps I should say, daughter societies, of this venerable institution were present. The toast of the visitors was responded to by the director-general of the army medical department, Surgeon-General Jameson, C.B., who naturally referred to the topic which occupies us all. In the course of his speech he remarked that the results of abdominal sections in field hospitals were not very good, while many soldiers wounded in the abdomen and left quiet had recovered. He also said that it was not desirable for wounded men to be taken too early on long railway journeys, as their wounds were very apt to become septic during the transit. Another point he emphasized was that female nurses are not only useless, but a real nuisance in field hospitals. It is desirable the public should know this, as many women continue to imagine that they could be of service, and are offering to go. The male nurses, trained in the army, are the proper persons for these positions. Female nurses should be utilized only far from the front, and there is a surplus supply of them at the Cape.

At the ordinary meeting of the society held on Monday, Mr. Freyer brought forward a new method of performing perineal prostatectomy. He started by admitting that the great majority of cases of enlarged prostate only required careful, cleanly catheterism. But in some cases an operation was advisable, and in just a few necessary. His plan was put forward as much less dangerous than suprapubic cystotomy. He removed the tumor by a pararectal incision, preceded by external urethrotomy. He described his operation in detail, and related a case. In the discussion on this, the perineal distance was mentioned as too great for intravesical growths to be reached. For these it was suggested that McGill's operation was effective, though not without risk. It was asked whether the division of the hemorrhoidal nerves, necessarily involved, had led to any inconvenience. Further, it was remarked that as enlargement of the prostate took place in different directions, operative procedures must also be varied.

Coxa vara was the subject of a subsequent paper, the author of which said he had seen seven adolescent cases, five of them being demonstrated by skiagrams, the other two being too well marked to call for the *x*-rays as an aid to the diagnosis. He thought it likely other cases would be met with if looked out for.

The Pathological Society held another of its laboratory meetings on the 6th inst. On this occasion the laboratories of the conjoint colleges were lent for the meeting, and interesting demonstrations took place. Dr. Grube related some experiments he had made which seem to confirm those of Sternberg, published a short time ago, as to the probability of diabetic coma being due to B-amidobutyric acid. He had injected this into the veins of twelve cats. Coma followed with respiration such as is seen in diabetic coma, and the urine was found to contain substances met with in diabetes, besides sugar, which last is not of much significance, as that is often found in cats after other operations.

Dr. Bain described a case of typical rheumatoid arthritis, in which he analyzed the urine during seven successive days of a fixed diet. Lactic acid was not present. The only change was a diminution of uric acid and phosphates.

Dr. Cadman described experiments on the rootlets of the ninth, tenth, and eleventh cranial nerves in cats and dogs.

Drs. Brodie and Dixon demonstrated the action of some drugs on the pulmonary circulation and bronchial muscles. Suprarenal extract increased blood pressure and led to congestion of the lungs. Muscarin caused spasm of the bronchial muscles, and they said pilocarpine also did this. Atropine neutralized the effect, as they said urethan would also do, suggesting its use in asthma. Dr. Brodie demonstrated the actions of diphtheria toxin on the spleen. The first effect was constriction of the vessels. This was rapidly followed by relaxation; then by alternate relaxation and contraction; lastly by complete paralysis.

Dr. Pavy demonstrated the production of glycosuria by exalted respiration, which he had shown some years ago to be the effect. Further, jointly with Drs. Brodie and Sian, he showed the effect of phlorizin in producing the same effect as an artificially perfused kidney. It has previously been shown that injecting this drug into the renal artery of one kidney produces this effect in that organ, while its fellow remains unaffected until the drug reaches it through the circulation.

The mortality returns are more favorable. The London death rate last week fell to 18.8, the rate of the three preceding weeks having been 22.9, 21.5, and 19. For the thirty-three large towns the rates for the last four weeks have been 25.8, 24.2, 21.2, and 20.4.

Dr. Mason, of Dublin, died on Saturday, aged eighty years. This venerable gentleman had held an important position as a teacher of anatomy and of medicine for about a quarter of a century, chiefly in connection with the Ledwich school, of which he was one of the founders, but also as physician to Mercer's Hospital. I mentioned in January that his son had died. Now the father follows.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

The Occupation of Bloemfontein.—Since my last letter Bloemfontein, the capital of the Orange Free State, which was clearly the objective of Lord Roberts' march to the eastward, has been occupied by British troops. The city capitulated without resistance upon a message from the field marshal that he should commence shelling in twenty-four hours, unless the inevitable was recognized, and submission made. President Steyn fled northward, and the keys of the public offices were sent out to Lord Roberts. The occupation of Bloemfontein marks a distinct stage in the war, and all humane people must rejoice that its surrender did not follow upon any protracted siege or loss of life through stubborn fighting. There are no medical aspects from which to view the taking of the city; but, as far as the British are concerned, the bloodless victory is of good medical omen. The troops under Lord Roberts have now been engaged in six weeks' hard marching, varied with some fierce fighting. They will at length obtain a rest which will certainly save many of them from hospital treatment.

Intombi Camp contained, after the relief of Ladysmith, twenty-one hundred sick. By the second week in March a large proportion of these were convalescent, while others had been deported to more sanitary places on the lines of communication. By medical advice Ladysmith was evacuated as soon as possible after it was relieved.

The Casualties among the Royal Army Medical

Corps.—The British military medical officers have borne their share of fighting in carrying out their professional duties, and have not come unscathed out of the war. Their casualties by the beginning of March numbered four killed, three dead from disease, and fourteen wounded. Those killed in action were Major Edward W. Gray, Captain Matthew L. Hughes, and Lieutenant Hugh B. Onraet. All three were fine officers; but Captain Hughes was something more. He was one of the most promising scientific men in the service, and had already made researches into certain climatic diseases that were recognized by epidemiologists as being of great importance. Captain R. H. G. E. Holt, the fourth officer whose death is recorded, died from wounds received during his gallant behavior at the front in Sir Redvers Buller's operations at the Tugela.

The Imperial Yeomanry Hospital.—Since the inception of the scheme of this hospital by Lady Georgiana Curzon and Lady Chesham, £100,000 have been subscribed for its purposes. With this money a base hospital of five hundred and twenty beds has been equipped (I have already described the site chosen for its establishment to your readers); while a field hospital of one hundred beds has also been prepared, and a complete bearer company. Major Stonham, senior surgeon to the Westminster Hospital, who has gone to Africa as chief surgeon to the Imperial Yeomanry Hospital, has a grand but responsible billet.

The Use of Hollow-Nosed Bullets.—There is no longer any doubt that some of the Boers have used so-called explosive bullets. A large number of hollow-nosed bullets, such as are used in the pursuit of big game, have been found upon Lord Roberts' Boer prisoners, while the surgeons with the British advancing column have felt certain, from the more serious nature of the wounds, that explosives were being used. This probably means that other bullets are running short with the federal troops, for the Boer generals would not willingly risk the loss of the sympathies of Europe by the employment of weapons that are universally condemned by civilized nations. The Boers confidently assert that in using hollow-nosed bullets they are only following the example of the British, who have employed Dumdum bullets. No such bullets have been served out to the British soldiers for the campaign, and the persistency of the stories in European papers was a subject of wonder, until a Boer surgeon explained to a Dutch paper the possible origin of the mistake. It appears that many Lee-Mitford bullets, the bullets used by the British, have been manufactured at the Dumdum factory and issued to the troops in cases bearing the name of that factory. These cases have been noticed, and led to the obviously genuine belief among the Boers that the British were using explosives. The surgeon who suggests the explanation of the mistake says that he looked for the effects of explosive bullets among the Boer wounded, but had been unable to find them.

The Plight of Mafeking by the second week in March was becoming acute. Messages had reached telegraph stations both north and south of the beleaguered hamlet stating that the garrison was reduced entirely to siege soup made of horses and dogs, that the horses' provender was being made into bread, that the mortality among the natives was very high, and among the few women and children still left terrible. A relief column has started northward from Kimberley, and another has been for weeks coming southward from northern Rhodesia; but whether either will arrive in time is doubtful. The water supply of Mafeking is said to be polluted, and the medical men with the relief columns anticipate finding a large proportion of Colonel Baden-Powell's tiny force prostrate with typhoid fever and dysentery. Since the beginning of the siege two hundred and ninety-two persons have been killed and wounded or died of disease at Mafeking out of a total of less than two thousand.

Yet another Hospital Ship, the *Avoca*, is now riding at Durban. As in the case of the *Lismore Castle*, the transformation from a passenger steamer to a hospital ship was entirely carried out by Durban artificers.

ACTING ASSISTANT SURGEONS IN THE ARMY.

To the Editor of the Medical Record.

Sir: In your issue of March 17, 1900, you mention the dissatisfaction that exists among the acting assistant surgeons of the army who served in the Spanish-American war, etc. This is not a new grievance, and is not confined to those who served in the Spanish-American war and the Philippine rebellion, but it has continued to exist since the Mexican war, and no apparent effort seems to be made by the medical department of the army to remedy it, and so long as physicians can be obtained to fill this position it will probably continue to exist.

Every person who knows the position of the acting assistant surgeon of the army knows his grievance is a just one; but there it seems to end. Your suggestion that it would be better policy to place the status of these men on a satisfactory footing than to continue an out-of-date and unpopular system, ought to meet with the approval of the medical profession.

There is a bill now pending before the United States Senate, S. 1782, introduced by Senator Thomas C. Platt, which will, with a slight modification, give to the acting assistant surgeon of the United States army the same status, rank, etc., in the army as is now given to the acting assistant surgeons of the United States navy, which is that of an assistant surgeon of the United States navy.

The injustice of depriving an acting assistant surgeon of the army (who has to sacrifice home comforts and follow the army in the field and share the dangers with the troops) of salary, if he is wounded or disabled by disease contracted while in discharge of his duty, is apparent, when a government clerk in Washington or elsewhere, who is exposed to no danger and is not deprived of home comforts, is allowed one month's vacation with full pay each year.

You are quite right in your statement that an acting assistant surgeon of the army cannot receive a medal for bravery, however distinguished his services may have been. This is the ruling of the War Department.

I take this opportunity to commend the surgeon-general of the navy for his success in obtaining the proper recognition of the acting assistant surgeons of the navy in the late war, and to call the attention of the medical profession to his interest in the medical staff. I submit his letter, which will show the benefits obtained by the act approved May 4, 1898, for the acting assistant surgeon of the navy, in the late war, compared with his condition previously. It is an example that the medical department of the army might follow with advantage, and would be of benefit to the members of the medical profession who enter the service.

"53,961.

"Washington, D. C., February 9, 1900.

"Dear Sir: Referring to your letter of February 8th, I would state that the law authorizing the appointment of acting assistant surgeons in the United States navy during the War of the Rebellion is contained in the act approved July 24, 1861, and in section 1411 of the Revised Statutes, which states: 'The Secretary of the Navy may appoint for temporary service such acting assistant surgeons as the exigencies of the service may require, who shall receive the compensation of assistant surgeons.'

"The volunteer medical officers during the War of the Rebellion were not commissioned. They were appointed by the Secretary of the Navy. The law does not mention their rank; it simply refers to their compensation. They, however, wore the uniform of an assistant surgeon and received all the consideration shown to an assistant surgeon in the regular service. The act approved May 4, 1898, is the only one conferring rank on acting assistant surgeons. The acting assistant surgeons in the United States navy, who served during the War of the Rebellion, were not appointed by the President.

"Very truly yours,
"(Signed) W. K. Van Reypen,
"*Surgeon General, United States Navy.*"

On February 13, 1900, General Orders were issued from Headquarters of the Army, adjutant-general's office, with the approval of names of the Secretary of War, which contained a list of names of persons who have distinguished themselves in the Spanish-American war by "especially meritorious acts or conduct in service." Among these names are several members of the medical profession who should receive medals of honor, and it seems to me that these medical heroes deserve to be mentioned in every medical journal published in the United States. I have culled the following from the General Orders, viz.:

1898.

June 24, and July 1 to 3. Dr. John Guitéras, now out of service (then acting assistant surgeon, United States army): For gallant and meritorious conduct in attending the sick and wounded on the field of battle at Las Guasimas and Santiago.

June 24. Dr. José M. Delgado, acting assistant surgeon, United States army: For distinguished service, by being constantly on the firing line, exposing himself in the most conspicuous manner to the fire of the enemy, in the care of the wounded, in the battle of Las Guasimas, Cuba.

June 30. Dr. Maximilian Lund, then acting assistant surgeon, United States army: For especially meritorious conduct attending the sick and wounded under fire, during the reconnoissance at Tayabacoa, Cuba, and subsequently in making extraordinary efforts to secure their embarkation on the transports.

July 1. Captain Thomas R. Marshall, assistant surgeon, Forty-first infantry, U. S. V. (then acting assistant surgeon, United States army): For gallant and meritorious conduct during the battle of Santiago, Cuba, where, under fire, he cared for the sick and wounded.

Dr. Thomas Y. Aby, now out of service (then acting assistant surgeon, United States army): For gallant conduct in attending to the wounded on the battlefield and the sick in the trenches, while himself ill from fever and heat; this at the battle of Santiago, Cuba.

Dr. Harry W. Danforth, deceased (then acting assisting surgeon, United States army): For especially meritorious service rendered during the battle of Santiago, Cuba, in caring for sick and wounded. He was killed while at work at the dressing station at the "Bloody Ford," on the morning of July 2.

Dr. Francisco E. Menocal, now out of service (then acting assistant surgeon, United States army): For gallant and meritorious conduct during the battle of Santiago, Cuba, where, under fire, he cared for the sick and wounded.

July. Major Frederick J. Combe, brigade surgeon United States Volunteers (then acting assistant surgeon, United States army): For especially meritorious service during the Santiago campaign, in establishing, with the aid of others, the division hospital at the extreme front, carrying a portion of the supplies for several miles on his back during drenching rains and in deep mud.

Drs. Hamilton P. Jones and William W. Calhoun, acting assistant surgeons, United States army: For especially meritorious service during the Santiago campaign, in establishing, with the aid of others, the division hospital at the extreme front, carrying a large portion of the supplies for several miles on their backs during drenching rains and in deep mud.

Dr. G. Goodfellow, civilian and volunteer aid to General William R. Shafter: For especially meritorious services, professional and military, during the campaign in Cuba.

July and August. Dr. Nicholas Senn, now out of service (then lieutenant-colonel and chief surgeon, United States Volunteers): For his surgical work during the Cuban campaign, and for making a scientific study into the causes of typhoid fever among the troops.

August 13. Major Frank H. Titus, surgeon United States Volunteer staff (then acting assistant surgeon, United States army): For establishing a first-aid hospital in the village church, and for the manner in which he came to the front with a detachment of the hospital corps through a heavy indirect fire, and the efficient manner in which he rendered services to the wounded at the battle of Manila, Philippine Islands.

August. Colonel Charles R. Greenleaf, assistant surgeon-general, United States army: For most efficient and hazardous services in the medical department in Cuba and during the Puerto Rican campaign, especially in the yellow-fever camps.

General Lawton's last act was to recognize the bravery of Dr. E. K. Johnstone as follows:

"Army Corps, Manila, P. I. December 18, 1899. —E. K. Johnstone, acting assistant surgeon, United States Army, was attached to Kent's battery. His performance of professional duty in field and barracks had hitherto attracted the favorable attention of the officers of this command; but the exceptional daring and high sense of duty exhibited by him during this expedition, particularly at the battle of Zapote River, when he gave the immediate first aid to the wounded along the river bank and on the bridge, deserve material recognition.

"It is recommended that this gallant young surgeon be commissioned either major and brigade surgeon or major and surgeon of volunteers.

"Very respectfully,
"W. H. Lawton,
"*Major-General Commanding, First Division U. S. Volunteers.*"

The above just tribute of the War Department to the heroic deeds of the members of the medical profession who volunteered their services in the late war ought to be sufficient to receive the gratitude of a patriotic nation, and should obtain for the acting assistant surgeons of the army the recognition they deserve and what they ask for from Congress, as well as the approval of the surgeon-general of the army.

John T. Nagle, M.D.

THE MORTON-ROCKWELL DISCUSSION.

To the Editor of the Medical Record.

Sir: I would like to refer the readers of the Morton-Rockwell discussion to a quotation from Beck's Murray, "A System of Materia Medica and Pharmacy," published in 1828, vol. ii., page 240: "Electricity is applied medicinally under the form of the stream or continued discharge of the fluid, under that of the sparks, and under that of shock; the first being the most gentle, the second being more active, and the last being much more powerful than either of the others. At the introduction of electricity as a remedy, it was highly celebrated for its efficacy in a number of diseases. It is usually applied under the form of sparks; the spark is communicated, etc., from the machine while the machine is being worked. The shock is given by discharging the Leyden phial." Again from "Braithwaite's Retrospect," 1845, part xi., page 33: "The second fact is, that if the nerves of a living animal be submitted to the passage of the electric current, renewed at short intervals (static induced current), tetanic contractions are excited."

C. L. Squire.

March 24, 1900.

PURE FOODS AND DRUGS.

To the Editor of the Medical Record.

Sir: Apropos of your editorial upon the adulteration of food in your issue of March 10th, it is of further interest to note that the Senate committee upon manufactures in its recent report suggested that a board be appointed by the Department of Agriculture to have full control of the standards of foods, drinks, and drugs, and that the board use the "United States Pharmacopœia" as its guide. Thus a step has been taken to secure legislation of a national character, as suggested two years ago by the National Pure Food and Drug Congress. The object and intent of such a board would be to protect the right of the individual to obtain in foods, drinks, and drugs, exactly what he requires, not alone from the standpoint of obtaining his money's worth, but also to protect him from injuring his health. "Patent medicines," as well as drugs, would, therefore, come under the control of this board, at least to this extent: A patent medicine would have to be harmless to any individual, and could not be sold for more than its true valuation. Thus the sugar-and-water preparations, as well as the "cures" containing injurious amounts of opiates and alcohol, would no longer be allowed on the market, unless, perhaps, a true formula accompanied each package. Every well-informed physician knows that it would be better for the public to continue using pepper of which sixty per cent. is cocoanut shells, than for one individual to take a patent medicine. Who of us has not seen the ruined intestinal tract from the free use of cathartics, or does not know of the consumptive dying of cirrhosis, or the neurasthenics—yes, and maniacs—from the employment of headache cures, "pain killers," etc.?

If I am correct in my opinion that the jurisdiction of this board would extend over the control of patent medicines, would it not then be well for the various medical societies to lend their influence to the immediate passage of such a bill? I would suggest that resolutions indorsing this committee's recommendations to the Senate be forwarded to Washington immediately.

John Joseph Nutt, M.D.

San Diego, Cal.

REFORM IN THE AMBULANCE SYSTEM.

To the Editor of the Medical Record.

Sir: In an editorial upon "Needed Reforms in Our Ambulance System," of your issue of January 6th, you suggest that the ambulance service be undertaken as the closing duties of the surgeon's hospital career. A serious objection to such a change would be the impatience of the surgeon to launch himself out into the world, and his great temptation to resign his position. It is the promised reward of house-surgeonship which keeps the interne, and especially the ambulance surgeon, contented. After one month of first and second ambulance call at Bellevue Hospital the surgeon has had practically all there is to be gained from the service. After that each week—each day even—may bring to him some new experience, but he does not learn enough to repay him by any means for his long hours and hard work. There occur to me two ways in which the ambulance service might be changed to advantage. One is that the hospital surgeon should do his ambulance duty during his last six months, as you suggest, but that he should receive a salary during that time. Most of the surgeons would be glad of the opportunity to make a little money at the end of so many years of hard study and work in the colleges and hospital, and as experienced surgeons and salaried officials they would indeed reform the ambulance system. My other suggestion is that every hospital or dispensary receiving any moneys whatsoever from the city should be required to keep one or more ambulances in service and a sufficient number of beds to care for all the emergency cases they may receive. This would divide the city up into such small districts for ambulance service, that its adoption with a rule that all patients are to be brought to the hospital, would lessen to a minimum the dangers from a wrong diagnosis upon the part of the surgeon.

John Joseph Nutt, B.L., M.D.,
Late House Surgeon, Bellevue Hospital.

San Diego, Cal., March 10, 1900.

Surgical Suggestions.

Duodenal Ulcer should be treated on the lines laid down for gastric ulcer. Operation is indicated in repeated and exhaustive bleeding with symptoms of acute perforation. Perforation usually takes place in the peritoneal cavity. The symptoms are either those of generalized sepsis, suppuration, or perforation of the gall-bladder, peritonitis, etc. Differential diagnosis from ulcer of the stomach is, as a rule, impossible. Bleeding is an almost constant symptom, the blood appearing both in the stools and vomited matter. The mortality is high—there were twenty-four deaths in twenty-eight cases of perforation treated surgically.—Pagenstecher, *Deutsche Zeitschrift für Chirurgie*, Bd. 52, Hft. 5, 6.

Surgical Hints.—In phlegmonous conditions affecting the hand or forearm, long-continued baths in mild antiseptic solutions are of great usefulness. The ordinary elongated fish-boiler is very convenient for this purpose, as the whole hand and forearm may be placed in it, and allowed to remain in it for hours at a time.—In making plaster-of-Paris bandages, or in using those that are ready-made, see if the plaster appears to be damp. If so it will not set well, but may be greatly improved by placing it in the kitchen oven for a short time.—Pain occurring symmetrically about both shoulders in children should lead to examination for cervical caries. In rheumatism the pain is of a very different character, and practically never affects both sides so evenly.—In concussion of the brain death often takes place through paralysis of the respiratory centres. The prompt use of artificial respiration may tide the patient over his danger. If the heart centres appear to be involved we must stimulate, and for this purpose there is nothing better than heat applied to the precordial region, together with such drugs as nitrite of amyl, nitroglycerin, strychnine, ammonia, etc. Alcohol and strong coffee may be administered in enemata.—In partial amputations of the foot it is essential to prevent contraction of the tendo Achillis, either by tenotomy or by the use of splints, otherwise the foot is likely to point downward, which will much interfere with the fitting of an artificial limb. The tendency of surgeons is more and more to discard these partial amputations and cut above the malleoli, an operation giving less chance of sepsis, a better stump for an artificial limb, and greater facility of performance.—Always prepare packages of sterilized sponges, made out of cotton, or cotton and gauze, and always containing the same number, say six. Then if the operation is in a cavity, one will always know whether he must account for six, twelve, eighteen, etc.—*International Journal of Surgery*, December, 1899.

The Prevention of Cancer.—Cancer of the uterus is preventable. If we believe, as Emmet has conclusively proved, that cancer of the cervix almost always begins in the cicatricial tissue in the angle of a laceration, then by removing the cicatricial tissue and repairing the laceration we would put a stop to this dreadful disease, at least so far as the cervix uteri is concerned. And this is just what has happened in my own experience. I have made it a practice at the clinics and hospitals to repair every lacerated cervix that comes before me, with the result that out of five thousand gynæcological cases, of which there are complete histories, there are at present less than twenty-five of marked laceration of the cervix remaining unrepaired. The result is most striking: instead of having two or three cases a month of cancer of the uterus, as I had ten years ago, I now see only three or four in a whole year.—A. Lapthorn Smith.

The Incidence of Cancer.—Oöphorectomy, either combined with removal of carcinoma of the mamma or performed subsequently in consequence of recurrence, or undertaken as a last resort in inoperable cases, has sometimes produced remarkable amelioration of symptoms, and often total disappearance of undoubted cancerous tumors of the breast. The good effect of this operation has been attributed either to atrophy of the breast consequent upon removal of the ovaries, or to suspension of some occult influence supposed to be exercised by that upon the breast. A very serious drawback to both these theories is that they do not explain the undoubted benefit, marvellous indeed in some cases, which follows oöphorectomy when it is performed for recurrent scirrhus in the pectoral region, many months after all breast tissue has been removed in a former operation. . . . Oöphorectomy as a mode of treatment of cancer is so frequently combined with the administration of the thyroid extract that it is difficult to apportion their respective shares in any improvement that takes place.—Dr. Arthur Jackson, *British Medical Journal*, November 25th.

Methods of Suturing Wounds.—Drs. W. Watson Cheyne and F. F. Burchard ("Manual of Surgical Treatment," p. 159) give the following summary regarding the method used: When there is no tension on the edges of the wound, and a very small, fine scar is required, either buried sutures may be used with no sutures in the skin at all, or the finest horsehair may be employed. When very great tension is present, button sutures should be used, after undermining the flaps, and, in addition to them, deep relaxation sutures of silk wire should also be inserted, these being sufficiently numerous to separate the edges of the flap, which should be coapted by a fine, continuous buttonhole stitch. When there is only a moderate amount of tension, interrupted silkworm gut, reinforced by a fine, continuous coaptation stitch of silk, may be made use of; and lastly, when there is little or no tension, and stitch marks are unimportant, the edges may be appoximated by means of thick or fine silk.

Rigid Perineum.—

℞ Chloroform	℥ ij.
Ether	ʒ i.
Spt. colognien	ʒ i.

M. S. Apply locally.

Indispensable and infallible.—Southworth.

Painless Lithotrity.—Rectal and vesical injections of antipyrin lessen vesical sensibility. In a case operated upon by Guyon, crushing and evacuating the stone was painless after—

℞ Antipyrin	gr. xxiv.
Tr. opii	gtt. x.
Aquæ	℥ iij

had been injected per rectum three-quarters of an hour before the operation.—*Ann. des Mal. des Org. Génit.-Urin.*, No. 7, 1899.

Stricture.—Massage in the perineo-bulbar region for five minutes daily with—

℞ Potass. iod	4 gm.
Lanolin,	
Ung. aq. ros	āā 15 "

—Bazy.

Excoriations on Hemorrhoids.—

℞ Chrysarobin	0.08 cgm.
Iodoform	0.02 "
Ext. bellad	0.01 "
Ol. theobrom	2 gm.

For one suppository. Use two or three daily.

—Boas.

Aneurism, suggesting pulmonary tuberculosis, was detected by *x*-ray examination. Other cases showing the value of *x*-rays in suspected aneurism are given.—F. H. Williams, *Boston Medical and Surgical Journal*, January 18th.

Suppurative Teno-Synovitis may be produced in one of three ways: First, by direct septic infection of the synovial sheath by a wound. Second, by a secondary infection from adjacent structures. This is seen frequently in the finger, where an infective cellulitis spreads from the connective tissue about the vaginal sheath into its interior. An infective process in a phalanx or joint may extend in a similar manner. Third, in rare cases by a secondary process, as in pyæmia," scarlet fever, typhoid fever, etc.—W. Arbuthnot Lane.

Surgical Treatment of Fibromyomata of the Uterus.—(1) The surgical treatment of fibromyomata should consist in their removal. (2) The bilateral removal of the adnexa by laparotomy has been generally abandoned and is indicated only as a complement of ovariotomy when uterine fibromata exist which do not cause grave symptoms. (3) The removal of fibromyomata should be made through the vagina when the operation is easily made by that route. (4) Laparotomy is preferable when vaginal hysterectomy appears to present real difficulties. (5) Myomectomy and vaginal hysterectomy should be made by anterior simple hemisection of the uterus or in a V-shape. (6) Large interstitial tumors are scooped out by a cutting tube and removed by lozenge-shaped morcellation. (7) The removal of large pedunculated fibromata by laparotomy presents special indications. Abdominal myomectomy is only rarely indicated. (8) The operation of choice for large and multiple interstitial fibromata is complete abdominal hysterectomy by subperitoneal decortication of the lower segment of the uterus, with closure of the pelvic peritoneum.—E. Doyen.

Reviews and Notices.

Treatment of Diseases of the Nervous System: A Manual for Practitioners. By Joseph Collins, M.D., Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School; Visiting Physician to the New York City Hospital. Illustrated by 23 Engravings. New York: William Wood & Company. 1900.

"Books cannot always please, however good.
Minds are not ever craving for their food."

THE book which Dr. Collins has written may not please all, but many must surely be craving for the food he offers. It will be a surprise to the general practitioner that a book of six hundred pages should be written on the mere treatment of nervous diseases. There is a general impression abroad that the treatment of nervous diseases does not amount to much; that the diagnosis is the important matter; and that, if it were not for the difficulty which the average practitioner experiences in recognizing nervous diseases, the sphere of the neurologist's usefulness would be distressingly limited. The every-day experience of the specialist proves that there is indeed an art in treating nervous diseases and nervous patients, and his fellow-neurologists will be profoundly grateful to the author of the book we are reviewing for proving to the medical public that there is much to be said regarding the therapeutics of nervous diseases.

Dr. Collins has had a grateful task before him, and has acquitted himself well of it. His style, though not terse, is vigorous; his manner combative and original, and his conclusions on every subject are almost certain to be both interesting and suggestive. The author was fortunate enough not to have been hampered by tradition, and though he sets out to speak of the therapeutics mainly, it is natural that he should also have much to say about the diagnosis and the pathology of the various diseases which he has considered. No fault is to be found with him for having written a condensed general treatise on nervous diseases. He has had the special privilege, moreover, and no one could deny him the right, to say what he cared to say and to leave much unsaid that he did not choose to dilate upon. We have noted only one rather striking omission in the chapter on the treatment of cerebral apoplexy. Very properly the author considers cerebral hemorrhage and softening of the brain from embolism and thrombosis; he discusses the treatment appropriate to each condition; but, although he gives the etiology and the pathology of cerebral hemorrhage and of embolism and thrombosis, he fails to state the most important thing—namely, how the practitioner who is attending at the bedside of a patient just laid low from apoplexy can tell whether the apoplectic stroke is due to hemorrhage, embolism, or thrombosis. A table giving the symptoms of the various modes of onset of the apoplectic attack would be very helpful, and we trust that in future editions—which the book is certain to have—such a table will be inserted. In almost every other chapter of the book the information which the author gives regarding the diagnosis and pathology contains practically all that the physician who wishes to treat a patient intelligently needs to know at the time such treatment is projected, and this means much as an indorsement of the extremely practical character of the book.

The general plan of this manual is to be commended. Part I. consists of a chapter on the "Causes and Origination of Diseases of the Nervous System," and of a second chapter on the "Prevention of Diseases of the Nervous System." Both these chapters are so thoroughly characteristic of the author's manner of writing and of thinking that we trust all will become acquainted with their contents. Hereditary and congenital influences, the neuropathic diathesis, the stigmata of degeneracy, the rôle of infection, and the influence of syphilis are thoroughly discussed. The author has a tilt with those who are constantly speaking and writing of "syphilis of the nervous system" as though it were "a disease with defined anatomical foundation and unvarying morbid changes." We know of no recent writer of repute who has spoken thus loosely of syphilis of the nervous system, and we find that the author has given a very able presentation of the subject along the orthodox lines adopted by a number of his predecessors. There is no reason to disagree with him in his general discussion of this special question, except that he makes syphilis responsible for certain diseases which others of equally large experience would not ascribe to it. Only one author of any note has maintained—and his conclusions were based on insufficient evidence—that a majority of infantile cerebral palsies were due to syphilis. The statistical evidence that has been carefully collected by previous writers points to the very opposite conclusion. We can subscribe, however, to Collins' fling at the "*laisser-aller*" fashion in which antisyphilitic treatment is generally conducted. If he will stir up the syphilologists to greater efforts in this respect, he will deserve the gratitude of the medical profession and of the laity. Chapter III. contains a very useful list of the drugs employed in the treatment of nervous diseases, and stamps the author as a firm believer in medicinal agents. In maintaining this position he is evidently anxious to remain in good company; but he does not, by any means, limit his therapeutic measures to the exhibition of drugs. In the chapters on hydrotherapy, massage, and electrotherapy, as well as the one on exercise, rest, and occupation, Collins shows that he has full regard for every remedial measure calculated to benefit the patient. His remarks on hydrotherapy are thoroughly sane. They may not meet with the approval of those who consider hydriatric treatment a panacea, and his fling at "institutional" treatment may arouse some opposition; but he has unquestionably done good work by showing that great benefit can be derived from hydriatric procedures practised in the patient's home.

After devoting one hundred and forty-four pages to the consideration of the general methods of treatment, the writer enters upon a detailed consideration of the treatment of various diseases. These are discussed in practical sequence, and the order, although somewhat different from that adopted in the ordinary text-book, is such as to be hardly open to serious criticism. But we cannot quite understand why, after a chapter on the treatment of cerebral apoplexy, there should be another near the close of the book on hemiplegia. In the consideration of tabes, the author gives a detailed account of recent methods for the re-education of the ataxic extremities, with a series of serviceable illustrations, which will help the practitioner unacquainted with these methods to inaugurate them in any case that may be under his care. While the treatment of the chronic disorders of the central nervous system is considered briefly enough, a very detailed account is given of the proper manner of handling the large number of functional diseases which come under the observation of the practitioner and the specialist. It cannot be our purpose to enter into a consideration of the various forms of treatment recommended by the author, and it will suffice to state that he is entirely in line with the most modern ideas regarding the therapeutics of the nervous system. He is generally conservative enough. In his partial indorsement of cerebellar operations he has perhaps been a little less conservative than others would have been; but individual experience is bound to leave its imprint upon the work of every writer who does not merely copy from others, and so we have no fault to find with Collins' position in this matter, all the more as he is excessively careful in the general consideration of the surgery of cerebral tumors.

The general practitioner will find Dr. Collins' work all that it claims to be; and even specialists will find it a convenient book of reference, if they are anxious to determine what special methods of treatment had been advocated in any given disease. The book deserves to be widely read and carefully studied.

The Dispensatory of the United States of America. By Dr. George B. Wood and Dr. Franklin Bache. Eighteenth edition, thoroughly revised and largely rewritten, with illustrations, by H. C. Wood, M.D., LL.D., Joseph P. Remington, Ph.M., F.C.S., and Samuel P. Sadtler, Ph.D., F.C.S. Philadelphia: J. B. Lippincott Company. 1899.

THE advances made in drug study since 1833, when the first edition of this standard work was issued, are in a measure reflected in the increase in size of the volume now necessary to cover the great number of remedial agents. Aside from the accurate information concerning materia medica and the medical properties of drugs and their uses, we have, first, a glossary of terms employed; an index of diseases, giving the reference to the particular remedy mentioned; and in Part III. we find the subjects formerly embraced in the appendix, with the additions of official tests and various tables, many of which are now introduced for the first time. A feature of value is the alphabetical table of formulæ and molecular weights. The index alone takes up just one hundred of the two thousand pages. All who have had to do with the production of so important a work, representing such a vast amount of research, are subjects for congratulation.

The Cost of Living as Modified by Sanitary Science. By Ellen H. Richards, Instructor in Sanitary Chemistry in the Massachusetts Institute of Technology. New York: John Wiley & Sons. London: Chapman & Hall. 1899.

This little duodecimo of one hundred and twenty pages, without preface, starts with Chapter I. on "Standards of Living." The author then studies the service of sanitary science in increasing productive life, household expenditure, rent, operating-expenses, food, intellectual and emotional life, etc. A valuable and well-written book.

Recollections of a Rebel Surgeon (and other sketches); or, In the Doctor's Sappy Days. By F. E. Daniel, M.D. Illustrated. Austin, Tex.: Von Boeckmann, Schutze & Co.

Literary physicians keep springing up in various quarters. Southern writers (in the South) have as yet been slow in going into non-medical work. We have, however, had in this city two notable examples of Southerners who have recently made a success with the pen outside of professional writing. Dr. Daniel, of the *Texas Medical Journal*, gives in his preface an explanation of the reasons why the average Southerner speaks as incorrectly as he does. He then makes the "Old Doctor" tell some "alleged" humorous, sad, and pathetic stories, all said to be true. The literary merit is not of a high order; the illustrations are very crude, and too much slang is indulged in to make pleasant reading.

Consumption and Chronic Diseases: A Hygienic Cure at Patient's Home of Incipient and Advanced Cases. A Popular Exposition of the "Open-Air Treatment," with Latest Developments and Improvements. By Emmet Densmore, M.D. London: Swan, Sonnenschein & Co., Paternoster Square. New York: The Stillman Publishing Company, 15 Sterling Place, Borough of Brooklyn. Pp. 198.

The author contends most valiantly for the efficacy of the Nordrach treatment by fresh air and overfeeding, and cites many instances in which those living in cities who had advanced pulmonary tuberculosis have been wonderfully helped. There is undoubted truth in his contentions, although they are perhaps tinged too much with a sanguine enthusiasm, leaving the reader with the impression that failure would be exceptional. It is but another proof that the profession is relying more and more upon hygiene to combat this scourge.

Chirurgie du Foie et des Voies Biliaires. Par J. Pantaloni (Marseilles). Avec 348 figures dans le texte. Paris: Institut de Bibliographie Scientifique. 1899.

To the surgeon who wishes to have a complete and succinct history of the status of the surgery of the liver, the gall bladder and its ducts, this volume cannot fail to be of great use. The subject is taken up systematically, beginning with the simplest operative procedures and progressing to the most difficult, and there are numerous very good explanatory illustrations. The author has evidently used great care in examining the literature of his subject, and has been successful in bringing it up to date, and we are glad to note instances of credit due to American surgeons placed where it belongs—something not too common in European writings. The descriptions of operations are lucid, and the various forms of mechanical aids are well illustrated. The volume is a scholarly production and an excellent addition to any library.

International Clinics. Edited by Judson Daland, M.D., Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania. Vol. III. Ninth series. Philadelphia: J. B. Lippincott Company. 1899.

This quarterly of clinical lectures and specially prepared articles on treatment and drugs continues to receive contributions from the best men of this and other countries. This issue contains the names, among others, of Baginsky, Bernhardt, Dieulafoy, Gärtner, Gerhardt, Goldscheider (who has an excellent article on the method of treating tabes patients), Graucher, Helferich, Krehl, and Robin, not to mention many of the best-known American names. In a work intended for practitioners, it would seem somewhat out of place to devote so much space to definitions and generalities with which every student is familiar, as has been done by the writer of the last specially prepared article.

Contribution à l'Étude des Obsessions et des Impulsions à l'Homicide et au Suicide. Par Georges Carrier. Paris: Felix Alcan. 1899.

This is one of the publications issued by the *Progrès Médical*, and deals with the tendencies to suicide and homicide in degenerates, considered from the medico-legal standpoint. It is a very readable little brochure.

Chirurgie du Rectum. Par E. Quénu et H. Hartmann. Vol. II. Paris: G. Steinheil. 1899.

The second portion of this excellent work on rectal diseases treats of the tumors of the region, adenomas, villous, fibrous, lipomatous, cancer, sarcoma, myxoma, enchondroma, lymphadenoma, dermoid cysts, and angiomata. Like the first volume, it is superbly illustrated, having seventy-four figures in the text and twenty-eight plates, many colored, as insets. The authors are to be congratulated upon so successful a presentation of their investigations and years of labor, as are the editors upon the quality of the press-work.

A Practical Treatise on Medical Diagnosis, for Students and Physicians. By John H. Musser, M.D., Professor of Clinical Medicine in the University of Pennsylvania, Physician to the Philadelphia and the Presbyterian Hospitals, Consulting Physician to the Woman's Hospital of Philadelphia and to the West Philadelphia Hospital for Women, Fellow of the College of Physicians of Philadelphia, Member of the Association of American Physicians, etc. Third edition, revised and enlarged. Illustrated with 253 woodcuts and 48 colored plates. Philadelphia and New York: Lea Brothers & Co. Pp. 1082.

The third edition of this work is a considerable improvement over its predecessors, good as they were. The chapter on nervous diseases has been entirely rewritten, while changes in the articles on the sputum and on the eye are to be specially noted. Too high commendation cannot be paid to the pictorial records of physical signs, where at one glance the disease picture is seen and grasped in a manner more like that which the clinician employs and less like that of the text-book. It is a most complete work, richly and expensively illustrated and thoroughly modern. The first section describes the data obtained by inquiry and observation, and serves to point out how to ask questions and how to see; the full description of the blood as regards diagnosis, and the symptomatology of general morbid processes. Part II. takes up in order the nose and larynx, lungs and pleuræ, heart, blood-vessels, and the mediastinum; mouth, fauces, pharynx, and œsophagus; stomach, intestines, and peritoneum; liver, spleen, and pancreas; kidneys and nervous system.

Anæmia and Some of the Diseases of the Blood-forming Organs and Ductless Glands. By Byrom Bramwell, M.D., F.R.C.P. Ed., F.R.S. Ed., Physician to the Royal Infirmary, Edinburgh; Lecturer on the Principles and Practice of Medicine and on Clinical Medicine in the School of the Royal Colleges, Edinburgh; etc. Philadelphia: P. Blakiston's Son & Co. 1899. Pp. 450.

When the author's well-known clinical ability and clearness of description are remembered, this work hardly needs an introduction. From start to finish it abounds in magnificent pen pictures, logical discussions of theories, and commonsense methods of treatment. After a short general description of what anæmia is, its causes, forms, general clinical symptoms, and microscopic characteristics, he proceeds to treat in an exhaustive manner the subject of chlorosis. The usual and unusual symptoms are all well described, and the treatment of obstinate cases by very large doses of iron is especially insisted upon. Among his many useful methods of teaching particularly to be noted is the tabulation of eighty cases with regard to the ages, number of red corpuscles, percentage of hæmoglobin, conditions of menstruation and bowels, and specially noteworthy peculiarities in each case. The next section is devoted to pernicious anæmia, treated in much the same manner, and containing all the important points in differential diagnosis. Here again he has tabulated forty-five cases with reference to age, sex, hæmoglobin, red-blood-corpuscle count, and the relative numbers of megalocytes, microcytes, and white corpuscles; the marked or moderate showing of poikilocytosis, the presence or absence of marked prostration, loss of weight, hemorrhages, dropsy, vomiting, diarrhœa, jaundice, and fever, with the characteristics of the urine. The pathological physiology of the disease is discussed most fully and in an interesting manner. It will be remembered that the arsenic treatment was introduced by the author and has since become universal. Besides the table just mentioned, a most interesting summary of forty-eight cases is added, giving a succinct history of each, its duration and treatment. Leucocythæmia's varieties, etiological factors, morbid anatomy, clinical history, diagnosis, and differential diagnosis, prognosis, and treatment occupy the next chapter, followed by a similar handling of Hodgkin's disease. Under Addison's disease he analyzes twelve cases seen by him during life, with a summary of the history, course, and treatment in each. The final chapters are devoted to myxœdema, of which disease he has seen forty cases; exophthalmic goitre, with a summary of seventy-nine cases, and acromegaly. Throughout the work the greatest completeness and clearness obtain. When one has finished reading, there seems nothing which one could desire to be added to the text, and one feels satisfied that the pictures of the various diseases have been impressed upon the mind in a manner not soon to be forgotten. The stamp of the personal observer is seen from the introduction to the index, and the author has the happy faculty of transferring that experience in a most impressive way. It is to be regretted that pictorial illustrations have not been introduced into this work, since many of the conditions mentioned are such as can best be taught in this manner. If the reader could have a picture of a myxœdematous patient, for instance, near at hand while reading the masterly descriptions, certainly it would be a great aid. Also pictures of the microscopical appearance of the blood would have added to the book's value. For every practitioner this volume would seem a necessity, both to be perused in continuous reading and to be sought as a reference in diagnosticating puzzling and atypical cases, or treating obstinate ones. The book is essentially practical without omitting the necessary theoretical discussions, such as tend to make us broader practitioners and urge us to further effort to seek the causes of disease. The theories are concisely treated, however, and could not possibly fatigue the reader if he is of average intelligence.

TREATISE ON ORTHOPEDIC SURGERY. By EDWARD H. BRADFORD, M.D., Surgeon to the Children's Hospital, etc., and ROBERT W. LOVETT, M.D., Assistant Surgeon to the Children's Hospital, etc. Illustrated with 621 Engravings. Second revised edition. New York: William Wood & Company. 1899.

THE first edition of this work, published several years ago, soon made an enviable place for itself, and for some time it was not thought necessary to publish a second. The time finally has come when such a second edition seemed desirable, and the authors have given us what is practically a new work. New subjects and illustrations have been added, and old subjects have been amplified. As is natural, diseases of the vertebral column take a large share of space, in which, among other things, we find an interesting discussion of the forcible reduction of spinal deformities. The conclusion is conservative, and we are warned that great care is necessary in the performance of the operation and in the selection of cases. There are many illustrations showing the changes in bones and joints due to chronic disease, which means practically a description of the tuberculous lesions of bones and joints, and the various forms of apparatus are illustrated and explained by photographic reproductions and diagrams. The chapter on the subject of clubfoot is excellent and complete, and is freely illustrated. There is a careful weighing of the comparative value of the various methods of treatment, and several excellent results after operation are shown by diagram. The importance of over-correction of the deformity is emphasized. The authors do not accept intra-uterine violence as the cause of the so-called congenital dislocations, but believe that such abnormalities depend upon some sort of defective nutrition and development. The hip, as it is most important in this regard, receives most attention. The deformities due to rickets and allied conditions are given considerable space, and the choice between osteoclasis and osteotomy is left to the individual operator, except that osteoclasis is not thought desirable in adults. On the whole, this book is the best work of reference upon orthopedic surgery which is now extant in this country, and must prove very satisfactory to the specialist as well as to the practitioner.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 15, 1900.

WILLIAM H. THOMSON, M.D., PRESIDENT.

THE third meeting devoted to the discussion on cancer.

Cancer of the Breast.—DR. ROBERT T. ABBE read this paper. The question whether surgeons could eradicate cancer of the breast was open to debate. Light was dawning on the subject, showing a bacterial origin, and any advances made in curing the disease he believed to be the outcome of this knowledge.

Lymphatics and Cancer.—During the past fifteen years the minute anatomy of the efferent lymphatics demonstrated that recurrences occurred along these lines, and this pointed to the only method for eradication. In early life cancer of the breast was purely a localized disease. Certain anatomical features of the lymphatics were considered: (1) Those that drained the mammary gland toward the axilla; (2) those that extended outward to the overlying skin; (3) those in the deep aspect of the gland draining to the deep cellular tissue of the pectoral muscle; (4) those that drained toward the sternum. Clinical observations would determine which series would be the most involved. The axilla received the greatest part of the infection. The progress of this disease along anatomical lines gave us such knowledge as was of interest in the effacement of this disease; infiltration of contiguous parts must be recognized.

The Operation of Removing Cancer of the breast was now practically a bloodless one, and there was no shock following. Too much emphasis could not be laid upon the fact that the infected cells should not be squeezed into the wound. The hard scrubbing of the skin by the nurse he regarded as instrumental in causing recurrences in the neighborhood of the scar; there should be less handling and friction of the skin. Infection by escaping cells was no myth.

Statistics.—To determine the actual value of the work done in this field in recent years one must be able to state the length of time the patients were rid of the disease, and what approach to eradication had been made; this could be done only by (1) the statistical method, and (2) the personal impressions of the surgeon. Halsted's statistics were the best obtainable. He gives an analysis of 133 operations done at the Johns Hopkins Hospital during the preceding nine years; forty-one per cent. of the patients lived without recurrence and without signs of metastasis; 76 patients survived more than three years; 40 lived more than three years without recurrence. Stiles, of Edinburgh, emphasized the results of microscopical examination proving the course of lymphatic absorption, namely, by the lymph channels accompanying blood-vessels. In thirty per cent. cancerous nodules were found on the posterior surface of the pectoralis major. In Dr. Abbe's personal experience, notes taken during only the past fifteen years showed 33 cases in private and 90 in hospital practice, or 123 cases altogether.

Among the 33 cases in private practice that he had recently heard from, 1 patient lived six years; 1 lived five and a half years; 1 lived four years; 2 lived three years; 5 lived two and a half years. Twenty-five per cent. reached the three-year limit, and nearly as many approached it. From a personal estimate of the modern operative work he found to-day that the impressions of men had passed the stage of pessimism and they were now high optimists. He thought that the three years' immunity was within the reach of most surgeons. Removal of the involved lymphatics gave two advantages: the pressure in the neck was not seen, and the cachexia, formerly so distressing, was now rarely present. Recent experiences showed that recurrence of cancer after operation need not discourage the patient or the operator.

Muscular Tissue, Lymphatic Glands, and Skin.—DR. J. A. FRANZ TOREK said that the question that arose as to what we should do besides removing the breast were three in number: (1) Should we remove more skin than that which covers the breast, and if so, how much? (2) Should we remove glands? (3) Should we remove muscular tissue? Since the publication of Dr. Halsted's paper he had invariably removed both pectoral muscles, and he had never had occasion to regret such a radical measure. Among the cases operated upon in this way there were a number of hard-working women, servant-girls, etc., and after removal of the pectoral muscles, while they declared that some power was lost, yet they were perfectly able to move the arms. It was pretty well agreed that the muscles should be removed. If the entire axilla, anatomically considered, were cleared out, it would be a good piece of work. In the hands of the earlier surgeons, clearing out the glands from the axilla as high up as an inch or two from the border of the pectoral muscle was supposed to be effectual; but they really never entered the axilla. As Dr. Abbe stated, in a great many cases infected glands were present behind the pectoral muscles; he had repeatedly seen them. The method of removing them by simply lifting the border of the pectoral muscle was very unsatisfactory; this fact alone gave justification for removing the pectoral muscles. This method thoroughly exposed the entire stretch of connective and fatty tissue, which contained a considerable amount of infected glands, from the outer border clear up to the clavicle. One should never forget the supra-clavicular glands. They could be more easily diagnosed before operation than any other glands; they could be palpated with great ease, which was not the case with the sub-pectoral glands; the latter could not be diagnosed unless large. The removal of the skin was of the utmost importance; it should be lavishly sacrificed. The skin was the foremost organ for recurrences. In order to be safe against recurrence we should sacrifice a considerable amount of the skin.

Results of Operation.—DR. THOMAS H. MANLEY said it appeared that cancer was more common in the breast than in any other organ of the body. Up to recent times genuine typical mammary cancer had been regarded as practically incurable. He averred that he had heard a statement made by Dr. Abbe a few years ago to the effect that relapses were so common, and fatal consequences so general from this operation, that the late Dr. Sands had become so discouraged as to practically decline to operate. The fundamental question now was whether we were assured and satisfied beyond a doubt that the lesion was of local character, and that it was not disseminated or generalized before it manifested itself in the mammary gland. It should be caught at its birth and eradicated then and there. A patient with cancer of the breast wished to know two things before operation: What was the danger to life, and whether it would impair the usefulness of the limb; also, whether the disease could be cured or not. Some cancers relapsed at once and some not for years. The new operation certainly guaranteed a non-recurrence in the breast or chest wall, for the reason that there was nothing left in which the cancer could return. Halsted's operation entailed a large sacrifice of muscle and fascia. He had seen elephantiasis result in an arm from which the lymphatics had been removed; he had seen cases in which the nerves of the arm had been injured, resulting in more or less paralysis and numbness of the limb; he had seen cases in which the patient had been left with troublesome painful sores upon the thighs, making walking impossible. He had not undertaken the wide dissection of the parts because the simple excision of the gland, in the majority of cases, had not been followed by recurrences; the average period being three years and some having passed nine years. His experience had not been similar to Dr. Abbe's in regard to the disease following the course of the lymphatics; in one instance it recurred in the larynx; in another, in the opposite mammary gland. He was hopeful that the new operation would do all that was promised for it, but he believed that it was yet in the trial stage.

DR. WILLIAM H. THOMSON said that five years ago he had a patient whose breast had been removed by Dr. Sands ten years before for cancer, and she had remained healthy until that year, when it developed in the axilla. The original operation was simply its removal, and no attempt had been made to follow it up into the axilla. The growth had remained quiet ten years before it started afresh.

Cancer of the Uterus.—DR. HENRY C. COE read this paper. He said that surgical treatment, in order to be successful, should be done in time; that was the key-note of success. Accumulated experience emphasized that one point—early diagnosis and removal. In Germany thirty per cent. of the patients were operated upon when first seen, and that was the explanation of so many radical cures. In early diagnosis lay the hope of improvement in our statistics. This implied in general the recognition of certain symptoms and the investigation of causes. An idea existed and was firmly fixed in the minds of some physicians, that a woman could not have cancer without pain, cachexia, and a foul discharge. These were symptoms of advanced disease. Uterine hemorrhage was significant of commencing carcinoma, and, in short, was the only symptom; it was slight and atypical, and so was often overlooked. It was universally believed that the approach to the menopause was the explanation of every irregular discharge of blood, and that belief was responsible for so many neglected cases. If the trouble was within the uterus, the sharp curette or palpation was the only positive means of learning the nature of the disease; some foci of disease might easily be passed over by the curette; therefore a careful history was very important. After a positive recognition of the disease the questions arose, whether it was a suitable case for operation; was it confined to the uterus or did it involve adjacent viscera? These questions could be determined only by an examination conducted under an anæsthetic. We should also determine to what extent the glands were involved. He had operated upon a case that day. Five years ago the woman was examined in a New York hospital by several surgeons, and it was supposed that the disease had invaded the peri-uterine tissues, and she was told her case was absolutely hopeless. The sharp spoon and cautery were used, and the woman lived eight years perfectly well. She was referred to him a few weeks ago, when he found that the disease had recurred and extended up the cervical canal. One man would operate when another man would not; some general rule should be laid down for our guidance. In general, operable cases should be divided into those confined to the uterus and into those in which there were limited mobility of the uterus and induration at the base of the broad ligament. The prediction as to the lease of life without operation was notoriously uncertain. It was well known that patients with inoperable cancers might enjoy life, free from pain, even three years after the death sentence had been pronounced. Dr. Jackson, who was so opposed to hysterectomy, had made a study of statistics, and stated that the duration of life was longer when the cancer was treated palliatively than when submitted to operation. Three times as many women died from cancer as from childbirth. In less than ten per cent. of operable cancers were the patients saved by operation.

Increased knowledge of the histology of cancer confirmed the opinion of the older gynæcologists that erosions or ulceration were often exciting causes; therefore it might be well to amputate the cervix or to use the sharp curette in the early stages. Regarding the question of removing the uterus by the vaginal or abdominal route, all were agreed that the abdominal route was indicated when the organ was too large to be removed by the vagina. He was sure the trend of opinion was now in favor of the abdominal method in corporeal disease. It might be contraindicated in stout patients or when rapid work was necessary. Among twelve hundred and seventy-three cases collected by thirty-eight surgeons in Europe, a mortality of 14.6 per cent. was shown. In patients that could be traced, the average period of exemption was found to be three years and four months. Even if ten per cent. of the lives could be prolonged two, five, or seven years, or even permanently saved, there was decided hope for the future. Abdominal hysterectomy for cancer of the cervix was rapidly growing in favor; it appealed to the modern surgeon as the only method by which ultimate results could be improved. Assisted by catheterization of the ureters and ligation of arteries, operators worked with a thoroughness formerly regarded as impossible. Statistics were not now obtainable, but soon would be, as data were now being prepared. The speaker closed his paper by calling attention to the importance of the early recognition of the disease; the profession and laity should be instructed as to the importance of hemorrhage as an early symptom. Every suspicious case should be submitted to rigid search, careful examination being made under anæsthesia. A thorough removal should be made; unless incision was made in healthy tissue the operation was palliative rather than curative. He believed that abdominal hysterectomy would be the method of the future.

Prognosis.—Dr. Herman J. Boldt stated that the prognosis must depend upon the early diagnosis. The reason for the difference between operable cases found in this country and those occurring elsewhere was simply that abroad, whenever there was any abrasion of the mucosa of the cervix, the scrapings from it were subjected to a careful and scientific examination by one who was competent to judge what was pathological and what was histological. The prognosis depended largely upon the seat of the disease. The gravest cases of all were those in which the cancer was present in the so-called cervical portion, especially in the vaginal tract, because here the cancer was situated beneath the endometrium. When the parametrium was involved, or the deeper tissues were encroached upon, compressing the ureters, the prognosis was exceedingly unfavorable. Certain unrecognized cases, treated in a palliative manner, when they came to the surgeon and were recognized, had gone beyond the vaginal portion proper, and had encroached upon the supra-vaginal portion and attacked the parametrium; these were also very unfavorable cases.

Diagnosis.—One could not be too careful to investigate each and every case in which there was the slightest suspicion of the disease being present. A woman between the ages of thirty and thirty-five years, who showed signs of atypical bleeding, was the one offering the most unfavorable prognosis. When such a condition was present it was not enough merely to scrape the mucosa of the uterine cavity with a curette, because the part most desired to be removed was frequently left. It was necessary to remove every vestige of mucosa and submit it for examination. In the cervical canal, when the disease started in the endometrium microscopical examination became unnecessary, because here the disease was well marked. He did not believe it was necessary to make a manual examination of the uterine canal; forcible dilatation was uncalled for; curettage would do all that was needed. In doing this an anæsthetic was absolutely necessary. In examining under an anæsthetic a point that should not be overlooked was that the vagino-abdominal examination was entirely unsatisfactory; unless one made a recto-abdominal examination the results would never be satisfactory in revealing the amount of infiltration. An examiner of large experience could determine whether the infiltration was malignant or inflammatory.

Treatment.—Regarding igni-extirpation, if it was shown that the cases operated upon were such bad ones, and that twenty per cent. of the patients recovered for a certain length of time, he thought that was a favorable showing. In one of his cases there had been no recurrence for nearly three years. The case had been declined by one of the leading surgeons of the city. Igni-extirpation was done, and although bad complications arose, in that secondary to the igni-extirpation both ureters gave way and there was a ureteral fistula on both sides, the result of the hot iron, yet the patient did well. Comparing vaginal with abdominal hysterectomy, he did not believe that the modified operation would give better results than vaginal hysterectomy if performed when the patients were in a suitable condition.

Diagnosis.—Dr. W. Evelyn Porter said that during the past eight years he had been studying cases in the various hospitals in the city, and had had the assistance of various pathologists in studying sections of uteri that had been removed; the result of his study showed the difficulty in making a satisfactory diagnosis except in the superficial forms of the disease. Hemorrhage should be considered in connection with the age of the patient. Hemorrhage occurring in women past forty years of age, in the large majority of cases, was due to malignant disease. He preferred the abdominal route in operating, and thought it would be the choice of the future.

Educate the People.—Dr. Philander A. Harris, of Paterson, N. J., believed that, in the hands of a skilful operator, the vaginal operation could surely be done without a death rate greater than five or six per cent., when the cases were judged to be operable. The profession should be educated, and secondarily the people should become educated, as to the importance of operation. Another serious obstacle to proper treatment was the erroneous impression women had about the menopause; which caused this period to be much neglected on their part. It was common for a woman who menstruated ten or fifteen days each month to say that it belonged to the change of life; she did not consult her physician. It was also common for them to disregard leucorrhœa at this period. Many cases had gone on to tissue necrosis before a physician had been consulted. As to diagnosis, if débris had been submitted to a pathologist and he reported that he could not find signs of malignant disease, that was not conclusive, and the pathologist should not be blamed for what he did not find; if he found evidences of malignant trouble, it helped the physician.

Clinical Facts.—Dr. W. Gill Wylie said there was no doubt that cancer was a disease not prone to attack normal or healthy tissue; it attacked only degenerated tissue, and was much more commonly found in such organs as the breast and uterus. Recognizing that fact, he believed much could be done, and would be done, in the removal of degenerated tissue to aid these patients. Speaking of age in prognosis, he said he had seen carcinoma occurring in persons under twenty years of age, but had never seen one cured. Between the ages of twenty and thirty years the disease was rapid and very dangerous, whether occurring in the breast or the uterus. As the woman grew older it was more manageable. After the menopause, hemorrhages might occur; if they did, it showed that the disease was more advanced. If women stopped menstruating for six months, and then began again, that pointed to cancer; if they stopped one year, and began again, it was more certainly cancer; if they stopped for two years, and then went on again, it was most certainly cancer. In regard to the results of operation, he said there was a difference between the results obtained in foreign hospitals, and those in ours, because in our institutions we had the poorer people, who, when they came in, were in a bad condition; if they entered such an institution as Bellevue, it was because they were almost helpless cases. In private practice it was different, and here the death-rate should not exceed one or two per cent. in the hands of an expert. He believed it was more difficult to get good results in operating upon the breast than upon the uterus. If the uterus was movable, he thought the vaginal operation was the quicker one. As to suppuration, he did not know whether it had the power of killing cancerous tissue or not; but, in many operations in which he thought they would fail, extensive suppurations had taken place, big abscesses had formed, and the patients had recovered and still remained well. In inoperable cases in which the radical and complete operation could not be done he used the steel—not the copper—curette, getting away the diseased tissues; then, with a knife or with scissors, he cut in every direction all diseased portions; he then applied a saturated solution of chloride of zinc; this gave better results than could be obtained by the use of the galvano-cautery.

New Instruments.

A NEW NASAL SPLINT.

By Francis W. Alter, M.D.,

TOLEDO, OHIO.

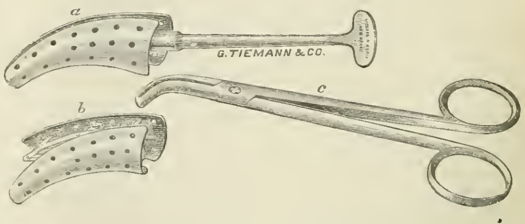
In presenting to the profession this dilating nasal splint, to be used in the after-treatment of operated deflected septums, I wish to emphasize the following favorable features of this device:

1. The drainage permitted by the outspread halves of this instrument when *in situ* is maximum, and such a thing as "clogging" never occurs, thus fostering that much-desired element, good drainage. Besides, the breathing through the previously stenosed nostril is at once established, and the satisfactory effect to the patient, as well as the surgeon, is immediately in evidence.

2. In the removal of the splint for the daily cleansing-process, a few turns of the key converts the splint from size *b* to *a*, as indicated in the cut, and its removal and subsequent introduction are effected without the usual pain accompanying this manœuvre with the splints now generally used.

3. The distal as well as the proximal end of the splint dilates equably. This is of the utmost importance, especially when the deflection is situated somewhat posteriorly.

4. Drainage being good, irrigation, with the splint in position and proper precaution as to the forward position of the head, instructions not to swallow during the injection of the fluid, and by imparting a moderate velocity to the inflowing medicament, can be successfully carried out. There is no need of its daily removal, and I leave the splint in position for five days, replacing it again for a like period, and removing it entirely at the end of that time. If, in its first introduction, too much or too little dilatation of the splint has been effected, a few turns of the key either way will bring about the desired effect. The daily removal of the splint carries with it certain ill effects, and the argument against the daily removal of the dressings on a broken limb also holds good here.



5. In my experience the material of these splints, metal instead of rubber, offers less opportunity for sepsis. In four cases in which I have used this splint, I had no rise of temperature, yet the opposite was of regular occurrence with the vulcanized rubber tubes.

These splints are made by George Tiemann & Co., of New York, and the J. F. Hartz Co., of Detroit, Mich., and are in three sizes. They are also made without the perforations. The latter, in my estimation, are of no use, serving only to increase one's labor in cleansing splints. Instead of the side plates being concavo-convex, I have them also made perfectly flat; or what seems to me still better, the septal plate flat and the opposite plate somewhat concave on its outer side for the reception of the opposed turbinal body. The only objection to the latter arrangement is that it somewhat increases the width of the collapsed splint; this, however, is overbalanced by the more perfect apposition of the splint to its anatomical surroundings. These splints, as enumerated, are known as Style "A," with perforations; "B," without perforations; "C," both plates flat; "D," septal plate flat, outer plate concavo-convex. The key of the splint acts also as introducer. The forceps grasps the splints when in position, thus preventing any slipping or twisting. It is my custom to dip them in sterilized olive oil before their introduction. This lubricates the joints in the splint and makes them work without any perceptible resistance.

Arsenic and Iron in the Chloro-Anæmias of Tuberculosis.—Dr. Martinet thinks the following conclusions are tenable: (1) The association of iron and arsenic is rational and justified by clinical experience. (2) The combination is particularly indicated in most chloro-anæmias, and especially in the severe forms approaching pernicious anæmia, with rapid destruction of globules, in torpid and antipyretic tuberculosis, and in the glandular forms. (3) There should be monthly alternation in the administration of protoxalate of iron and of an arsenical water; the administration of tincture of iron and Fowler's solution in equal parts; the administration of arsenate of iron.—*La Presse Méd.*, January 6th.

A SIMPLE AND EFFICIENT RUBBER SPLINT-SHOE.

By H. J. BOGARDUS, M.D.,

JERSEY CITY, N. J.,

SURGEON TO THE NEW YORK ORTHOPÆDIC DISPENSARY.

Probably most orthopædic surgeons have had occasion to recognize the apparent inherent merit of rubber as an eligible material for the shoeing of their hip-splints and other walking-apparatus. Hitherto it has always been difficult to get rubber in a form that would satisfactorily answer the requirements of a splint-shoe. It is known that attempts have been made in the past to secure this desideratum. Some twenty years ago Dr. Taylor used a skilfully moulded rubber splint-shoe, but either because of its expensiveness or its lack of durability owing to its manner of manufacture at that time it never came into general use.

Patients themselves have sometimes appreciated this need, and have come to the dispensary with their worn-out leather splint-shoes replaced with rubber carefully fashioned from some piece of solid rubber taken from the bumpers of cars or from a worn-out clothes-wringer roller, etc.

Not long since, in a casual visit to a carriage maker's establishment, the writer's attention was attracted by some pieces of solid rubber tires, and the present methods by which such tires are secured to the wheels of ordinary vehicles for road use. The idea suggested itself that this form of tire material might be readily adapted for use as splint-shoes, and for the past five or six months a practical test has been made of its efficiency for this purpose at the New York Orthopædic Dispensary, with the most gratifying results.

For the first experiments children were selected who were known to be the most destructive of apparatus, returning at short intervals for repairs and renewal of splint-shoes. By keeping a comparative time record it has been found that the rubber is at least four or five times as durable as the ordinary leather splint-shoe as made by the cobbler.

Besides durability a number of other important advantages may be enumerated in favor of the rubber. It does not involve the expense of special manufacture tor this purpose. It is made for carriage wheels in lengths of about thirteen feet, and all that is necessary to adapt it to the uses of the orthopædist is to cut it in the desired lengths of about three inches. This can readily be done with a sharp wet knife. Worn-out shoes can thus be renewed at the office with the simple help of a screwdriver.

There are no nails, as in the leather splint-shoes, to occasionally trip the patient, or maybe to scratch a polished floor. A brace shod with rubber is less noisy, less liable to slip on the icy pavement, etc.; does not soak up so much of the moisture and dirt of the street; and again, being more elastic, saves the transmission of that much concussion to the patient in walking. The rubber tire can be obtained in a variety of sizes differing in width by one-eighth of an inch.

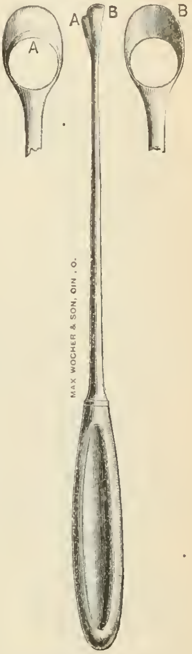
The rubber is fastened to the foot-piece of the splint by means of two ordinary flat-headed machine screws which, passing through countersunk holes in the foot-plate, engage by their threads in a piece of flat steel fitted in the slot that passes longitudinally through the rubber tire. When the screws are tightened the rubber is brought in secure and firm apposition to the under surface of the foot-piece of the brace. At first a piece of sheet brass was fitted over the foot-piece with lips extending down each side acting as flanges to hold the rubber more securely, but practically this has been found to be not really necessary, as the two screws alone hold the rubber firmly in place.

In some instances, if it is necessary to minimize the thickness of the rubber under the foot, a liberal slice may be cut from the convex surface of the rubber and the surface again nicely smoothed off with sandpaper, or, better, by use of an emery wheel.

A NEW CURETTE.

By H. F. GAU, M.D.,

CINCINNATI, OHIO.



This new safety curette is intended for use in those enlarged, softened, infected post-puerperal uteri, in which the use of the average curette is liable to cause perforation of the uterus. The modified curette, which I have named the "safety curette," has an anterior and a posterior cutting surface, with a central perforation varying from three-eighths of an inch anteriorly to one-half an inch posteriorly.

The anterior surface is intended for curetting the anterior, posterior, and lateral surfaces of the enlarged uterus, whereas the posterior edge is better adapted for use on the fundus and the upper angles. Both anterior and posterior edges are protected by a flattened surface, so that perforation of the uterus is impossible. The instrument was presented to the Cincinnati Obstetrical Society at its February meeting.

Therapeutic Hints.

Blennorrhagic Myositis.—Moist heat should be applied, by enveloping the limb in hot boric-acid solution covered with impermeable tissue. After the acute period the following is to be given:

℞ Guaiacol.,	
Ol. amygd. dulc.	p.æ.

S. Apply to limb and cover with cotton.

—Braquehaye and Servel.

Ozæna.—A douche with a Weber siphon should be given, changing the formula for the antiseptic from time to time. After each douching the nose should be sprayed with:

℞ Acid. phenic.	2 gm.
Resorcin	3 "
Glycerini pur.	50 "
Aquæ	300 "

The ulcers should be touched with silver nitrate or zinc chloride solution, and a general tonic treatment given.—*Journ. des Praticiens.*

After douching, a bean-sized mass of the following should be introduced into each nostril, the patient's head being bent back:

℞ Menthol	0.20 cgm.
Boric acid	2. gm.
White vaseline	30. "
Essence of geranium	gtt. xx.

—Bommier.

Trional produces accidents by not being absorbed, when given in water.

℞ Trional.......................... .... 1 gm.
Ol. amygd. dulc...................... 20 "
Sacch.............................. 8 "
Gum. tragac.,
Gum. arab................ ....āā 0.20 cgm.
Aq. aurant. flor...................... 10 gm.
Aq. lauro-cerasi...................... 2 "
M. S. To be taken in half a glass of water.

—POUCHET.

Intestinal Antisepsis in Children.—

℞ Benzo-naphthol... .... 0.05 cgm.
Bismuthi salicylat. (basic)............... 0.10 "
Bismuthi bicarbonat (basic)............. 0.10 "

For one powder. Make five such, and give one every two hours to a child of five or six months of age.

—COMBY.

Coryza.—

℞ Pulv. menthol........................ 0.25 cgm.
Pulv. betol.......................... 2.50 gm.
Cocainæ.............................. 0.50 cgm.
Pulv. caffeæ tost...................... 4. gm.
M. S. Use as snuff.

—*Ann. de Farm.*, Milan.

Eczema of the Ear.—Internal measures should not be neglected in chronic eczema of the meatus. So long as there is acute inflammation arsenic must not be given, but in the scaly stage order:

℞ Sodii arsenat....................... 0.10 cgm.
Aquæ lauro-cerasi........ .... 50. gm.
Aquæ destil.......................... 200. "
M. S. One to four teaspoonfuls daily at meals.

—LERMOYEZ.

Hypodermatically in Syphilis.—

℞ Hydrarg. benzoat........................ 0.30
Sodii chloridi............................ 0.10
Cocainæ.................................. 0.15
Aquæ destill.............................. 40.
Dissolve with heat.

Inject 1 c.c. each day. This must be made fresh at least every fifteen days.—STOUKOWENKOF.

Digestive Infections in Nursing Infants.—After a castor-oil purge:

℞ Benzo-naphthol............... ... 0.[illegible]–0.50 cgm.
Cretæ præpar.,
Bism. subnit....................āā 2 –3 gm.
Mucil. acac .... 30 "
Elix. paregoric .... gtt. vi.–xij.
M. Shake. S. Teaspoonful every hour—less often as improvement follows.

Psoriasis.—

℞ Acid. salicylic .... 3 gm.
Ichthyol.,
Picis.................................āā 10 "
Acid. pyrogallic......................... 6 "
Lanolini seu petrolat.................... 100 "
M. S. Apply.

—BROCQ.

Urticaria.—

℞ Sodii bicarb............................ 20 gm.
Tinct. opii (Sydenham)............. gtt. xx.
Aq. bul.................................. 500 gm.
M. S. Use as a rectal injection.

—DE MAHIS.

Alcoholic Cirrhosis of the Liver.—One of the best diuretics is:

℞ Juniperi fruct .... 10 gm.
Infuse in
Aq. bul.......................... 200 "
Add
Potass. nitrat.,
Potass. acetat......................āā 2 "
Scillæ oxymel.......................... 50 "
Syr. des cinq racines... .... 30 "
M. S. To be taken in four or five doses during the day.

—PLICQUE.

Medical Items.

Christian Science will cure you of what you have not got, or of what is going to get well of itself, just as quickly as any of the 'pathies, and sometimes more pleasantly.

One by Choice.—A Paris journal gives the number of prostitutes registered at 5,183. Of these, 1,440 are forced to the life by poverty, 1,255 are orphans, having no other way to obtain shelter; 280 are widows from the provinces unable to obtain an honest living; 404 are young girls brought from the country by soldiers and others; 289 are domestics discharged after being ruined by their employers; 1,425 have been deserted by faithless lovers; 89 admit adopting this life to support the family. This leaves one to be put down to pure depravity.

Dividends are Improving.—Up to now twenty-five per cent. has been about the limit of the dividend a physician could expect from the sharper to whom he referred his patients. An optical company in Fulton Street has raised the limit to fifty, and will now divide the profits with the physician, share and share alike, as the lawyers put it. These refractionists are paying out, they say, as high as $10 a week to some physicians who send their patients for glasses. A good distributor will soon be able to make a fair income if this sort of thing continues.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended March 24, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Alabama, Mobile	March 10th to 17th	5	
Florida, Jacksonville	March 11th to 17th	1	
Georgia, Brunswick	March 12th	3	
Cordele	March 12th	Present.	
Tifton	March 12th	Preseat.	
Illinois, Chicago	March 10th to 17th	1	
Forty-five counties	December, January, February,	1,000	
Indiana, Evansville	March 10th to 17th	3	
Wichita	February 10th to March 17th	53	
Twenty-four counties	February 1st to 28th	437	14
Kentucky, Covington	March 10th to 17th	1	
Louisiana, New Orleans	March 10th to 17th	71	21
Michigan, Detroit	March 3d to 17th	2	
Minnesota, Minneapolis	March 3d to 17th	52	1
Nebraska, Omaha	March 10th to 17th	1	
New York, New York	March 10th to 17th	7	
Ohio, Cleveland	March 10th to 17th	7	
South Carolina, Greenville	March 10th to 17th	2	
Utah, Salt Lake City	March 10th to 17th	1	
Virginia, Portsmouth	March 10th to 17th	6	1
Washington, Spokane	March 10th to 17th	5	
SMALLPOX—FOREIGN.			
Austria, Prague	February 17th to March 3d	7	
Belgium, Antwerp	February 17th to March 3d	13	3
Ghent	February 24th to March 3d	..	4
England, London	February 17th to March 3d	18	1
Egypt, Cairo	February 4th to 18th	..	15
France, Lyons	February 3d to 10th	..	3
Gibraltar	February 18th to March 4th	22	2
Greece, Athens	February 17th to March d	9	2
India, Bombay	February 6th to 13th	..	268
Kurrachee	February 4th to 11th	22	2
Madras	February 10th to 16th	..	1
Mexico, Chihuahua	March 3d to 10th	..	7
Mexico	February 18th to 25th	23	11
Vera Cruz	March 3d to 10th	..	1
Russia, Moscow	February 10th to 21st	9	1
Odessa	February 17th to March d	21	3
Warsaw	February 10th to 17th	..	2
Spain, Corunna	February 3d to 24th	..	24
Straits Settlements, Singapore	January 20th to February 3d	..	11
Switzerland, Geneva	February 14th to 24th	1	
YELLOW FEVER.			
Brazil, Santos	February 8th to 16th	12	6
Cuba, Havana	March 3d to 10th	..	1
CHOLERA.			
India, Bombay	February 6th to 13th	..	2
PLAGUE—INSULAR.			
Hawaii, Honolulu	February 24th to March 2d	2	2
PLAGUE—FOREIGN.			
India, Bombay	February 6th to 13th	..	570
Japan, Formosa	January 1st to February 5th	75	43

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Original Articles.

TRAUMATIC HEMORRHAGES INTO THE SPINAL CORD.[1]

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No one who has to do with injuries to the nervous system now questions the importance, from clinical, pathological, and legal standpoints, of traumatic hemorrhages into the spinal cord. The subject was brilliantly introduced by Thorburn ten years ago; and the contributions of the past few years from Russia, Germany, and this country have entitled it to a distinct place in the surgery of the spinal cord. Yet it continues to receive scant mention in the surgical and neurological text-books, and is inadequately handled even in recent monographs on spinal-cord injuries. As a result, the condition often fails to be correctly diagnosticated, and our knowledge concerning it is not advanced so rapidly as it might be. This is to be regretted from two points of view. First, because traumatic hæmatomyelia is a comparatively frequent lesion; and second, because the chances of recovery, when the symptoms depend upon hemorrhage into the spinal cord, are so much better than in any other variety of spinal-cord injury that the surgeon who fails to recognize the condition exposes himself to great error in prognosis and, maybe, in treatment.

The subject has interested me during the last two or three years; and I have tried to keep abreast of its literature. At the same time a number of cases, both clinical and pathological, have come under my observation. The following paper is based upon the results of these studies. It must not be forgotten, however, that the subject is still in an early stage of its development, and that more observations must be forthcoming before certain personal opinions can be regarded as thoroughly established by fact.

Traumatic hemorrhages into the substance of the spinal cord occur in two ways. First, as complications of general crushes and mutilations, due to fractures and dislocations of the spine. These I have called Secondary Hæmatomyelia. The other and more important variety I have called Primary Hæmatomyelia, as it results from force exerted directly upon the cord itself, without the intervention of pressure by bone or cartilage. Thus, without any fracture or dislocation of the spine the spinal cord may be so twisted or bent within its case, or may sustain a shock, so that its blood-vessels rupture and blood escapes into its substance. A force which ruptures the blood-vessels must at the same time tear nerve fibres and more or less injure nerve cells; and the resulting lesion consequently is a laceration of the cord as well as hæmatomyelia. But unless the laceration is very large it fails to be identified positively by the microscope. For the blood is generally poured out freely and hides minute lacerations; and even if the lacerations were apparent under the microscope, unless they had been so to the naked eye at the time of the autopsy it would be impossible to assert positively that they were not artefacts or the results of destruction which the blood itself had caused. Consequently, while admitting that every case of traumatic hæmatomyelia is associated with some direct injury to the internal parts of the cord, and that such an injury is entirely independent of the destructive effects of bleeding, we are none the less obliged to regard the amount of blood as an index to the severity of the total lesion, and to denominate the pathological condition as hæmatomyelia, though it is more complex than simple hemorrhage. It is the special object of this paper to consider primary traumatic hæmatomyelia. But before passing directly to the main body of the subject, brief mention must be made of the other varieties of injury of the spinal cord with which primary hæmatomyelia might be confused.

In the presence of an injury to the spinal cord, when bullet and other penetrating wounds can be excluded, three possibilities, and three only, present themselves. These are:

I. Pressure from displaced or broken-down protecting structures.

II. Pressure from blood poured out within the spinal canal (Hæmatorrhachis—extra- or intra-dural hemorrhage).

III. Primary hæmatomyelia.

I. Pressure from Displaced or Broken-Down Protecting Structures.—This class comprises the common fractures and dislocations of the spine. The resulting mutilation of the cord is usually extensive, the symptoms are widespread, and the prognosis, though the better for life the lower the region affected, is always gloomy for the restoration of function. The seat of the trouble in the cord can usually, though not always, be inferred from the displacement or abnormal mobility of the vertebræ.

In such injuries hemorrhage occupies a place of varying prominence. It may be extremely slight or absent; or capillary extravasations in the vicinity of the more severe lesion may be found scattered throughout several segments above and below the affected area; in still other cases, the blood makes its way in the gray matter, in pencils or columns, up and down the cord, often for long distances. It is to this latter condition that Van Gieson has applied the name hæmatomyelopore. These hemorrhages take place either immediately and from the same injury as caused the crush, or are the later results of softening and myelitis. They are important for two reasons: One is that a column of blood may extend in the gray matter for some distance above a transverse lesion, causing symptoms peculiar to lesions of the gray matter and different from those attributable to the transverse lesion. The most characteristic gray-matter symptom is the "dissociation" type of anæsthesia, *i.e.*, sensibility to touch preserved, but pain sense and temperature sense lost. Zones of such dissociated anæsthesia are from time to time observed, extending for some little distance above the line of the total anæsthesia symptomatic of the transverse lesion. The other reason for the importance of these secondary hemorrhages is found in the cases in which with a fractured vertebra, the external pressure effects upon the cord are slight; but in which the same force which caused the fracture caused a hemorrhage into the cord substance; so that the symptoms are the combined results of pressure exerted by bone externally and by blood internally. Such cases merge toward the category of primary hæmatomyelia.

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[1] From the Department of Pathology, College of Physicians and Surgeons, New York.

The vast majority of injuries to the cord resulting from fractures and dislocations present no difficulties of diagnosis. The history of the accident, the bone deformity, the sudden and persistent paralysis of motion, sensation, and sphincter action leave little opportunity for error. But when one or more of the cardinal symptoms are absent—when the spine appears intact or there is no anæsthesia, when the paralysis of motion is limited or incomplete, or the sphincters are not affected, the problem becomes more difficult. Partial lesions of this class may resemble, in symptoms and causation, primary traumatic hæmatomyelia; and, indeed, it is probable that secondary hemorrhage is responsible for part of the symptoms in such cases. The diagnosis of partial lesions arising from external pressure is assisted by remembering that the symptoms are chiefly due to pressure exerted upon the outside of the cord, *i.e.*, upon long afferent and efferent tracts, rather than upon the central gray matter. Consequently, however slight the symptoms may be, they are found everywhere below the lesion. Thus, in the case of an injury in the cervical region, paralysis or impairment of sensation and motion will involve both arms and legs; in other words, evidences of the injury will be present everywhere below it.

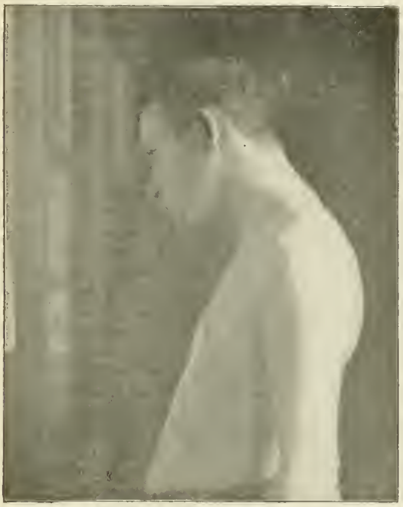


FIG. 1.—Attitude in the Case of a Partial Lesion of the Spinal Cord, due to injury of the cervical vertebræ.

Since hemorrhage has a predilection for the central parts of the cord, a small focal hemorrhage within the cord substance produces a very different clinical result. As will be explained further on, primary hæmatomyelia may cause symptoms in the upper extremities, while the lower extremities are unaffected—*i.e.*, no injury to long conduction tracts.

The dissociated type of anæsthesia also is, as far as our present knowledge goes, distinctly characteristic of a gray-matter or central affection.

Finally, lesions due to compression from without the cord are, as a rule, richer in symptoms than purely hemorrhagic ones. There is usually impairment of both sensation and motion in extended areas; also the bladder rarely escapes involvement. However, it is not to be denied that in some cases the symptoms following fracture or compression from the outside are extremely slight. The following case shows this:

The patient, W. A. B——, thirty-six years of age, a previously healthy man, and always well except for troubles directly induced by drink, fell on December 9, 1898, about fifteen feet into an area way, landing on the head. He was picked up unconscious, and found himself in Bellevue Hospital the next morning. The scalp was badly contused and lacerated; there were great pain and tenderness and some swelling of the neck. There was no paralysis, but both arms and both legs were weak, the weakness being especially noticed on the left side. There were tingling of the fingers and numbness of the arms and legs. There were no disturbances of the bladder or rectum. After eleven days the patient was well enough to walk out of the hospital. Since then the chief sources of annoyance have been pain and stiffness in the neck and numbness in the extremities of the right side.

Examination, January 25, 1899, Vanderbilt Clinic: The patient (Fig. 1) holds the head bent forward on the chest and is either unwilling or unable to make free movements with the neck. Efforts at movement done either by him or by the examiner cause severe pain. The seventh cervical spine is so unduly prominent that, although there is no crepitus, false motion, or other evidences of fracture, it seems certain that there has been either fracture or dislocation in this vicinity. The symptoms pointing to a nervous lesion are a partial hemianæsthesia on the right side, and a contracted pupil, with some sinking in of the eyeball and narrowed palpebral fissure on the left (cilio-spinal centre). The hemianæsthesia is very indistinct in its upper boundaries. It does not involve the face and begins at about the clavicle. In the upper extremity it is more definite and in the leg it is pronounced. It includes all qualities of cutaneous sensibility. There is also anæsthesia of the index finger of the left hand. All the muscles of the extremities seem somewhat weak, but there is no demonstrable paralysis. There is no localized atrophy, no fibrillation, no foot clonus. The knee jerks are lively, especially the left one, but not excessively exaggerated. The absence of paralysis, of sphincter troubles, and of marked changes in the tendon reflexes, shows that the injury to the cord was extremely slight. It is unusual for such slight injuries to be caused by a fracture or dislocation. But that a bone lesion, causing pressure upon the outside of the cord, was at the bottom of the symptoms in this case, seems probable. There were deformity and extreme pain in the back; the motor disturbances, slight though they were, involved all four extremities, and the hemianæsthesia bespoke a lesion affecting the long afferent sensory paths.

II. Pressure from Blood Poured out Within the Spinal Cord.—The second class, hemorrhage between the cord and the vertebræ (either extra- or intra-dural) has received much more attention by clinicians than it is entitled to by autopsy records. Surgeons are constantly on the alert for it, in the belief that it is amenable to cure by the knife. It is sometimes given a distinct symptomatology in text-books. Yet my own experience and a careful study of the literature have persuaded me that this lesion is rarely if ever of clinical importance. If it occurs as a distinct and isolated pathological entity, there are no reliable means of recognizing it during life. It is true that it is met with from time to time in autopsies on traumatic cases, but never, so far as I have been able to determine, as an isolated lesion. It is invariably associated with the far more important injuries of crushes or intraspinal hemorrhage, which latter conditions give the clinical stamp to the case. It is needless to say that they would remain unaffected, in symptoms and course, even were the external blood clot removed. This extramedullary hemorrhage is sometimes invoked (notably by Kocher) in explanation of the characteristic symptom complex known as "diplegia spinalis brachialis traumatica." That this condition can be better explained by hemorrhage within the cord than without it will shortly be shown.

III. Primary Hæmatomyelia.—The third variety of spinal-cord injury, primary traumatic hæmatomyelia, it is the special object of this paper to consider. The condition, as already intimated, is relatively frequent, but its special clinical importance results from its favorable prognosis. The subject is yet too young to permit any accurate estimate as to the ratio in which this particular variety of lesion stands with respect to the total number of spinal-cord injuries. Some facts are, however, accessible. Of twenty-one cases of spinal-cord traumatisms examined by Thorburn, six were interpreted as examples of primary hæmatomyelia. Of seven cases of general injury examined by Parkin, one was primarily hæmatomyelia. Of Stolper's twenty-two autopsies on various spinal-cord injuries, two were primary hæmatomyelia. Thus, autopsy records show that injury causes hemorrhage into the substance of the spinal cord, without demonstrable lesions of the bones, in a considerable number of cases. This percentage would undoubtedly be much higher if more statistics could be obtained of partial lesions; for there is good reasons to suppose from clinical data that a large proportion of cases of partial lesions are of hemorrhagic origin. But as the patients in such cases are much more apt to recover than to die, they are useless as far as the statistics of pathological anatomy are concerned.

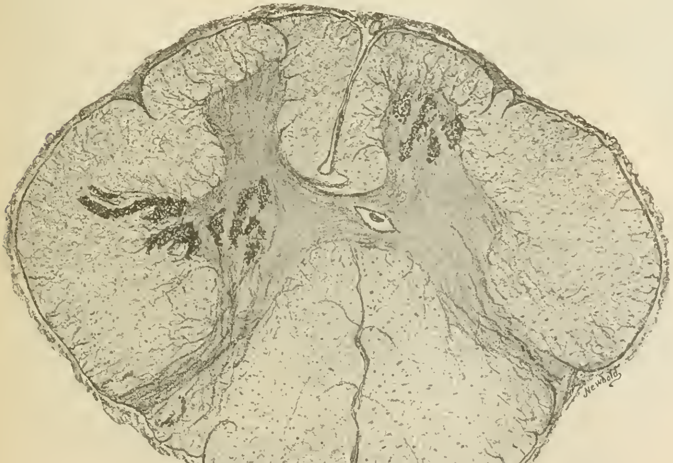


Fig. 2.—Small Hemorrhages into the First Thoracic Segment of the Spinal Cord, following a severe general traumatism. Spinal column uninjured.

The situation of the hemorrhage is usually in the gray matter. This is explained by the gray matter being more highly vascularized and by its having less supporting tissue than have other parts of the cord. When the hemorrhage is extensive, it may burst beyond the gray matter into surrounding areas. The ventral and the dorsal horns are the favorite sites. The gray commissure often escapes, and it is unusual for it to be involved in the immediate vicinity of the central canal.

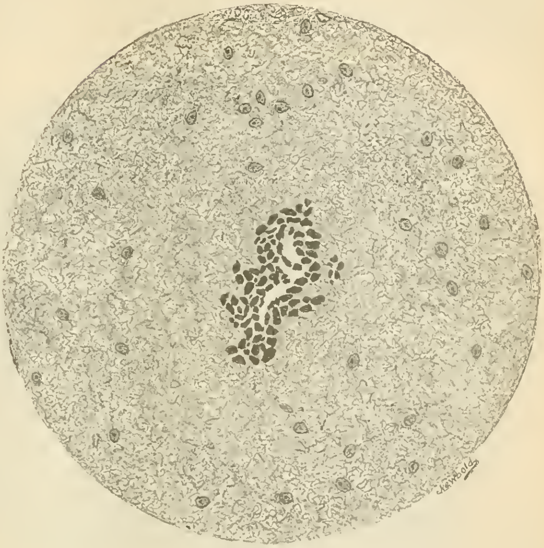
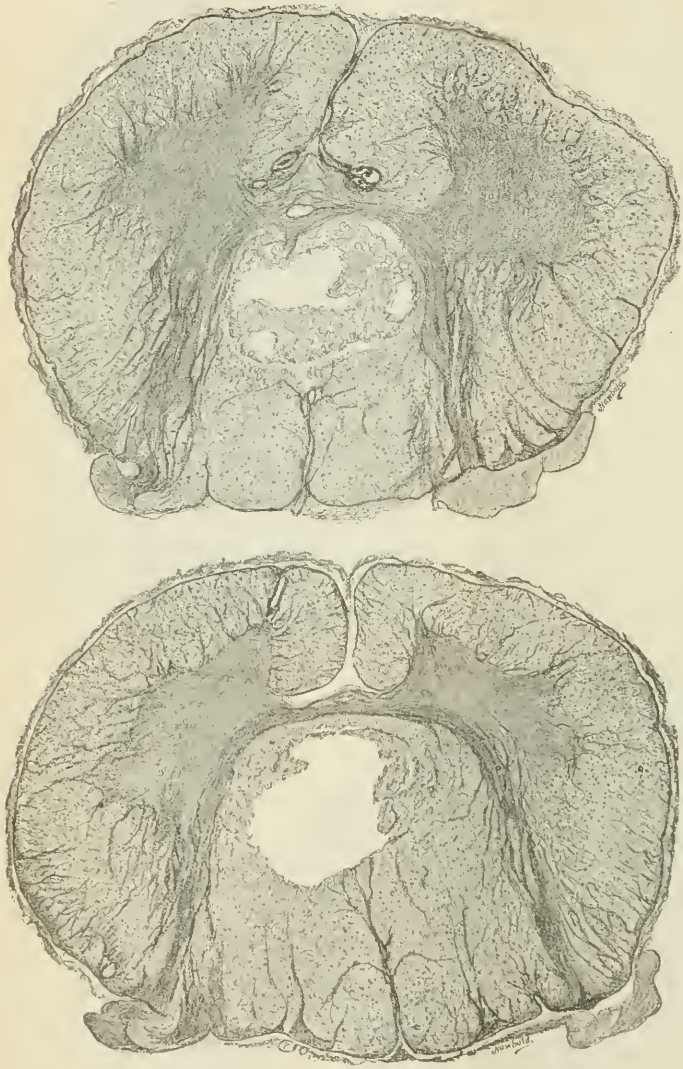


Fig. 3. Small Hemorrhage into the Spinal Cord. No inflammatory or degenerative reaction.

The white matter is not left entirely free, if the hemorrhage is at all extensive. It may be involved by the blood passing the limits of the neighboring gray, or the whole white matter may be spotted with small extravasations. Large hemorrhages into the white matter are most frequently found in the dorsal columns just behind the gray commissures. The size of the individual hemorrhages varies within wide limits. A single hemorrhage may extend, in an unbroken column, through several segments. In some of the reported cases the cord at the affected level has been completely hollowed out by the blood clot. In others, the blood, though extending widely, has left some of the cord free. In others, as in Fig. 2, the hemorrhage is extremely small and more marked on one side than on the other. The patient from whose spinal cord this drawing was made died ten days after a severe general traumatism involving rupture of the liver and kidneys. Between the receipt of the injury and the time of death he was conscious, could walk, and complained of no symptoms to call attention to the nervous system. But had he been carefully examined it seems probable that the existence of the hemorrhage, small as it was, might have been recognized. For it occurred in that most important segment, the first thoracic, which is concerned with the cilio-spinal reflex and with the fine movements of the fingers, and in which even very small lesions cause symptoms recognizable by the trained examiner.



Figs. 4 and Showing Cavity Formation in the Spinal Cord as the Result of Hemorrhage.

These focal hemorrhages are usually surrounded by some smaller extravasations which may be invisible to the naked eye or may appear as minute dots. It is usually impossible to tell without the aid of the microscope whether the blood in such cases is extra- or intravascular. When the hemorrhages are small, they do not cause any visible inflammatory or degenerative reaction in the cord (Fig. 3). Large hemorrhages may be surrounded by areas of softening. In many cases of large hemorrhages, however, the action of the hemorrhage seems almost entirely mechanical. The blood pushes its way through the cord substance, and destroys as it goes. As it disintegrates and is absorbed together with the destroyed nervous tissue, there results a cavity in the cord. Fig. 4 shows the mechanism of the formation, in an early stage, of such a cavity. The spinal cord is that of a man who sustained a fracture of the fifth cervical vertebræ, and died in five days. There was extensive mutilation in the sixth cervical segment with ascending and descending columns of blood. The ascending column went through the posterior column just behind the gray commissure. Figs. 4 and 5 show the condition of the fourth and third cervical segments, the latter segment being the upper limit of the hemorrhage. The blood and destroyed nervous tissue have not had time to be entirely absorbed. In Fig. 5 the disintegrated area dropped out during the manipulation of the cord for microscopic purposes, leaving a cord apparently healthy except for the loss of substance. This loss appears as a clearly punched-out hole, around the edges of which are clinging broken-down blood cells. When the patient lives for some time after the injury, it is the tendency for such cavities to be filled up more or less completely with neuroglia tissue. Fig. 6 shows a section of the cord at the eighth cervical segment of a man who died seven months after an extensive primary traumatic hæmatomyelia. At autopsy the cord was flattened from before backward, and the outlines of the gray matter were lost. The central part of the cord was occupied by new tissue, with cracks and slits throughout. Microscopic examination showed that this was new connective tissue, containing many and variously shaped spaces, some of which were filled with broken-down blood. What had undoubtedly taken place in this cord was hemorrhage into the gray matter; partial absorption of blood and broken-down nerve elements, and outgrowth of connective-tissue cells from the limits of the original cavity, gradually decreasing the size of the latter. Such hæmatogenous cavities have no epithelial lining and are not ordinarily connected with the central canal. They may resemble very closely the conditions found in syringomelia, and the symptoms to which they give rise are often surprisingly like those of syringomyelia. Some writers have gone so far as to refer to such cases as traumatic syringomyelia. It seems to me, however, that they should be kept distinct in name from the chronic progressive and probably congenital spinal disease, as they are distinct in origin, and that they should be designated as primary hæmatomyelia.

Localized collections of hemorrhage from injury are found very much more frequently in the regions of the cord subjacent to the lower cervical vertebræ, *i.e.*, in the region of the greatest spinal movements. The corresponding spinal cord segments are the fifth, sixth, seventh, eighth cervical, and first and second thoracic. It is probable also that primary traumatic hæmatomyelia occurs in the lower lumbar region and in the conus medullaris. In the majority of the cases of hemorrhage in this region, however, there have been serious lesions in the bones.

Such hemorrhages as have now been described are usually localized or focal. The largest hemorrhage may be surrounded by smaller collections of free blood cells, but the hemorrhagic region is limited to one region of the cord, and beyond it the cord is normal.

In contrast to this type of hæmatomyelia is another, the disseminated type, in which there are extravasations throughout the whole spinal axis. This is a variety of hæmatomyelia which has been much speculated upon as affording an anatomical foundation for the traumatic neuroses. It has been found at autopsies on infants born after prolonged and difficult labor. But with the exception of a case described by me,[1] I have found no pathological records of it in traumatic cases in adults.

An epitome of the case referred to is as follows:

A workman received a severe fall and died in three hours. The autopsy showed a hemorrhage into the middle fossa of the skull without fracture. There was a fracture dislocation of the atlas and axis, with extensive mutilation of the cord at this point. Except at the point of compression, the cord looked in every way normal. On section it could be seen that the blood vessels were somewhat prominent, but the eye could detect no free blood either at the seat of injury or at lower levels. Sections were made of every segment of the thoracic, lumbar, and sacral regions and examined microscopically. The lesions found were generally distributed up and down the cord, and consisted of recent capillary hemorrhages. No single hemorrhage contained over two or three hundred blood cells, and the majority of them contained fewer. In some places there were only two or three free cells. In a few sections the blood lay in little cavities, but the most common distribution of it was in the form of an infiltration of a small number of blood cells between the neuroglia and nerve fibres. There was nowhere any tubular cavity formation. The largest extravasations were in the pia and around the nerve roots. In the spinal cord, although occurring in the gray matter, they were most frequent in the white matter, especially in the posterior columns. Nearly every section contained the hemorrhages, but no section contained very many, usually not more than two or three. The situation of the hemorrhages bore little or no relation to the location of the large blood-vessels. The blood-vessels were prominent and filled with blood. In all other respects the spinal cord appeared normal.

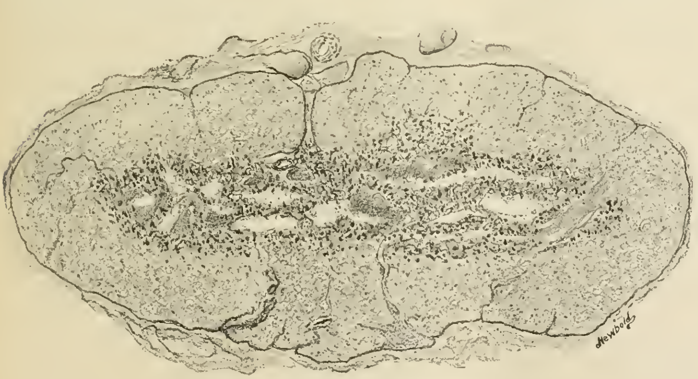


Fig. 6.—Showing Late Results of Cavity Formation. The central parts of the cord, into which hemorrhage had taken place, are being filled up with new connective tissue.

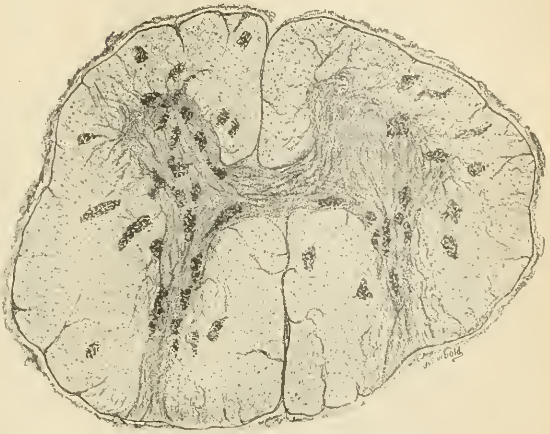


Fig. 7.—Disseminated Hemorrhage into the Spinal Cord from Injury.

Thus, to resume briefly, a healthy man fell with sufficient violence to break his neck and to cause an intracranial hemorrhage without fracture of the skull. The force was exerted chiefly on the atlas and axis, as seen by the injury to these bones. But it was also adequate to cause throughout the cord punctate hemorrhages, which were entirely unassociated with the severe local injury and which were probably due to the general violence to which the whole spinal cord was subjected.

Since the publication of the foregoing, two other similar cases have come to my observation. Of these, one came to me through the courtesy of Dr. P. R. Bolton from the Hudson Street Hospital, the other from Dr. Eugene Hodenpyl's pathological service at the Roosevelt Hospital.

Case I.—An adult workman fell through a hatchway and died in two days. An autopsy was made four hours after death. There was a fracture of both laminæ of the sixth cervical vertebra. Otherwise the spinal column was normal. The cord was softened and discolored in the lower part of the cervical region—*i.e.*, the region subjacent to the fracture. There was also a similar area of softening in the lower thoracic region.

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[1] "Accident and Injury; their Relations to Diseases of the Nervous System," New York, 1898.

Microscopical examination: The chief lesions in this case were small hemorrhages throughout the whole cord from the upper cervical to the lower lumbar region. They were especially pronounced in the region subjacent to the fracture and in the part of the cord included between the seventh and tenth thoracic segments (Fig. 7). The most serious damage was in the eighth cervical and first thoracic segments. Here the hemorrhages in both gray and white matter were very numerous and comparatively large, and were associated with a slight condition of softening, characterized by Glüge's corpuscles, myelin drops, and disintegration of nervous elements. There were similar appearances in the lower-lying focus of severe lesion. In addition to these two foci of most pronounced injury, capillary hemorrhages were present throughout the spinal axis from the second cervical to the lower lumbar segments. Above the second cervical and below the lumbar enlargement they were least frequent and prominent. The collections of blood throughout the affected segments varied in size and number. In some places only a few blood cells had been extravasated, in others they were more numerous. The largest hemorrhage was not over 3 mm. diameter, and none could with certainty be identified with the naked eye. In the most seriously affected regions the sections were studded throughout with the blood collections; in the other segments they were chiefly, though not exclusively, confined to the gray matter. In many of the larger hemorrhages there was degeneration in the centre so that the outlines of the blood cells were lost. In some of these there were fissures which, had the patient lived, would have gone on to cavity formation. The finer structure of the ganglion cells could not be determined, as the cord had been put in Müller's fluid; they seemed, however, except when directly involved by the blood, to be normal in number and size. The nerve fibres were, in general, well preserved. The blood-vessels were prominent and filled with blood throughout. Their coats were not thickened.

Case II.—A boy, two and a half years of age, fell down a flight of stairs, at the foot of which he was found unconscious. Four hours later, without regaining consciousness, he died. I did the autopsy four hours after death. The temporal and parietal bones of the skull were fractured, and there was an extensive subdural hemorrhage in the middle fossa, extending up over the convexity of the brain. The spinal cord was removed with especial care to avoid bruising. Macroscopically it appeared normal. Studied through all its segments in microscopic section it appeared normal in respect to topography and essential elements. The blood-vessels were not thickened nor unduly prominent. In the cervical and lower thoracic regions there were small capillary hemorrhages situated chiefly in the dorsal horns of the gray matter and on the dorsal white columns. They contained only a few blood cells, were in no apparent relation to the blood-vessels, and produced no secondary consequences in the structure of the cord.

In reporting cases of this character I am well aware of the danger of error of interpretation of such lesions, and of advancing as pathological what are in reality artefacts due to post-mortem mutilations. But that the free blood cells in the cases recorded here were in reality extravasated, and that they occurred before death as the direct results of the physical injury, I am confident for the following reasons:

1. All the patients suffered fatal traumatisms. 2. The cords were removed with especial care. 3. All gross evidences of internal or external bruisings were absent. 4. Such punctate hemorrhages are not found in spinal cords, removed in the ordinary way, unless there is a history of injury. 5. The wide dissemination of the hemorrhages. If they were artefacts, they would probably be focal. 6. The fact that in many places the blood had degenerated is conclusive proof that it had been poured out before death.

These cases must be accepted, therefore, as proving that severe general injuries can cause disseminated lesions throughout the spinal axis. Although the vertebral column was intact in only one of the cases, the bone injuries were confined to one point, and the hemorrhages existed so far from that point that they unquestionably arose independently of any local effects of compression, and would in all probability have occurred even if there had been no fracture of the spine.

The clinical importance of these disseminated hemorrhages will be referred to a little further on.

Clinical Considerations.—For clinical purposes primary hæmatomyelia can best be considered under three heads: A. Large focal hemorrhages. B. Small focal hemorrhages. C. Disseminated hemorrhages.

A. Large focal hemorrhages: In an article read before the Johns Hopkins Hospital Medical Society[1] I described this condition at some length. A brief *résumé* of certain parts of that article may make the present one more complete.

After certain injuries by which the neck is forcibly flexed or, perhaps, extended, there develops immediately a condition of motor paralysis, variously distributed, together with peculiar sensory symptoms. The paralysis of voluntary motion, with few exceptions, ensues instantly upon receipt of the injury. The muscles involved at the level of the injury (since the hemorrhage is most constant in the lower cervical region) are those of the forearm and hand, and sometimes of the upper arm; those below, of the lower extremities. The paralysis of the upper extremities has a different anatomical basis from that of the lower. The first is due to the blood being poured directly into the spinal nuclei of the brachial nerves, thus constituting a destructive lesion. From such a condition perfect recovery is improbable, and, in fact, most of the patients remain permanently paralyzed, though the paralysis may be very limited in some of the muscles of the upper extremity. The paralysis of the legs, on the other hand, is the result of conditions often permitting recovery. The most plausible explanation of this paralysis, from which recovery may be expected, is that the hemorrhage, although occupying the central portions of the cord, exerts sufficient pressure, or is followed by œdema sufficient to compress for a time the pyramidal tracts which lie a little distance from it, and which are carrying the long cerebral fibres destined for the muscle nuclei situated at lower levels. When the hemorrhage ceases, the commotion it has caused in its vicinity subsides and the pyramidal fibres are permitted to resume their wonted function. The distribution of the paralysis varies with the situation and extent of the hemorrhage. If below the first thoracic segment, an unusual situation, the arms escape. If above the second thoracic segment, the paralysis affects the muscles whose nuclei are below the upper limit of the hemorrhage. If the hemorrhage is on one side of the cord only, affects the arm chiefly or only; if larger, but still confined to one side, there is spinal hemiplegia.

In a large number of cases the hemorrhage is sufficient to cause at first paralysis of both arms and of both legs. When the patient is seen immediately after the accident, the paralysis is flaccid in character, the muscles are soft and yielding, without rigidity, and the paraplegia is complete. The knee jerks are diminished or lost (this does not of itself indicate a transverse lesion, as is often maintained). When the lesion is very small, the knee jerks may be hypertypical or exaggerated at once. In the lower extremities the paralysis soon undergoes a change, and from being flaccid it becomes spastic. The knee jerks, if they are diminished or lost, return and become exaggerated, and ankle clonus is added.

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[1] "Primary Focal Hæmatomyelia from Traumatism," New York Medical Record, November 19, 1898.

With the establishment of spasticity strength returns to the legs. Some patients are able to walk a few weeks after being completely paraplegic. The recovery in the legs comes sooner than that in the arms; in the arms it is also less perfect than in the legs, there usually being left a permanent atrophic paralysis in some of the brachial muscles.

Of these muscles the most frequently affected are the small ones of the thumb and the interossei. Thus, a patient recovering from this affection may present a picture very similar to that of progressive muscular atrophy (amyotrophic lateral sclerosis), viz., a paralysis of the upper extremities of the peripheral neuron type, with atrophy, fibrillation, and degenerative electrical reactions, and of the lower extremities of central neuron type, with rigidity, increased knee jerks, and ankle clonus.

When distinctive sensory symptoms are added to those of progressive muscular atrophy, the picture changes to that of syringomyelia, and, as has often been emphasized, primary focal hæmatomyelia from trauma has many things in common with syringomyelia. The sensory symptoms in these cases differ materially from the sensory symptoms observed in transverse lesions.

From the study of syringomyelia, a disease affecting primarily the central gray matter, and having for its most distinctive clinical manifestation a dissociated anæsthesia, the gray matter of the spinal cord has come to be regarded as intimately connected with the passage brainward of the sensations of temperature and of pain; and it is further probable that, whatever may be the paths for the sensations of touch, they are not in the gray matter. We expect, therefore, that in all cases, whether chronic or acute, in which the lesion is confined to the structures surrounding the central canal, the ability to recognize thermic and painful stimuli will be impaired or lost, while tactile sensibility remains normal. Such is the condition in focal hæmatomyelia. Sensibility is not affected, but there exists thermo-anæsthesia or analgesia, or both together. It is generally necessary to examine these functions specifically, as the patient will say that he "feels everything," being unaware that he cannot tell heat from cold or feel pain. The distribution of these disturbances is in general the same as that for the total anæsthesia of transverse lesions. The Brown-Séquard type is often seen, viz., a motor paralysis of one arm and leg, with loss of pain sense and temperature sense in the opposite side. The degree of thermo-anæsthesia and analgesia is not constant. As a rule, analgesia is the less of the two; in recovery also, it is the first to improve or disappear. From personal experience I can speak only of the loss of temperature sense. That has generally been, for the first few weeks after the accident, complete, so that the patients were not only unable to distinguish between heat and cold, but felt no discomfort from contact with the test tube of boiling water, although other kinds of painful stimuli were appreciated at their true value. When the symptom was incomplete at first, or when time had permitted it to become so, it appeared as a delayed perception. The tendency of these affections of the pain and temperature sense is toward improvement, and sometimes recovery is perfect.

The other symptoms of these large focal hemorrhages are those of spinal-cord injuries generally. Thus, there may be pain, loss of sphincter control, bedsores, priapism, œdema, cyanosis of the extremities, etc. In purely hemorrhagic conditions, however, these are generally characterized by their short duration and by one or more of them being absent. The chief title to distinction which these cases possess is their relatively good prognosis. Many of the patients recover almost entirely. It is certainly remarkable to see a man who had been completely paralyzed in all four extremities as the result of a severe injury, walking about again and pursuing a gainful occupation. It has been my privilege to see this in several cases, and there are numerous examples of it in literature. In the earlier article I described such recoveries in detail. Since that writing the following case has come to my observation:

A man, thirty-one years of age, fell off a cart, striking on the right side of the head, on July 21, 1899. He was immediately paralyzed in both arms and in the left leg, and for three days following there was retention of urine. On September 6th, less than eight weeks after the accident, when examined at the Vanderbilt Clinic, the right arm had nearly entirely recovered; the left arm was still weak, as was the left leg, though the patient could walk without much difficulty. There was no deformity of the vertebræ, though the movement of the neck caused pain. Tactile sensibility was everywhere normal, but there remained considerable impairment of thermal and pain sensibility in the right side of the body, *i.e.*, on the side opposite to the motor palsy, thus constituting the Brown-Séquard type. Thus, in less than eight weeks after an accident which had caused complete paralysis in three members, one arm had recovered almost entirely, the other arm was useful to a certain extent, and the paralyzed leg had regained sufficient power to make locomotion easy.

B. Small Focal Hemorrhages: It is evidently impossible to distinguish sharply between large hemorrhages and small ones; the one merges naturally and imperceptibly into the others. But as there are many clinical cases of hæmatomyelia of which it is possible to say that the hemorrhage and consequent injury to the cord are extensive—so are there others in which it is equally possible to assert that the hemorrhage and cord injury are minute. Under "Large Focal Hemorrhages" were described the cases in which the initial paralysis was extensive, involving three or more of the extremities, and associated, at first at least, with many other evidences of severe lesion. Under "Small Focal Hemorrhages" an account will now be given of the cases in which many of the cardinal symptoms of injury to the spinal cord will be sought for in vain, and in which such symptoms as are present are incomplete or limited in distribution. These small hemorrhages rarely if ever cause death, and consequently post-mortem evidence concerning them is meagre. But they are occasionally found after death in the bodies of persons dead from other causes; and there are many correlated facts which make diagnosis reasonably certain. Chief among these are the facts that the symptoms point to the cervical region, and that they indicate in their mode of origin, their individual characters, and evolution, a central lesion of the cord.

It has been thoroughly demonstrated that the cervical region is the elective seat, if not the exclusive one, of primary focal hæmatomyelia. It is the region of which our knowledge of fibre courses and cell groups is most complete. It is here that such diseases as syringomyelia and progressive muscular atrophy, which have furnished invaluable information as to spinal-cord structure and function, have their favorite starting-points. From the fourth cervical through the first thoracic segment are grouped the muscle nuclei for the upper extremities; the sensory supply, in sharply differentiated areas, of the whole integument below the neck; the cilio-spinal centre, and various centres of reflex action. The functions of this region are so important and so closely packed together, and their allocation is so well known, that even a slight lesion can hardly pass undetected and unlocalized. Such a minute lesion is exemplified in the following case:

The patient, a man forty-three years of age, with an unimportant previous history, was injured in an elevator shaft on November 11, 1898. He was packing the cylinder, and was wedged in between it, the wall of the elevator shaft, and a discharge pipe, when the balance weight of another elevator came down slowly, engaging his head on the left and back surfaces. Being unable to extricate himself, and the weight continuing to descend slowly, his head was bent forward and to the left on his chest, and in this position he was pressed down to the floor. This is all he remembers of the accident. When he recovered consciousness, about two hours later, he was in the New York Hospital. His symptoms then were: Laceration of the scalp, where the weights had pressed; severe pain and tenderness in the neck, with limitation of movement; tingling in the tips of the fingers of both hands. He could move all the extremities freely, although they felt weak; he could pass his water normally; his bowels moved regularly. He remained in the hospital for two weeks, the treatment being directed to the stiffness and pain in the neck and to the scalp wounds. He had no bed sores. When discharged from the hospital the pain in the neck was still troublesome, and he felt weak generally, conditions which have been gradually improving.

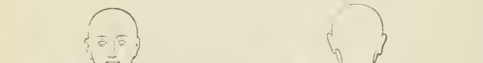

FIG. 8.—Diagrammatic Representation of the Anæsthesia and the Condition of Reflex Activity, in a case of primary focal hæmatomyelia from injury.

Examination, January 24, 1899, Vanderbilt Clinic: The patient is a fairly well-nourished man. There are no disturbances of mental capacity, no interference with the special sense functions of sight, hearing, smell, or taste. The pupils are normal. There are no symptoms referable to the cranial nerves. The neck is held somewhat forward on the chest and is very stiff. Attempts to cause movement in it in forward, backward, lateral or rotary directions, either on the part of the patient or of the examiner, cause sharp pain. There are, however, no demonstrable evidences of fracture or dislocation in the vertebræ. The only positive indications of destructive lesion in the nervous system consist in a patch of anæsthesia over the right shoulder and a foot clonus on the left side. The anæsthesia, as indicated in the diagram (Fig. 8) corresponds to the deltoid region. In the area marked black on the chart it is profound and total, so that touches are not felt, pin pricks cause no pain, and temperature sense is abolished. Surrounding this patch of total anæsthesia in front, behind, and above, there is a narrow zone of diminished sensibility, which merges into normally sensitive skin. Below, the whole right arm is not so acutely sensitive as the left, although there is no objective anæsthesia. In the trunk and legs feeling is the same on the two sides. The foot clonus on the left side is rhythmic and fairly forcible. It is not particularly persistent and is easily exhausted. The tendon reflexes are everywhere very lively. The left knee-jerk is more active than the right; elsewhere there is little comparative difference between the tendon reflexes of the two sides. The man is weak generally, but he is not conscious of, nor was I able to demonstrate, a greater weakness on one side than on the other. Fibrillary twitchings manifest themselves upon use of the muscles of the upper extremities. They seem equal on the two sides. There is no atrophy. The measurement of the limbs of the left side are somewhat less than those of the right, but not beyond physiological limits. There have never been rectal or vesical difficulties.

This is evidently the history of a case of spinal-cord injury. Yet many symptoms, usually prominent, were at no time present. There was no paralysis of motion; the sphincters acted physiologically; there were no trophic disturbances. The lesion therefore must be very minute. The diagnosis of hæmatomyelia is based upon the character of the accident, the anæsthesia, and the condition of the tendon reflexes. The accident caused a forced flexion of the neck, the most fertile cause of intramedullary bleeding; the anæsthesia, since it involved all forms of sensibility, is best explained by a lesion in the dorsal half of the left dorsal horn; and a lesion there, since it would press most severely upon the left (crossed) pyramidal tract, would account for the excess of knee jerk and foot clonus on the left side. All the symptoms can be harmonized by assuming a lesion within the cord, and by that only. And as hemorrhage is the chief primary intramedullary lesion from traumatism, there can be little question that a focal point of bleeding in the left posterior horn, extending not above the fifth cervical segment, is the correct explanation of this case.

Since a focal hemorrhage may vary greatly in situation and in extent, and since small hemorrhages may be multiple, it is evidently impossible to create any sharply defined symptomatological category into which all cases may be gathered. The lesions being small, there is a still further departure from the clinical picture of a transverse lesion than in the large focal hemorrhages. There is usually no loss of rectal control, and the bladder, if involved at all, is so only temporarily. Bed sores, as the patient is rarely confined to bed for a long time, do not occur. Sensory symptoms, with the exception of pain, may be entirely absent. This is the case especially when other evidences point to implication of the ventral horn nuclei. Anæsthesia, if it exists, is not widespread. It may involve all forms of sensibility as in the case just cited, or may be of the dissociated type. The Brown-Séquard distribution is common. Pain is generally present to a greater or less degree. It may manifest itself simply as pain and stiffness in the neck, or it may take the form of "root pains," and be extremely severe. The paralysis of voluntary motion is similar to that described under large focal hemorrhages, viz., a paralysis with rapidly ensuing atrophy, some of which will be permanent, of the peripheral neuron type, in one or both upper extremities; and, if the pyramidal tracts are encroached upon, a spastic weakness of one or both legs. In small hemorrhages the knee jerks are usually lively or exaggerated from the outset. This is an important differential sign from large hemorrhages. The symptoms referable to lesion of the cilio-spinal centre are usually limited to a myosis, often unilateral. Fibrillary twitchings, so constant a sign in chronic disease of the motor nuclei, are no less frequent in acute lesions. In some cases of injury to the back a persistent fibrillation in one or more muscles of the shoulder girdle is the only evidence of spinal-cord involvement. In all cases it should be looked for. Occurring alone, or associated with other symptoms, it is of great diagnostic value. It is found especially in the pectoralis major, the triceps, and the biceps. It is more difficult of recognition in the compactedly placed muscles below the elbow.

The condition known as diplegia brachialis traumatica has usually been explained by assuming an extra-dural hemorrhage. In the absence of post-mortem evidence of the existence of such a lesion as an isolated condition, and in the light of our present knowledge of hæmatomyelia, it seems to me that the clinical condition must henceforth be recognized as resulting from hemorrhages into the cord and not outside it. The symptoms consist in a flaccid paralysis of both upper extremities appearing as the immediate result of an injury to the neck. The legs are not involved; there is generally no anæsthesia, and the sphincters are implicated slightly and temporarily or not at all. Pain may be prominent, but it may also be slight or absent. The knee jerks may be normal or hyperactive. The following from the Vanderbilt Clinic is a typical illustration of this condition:

A man, fifty-four years of age, was run into on the street by a light carriage on December 2, 1899. He was stunned for a moment or two, and is consequently unable to give the exact details of the accident. He thinks, however, that one of the shafts struck him in the neck from behind, and that then the carriage ran over him. As a result of this accident there were the following conditions: Fracture of two ribs, scalp wounds, and paralysis of both upper extremities. The patient went to Roosevelt Hospital and stayed in bed ten days. During that time he says there was complete paralysis in the shoulders and in the upper arms, and great weakness in the forearms and hands, though he could use these to a certain extent. The right side was more affected than the left. The neck was stiff and painful on movement, and there was severe pain between the shoulders and in the neck, which darted down the arms as far as the elbows. These latter darting pains caused the patient intense suffering. At no time was there any paralysis of the legs, of the bladder, or of the bowels; nor was the patient himself conscious of any impairment of cutaneous sensibility. There were no bed sores. On January 8th, the patient came to the Vanderbilt Clinic, when the following notes were taken as to his condition:

The patient is well built and well nourished, and walks naturally, though the head and neck are held rather stiff. There is a slight prominence of the seventh cervical spine, but no marked tenderness. The movements of the neck are fairly free and cause no pain. Both upper extremities are weak, and around the shoulders there is almost total paralysis. This latter affects the deltoid, the spinati, the rhomboids, and the supinatores longi. These muscles are pronouncedly atrophied, are the seats of fibrillary twitchings, and respond sluggishly to faradism. In the other muscles of the upper extremity the affection is weakness rather than paralysis, and evidences of degeneration of muscle tissue are wanting. The knee jerks are normal. It is impossible to demonstrate positively pathological disturbances of sensibility. Touch is everywhere normal. It may be that on the inner sides of the arms and over the chest sensibility to pain is less acute than it should be, and that in these regions the patient is somewhat uncertain in his recognition of heat and cold. These disturbances, if they are regarded as such, are too slight to warrant the terms of analgesia or thermo-anæsthesia. The symptoms, therefore, were almost purely motor and were confined to the upper extremities. It is evident that the pyramidal tracts for the legs were not destroyed nor pressed upon. A lesion able to cause such symptoms must affect the ventral horn nuclei, or the ventral nerve roots, without encroaching upon sensory tracts or the pyramidal tracts. How a hemorrhage situated without the cord could cause such selective symptoms it is difficult to see; neither does it seem probable that all the ventral roots going into the formation of the brachial plexus could be so seriously injured as to cause bilateral brachial palsy, without at the same time there being other conspicuous symptoms on the part both of the spinal cord and of the spinal column. In contrast to these improbable hypotheses is the one which postulates that the lesion consists of hemorrhage among the nuclei of the brachial nerves in the fourth cervical segment. This latter explains perfectly all the symptoms, and its correctness seems almost incontestable in view of the demonstrated frequency with which hemorrhage involves the gray matter of the cervical region.

As to the prognosis of these small focal hemorrhages, little is to be said. Life is not directly menaced by them. The degree of ultimate disability is dependent upon the situation and size of the hemorrhage. Like the larger hemorrhages, the initial paralysis is susceptible to a great degree of improvement. For example, an arm which at the outset was completely paralyzed, after a few weeks or months has regained its function in all but a few muscles or groups of muscles. Muscles in which atrophy sets in early and progresses rapidly are the least likely to regain full power. But even in them there may be considerable return of usefulness. The paralysis is the only symptom which need cause anxiety. Anæsthesia is usually transitory, and even if it persists it rarely causes any serious trouble.

The treatment of both large and small hemorrhages is to be conducted on the same lines. As the hemorrhages are within the cord, they are beyond the reach of surgical aid, and operation, therefore, becomes absurd. This will of course be granted by any one. But until surgeons generally become more familiar with the differential diagnosis of injuries to the spinal cord, cases of primary hæmatomyelia will continue to be operated upon. And the relatively favorable prognosis inherent to them will be turned to the embellishment of the fame of the operator.

Rest in bed is the first primary requisite for these cases. When the legs are paralyzed, there is of course no other alternative. Then a water-bed is necessary. But even when the patient can walk, he should be kept in bed for ten days or two weeks after the accident, or longer if necessary. Orthopædic appliances are not indicated. The customary attention to bowels and bladder should be carefully given. The pain in the neck can often be relieved by the use of the thermo-cautery, or analgesic drugs may be necessary. The iodide of potassium in ten-grain doses may have an effect in hastening the absorption of the blood clot. Faradism to the paralyzed muscles should be given as long as they react to it. If they fail to respond, galvanism is to be substituted. After the immediate effects of the injury have passed, massage and passive motion in the neck are useful.

Disseminated hemorrhage: There is little to be said concerning the clinical characteristics of primary disseminated hæmatomyelia, for we have no means of positively diagnosticating it during life. If, combined with the scattered blood extravasations, there is a point of bleeding in a functionally important region of the cord large enough to give focal symptoms, there will be the symptoms of focal hæmatomyelia plus the evidences of a general commotion of the cord. When, however, there is no single collection of blood cells large enough to interfere with the function of afferent or efferent tracts, of cell groups or of reflex arcs, in a way to permit a clinical recognition of local interference, the diagnosis, if it be attempted, can at best be only one of probability, depending upon the pathological possibility of disseminated hemorrhages, together with the general clinical evidences of shock.

It seems to be extremely probable that many of the vague yet persistent nervous disturbances which are occasionally seen after severe general traumatisms are the direct results of such hemorrhages.

4 West Fiftieth Street

SOME REMARKS ON THE TREATMENT OF SYPHILIS.

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If comparison is invited with the class of ordinary infectious diseases, syphilis will be found to have many points in common. In fact, syphilis is regarded as an infectious disease, imparting its virulence from a local focus to the fluid tissues, producing constitutional symptoms, which abate and in their wake leave insidious constructive processes that ultimately degenerate and take on a destructive type. Practically a division of syphilis into primary, secondary, and tertiary stages is helpful in ascertaining pathological conditions and the resultant treatment, though such classification may appear rather arbitrary and fanciful. Rather a debatable question arises, why one person should present an apparent immunity to the syphilitic virus, while another may become severely infected by inoculation. No doubt good general health offers a certain check or a bulwark in counteracting the effect of this morbid infection. Susceptibility of the individual probably depends upon the inherent vulnerability and the resistant power of the tissues of the healthy body. And the better the health appears, the more reasonable would it seem that the tissues and the circulating fluids should counteract this unknown poison. Hence no two bodies exhibit the same degree of virulence, and no two bodies present the same fortifying and repelling influences of their tissues. Whether the disputed germ of syphilis or its resultant ptomains are responsible for the prolific cell growth in lues I am not prepared to state. This luxuriant cell growth readily and vigorously attaches itself to the walls of the lymph- and the blood-vessels, and so induces many morbid tissue changes. It is surmised that this almost explosive cell distribution throughout the body wages constant war against the tissues, the cells finally implanting themselves upon some vulnerable point, producing morbid processes extending over a number of decades, or even over the lifetime of the individual. Manifestations may appear at any time without warning; in fact, in the course of time they become more alarming and destructive, finally leaving irremediable sequelæ. Implantation of syphilitic processes acts at first destructively upon the functions of the organs, later sapping their very vitality.

The morbid tissue of syphilis is of a granulation type and has certain characteristics to distinguish it from other types of tissue. Granulomata are apt to infiltrate the lymph-vessels and nodes and the walls of the blood-vessels, being accumulative primarily, but owing to poor vascularization they readily undergo destructive metamorphosis. This tissue has characteristics in common with other tissue, in that it is subject to attacks of inflammation, suppuration, and caseation, yet it is a notable and a characteristic fact that even large accumulations of syphilitic granulation tissue become entirely dissipated by vigorous antisyphilitic medication. This capacity for complete absorption and disappearance without leaving any marks of ulceration or degeneration may be caused by various factors, but it strikes me that it is the only morbid tissue which will positively yield to medicinal treatment. The ravages of the disease increase with age, though it might be supposed that the germicidal effect of the blood plasma would be antagonistic to syphilitic infection, and so wear out its virulence. There is a constant effort of one trying to conquer the other, health having the germicidal action of the tissues in its favor. Our gratitude is due to the natural processes of our fluids, which are usually victorious; for experience teaches that in years elimination of the infection takes places in over two-thirds of those afflicted, who fail to record any but primary and secondary manifestations of this dreaded monster. In other words, we may put it as an axiom that over sixty-five per cent. of the afflicted escape tertiary manifestations or sequelæ, the foe being conquered by the elements of time and good health. Prolific cell hyperplasia at first gives rise to indurations; steady accumulations give rise to swellings and tumors. Progressive plastic elements increase the thickness of the walls of the blood-vessels, obliteration of their lumina may ensue, with thrombosis and embolism and a cut-off blood supply. For a vital organ like the cerebrum we see how important and necessary a good supply is—far more so than for the spinal cord. As a sequela a subsequent destruction of tissue takes place; the function at this area is forever destroyed, and it would not be feasible to suppose that this softening could ever be completely regenerated. This is one of the destructive ravages of this dread disease, and while we cannot regenerate what is completely destroyed, we may hope to check the progress of a contiguous and similar process which has not so far advanced. Suppose pressure of a similar growth upon the delicate nerve fibre produces a descending nerve degeneration with entire disappearance of axis cylinder and replacement of connective tissue, would we expect the connective-tissue changes to disappear completely, after their existence for a long time has caused the nerve to cease functionating? No, undoubtedly not, though we are aware of the great reparative power of nerve fibres, especially if peripherally injured. You say, What has all this to do with syphilis? A great deal, I say, because many of us expect to cure all kinds of lesions if they are syphilitic in character; we do not consider that they are sequelæ, which fail to respond to treatment, though they may have been caused by syphilis. Especially does this argument hold good in various cerebral affections of an organic type, excluding functional and nutritional diseases, in which syphilis plays a very important rôle as a causative factor—in fact, the most important, excluding heredity, worry, excitement, alcohol, etc. Nerves are far more prone to become regenerated, but they never can replace connective-tissue changes; restoration is as impossible in descending degenerations as it is impossible to restore cerebral softening when function has once become lost. In these lesions we must not expect too much from treatment, though we may be able to inhibit a further extension of the disease. There is no relation between a primary focus of infection, which may be very minute, and later manifestations, which may appear very severe and destructive. As a rule, from the local focus of infection we have little to fear; it is the harbinger of an already infected system, which may be followed by syphilodermata and a febrile movement. The multiform eruption of the skin need give us less apprehension than the visceral complications, which are apt to appear later, affecting the functions seriously and inducing structural lesions. These remarks apply generally, except to those cases dreaded so much, though fortunately rare, the cases of galloping syphilis. The mooted question, whether tentative excision of the local infection should be practised in order to induce a more favorable and attenuated disease, can be readily dismissed with the answer that extirpation is rarely practised, though it may appear to hold out hopes of lessening the virulence of this noxious poison. It is well known that the cure of the focus is a simple matter, unless a mixed infection causes much suppuration, when radical means must be resorted to. Excision to-day is very much discredited, as infection readily extends and permeates the tissues with wonderful rapidity. Enlargement of lymphatic vessels and general adenopathy, especially inguinal, and the syphiloderma, usher in the second stage. If the initial lesion is a doubtful one, it is a much-disputed question whether to begin treatment at once or wait for secondary manifestations. In order to give weight to our diagnosis and to strengthen our belief, it is better to wait until constitutional evidences arise rather than subject the victim to tentative treatment which is productive of nothing but leads us into error, not only for a short time but for a number of years, when we may regret to have before us an example of disease of a questionable character. The appearance of objective signs, taken in conjunction with an initial infection which was of a dubious character, will give a picture that removes all future ambiguity as to the character of the treatment to pursue. Great injustice may be done the patient in suspending over him a constant cloud of condemnation, whenever a symptom arises that cannot be explained, and that with great trepidation will surely be ascribed to the causative influence of syphilis. Syphilitic virus tenaciously lurks in the organism and insidiously affects the viscera and the osseous system, gradually producing serious lesions, the more rebellious to treatment the longer the process has continued.

Allusion has already been made to the resistant and overpowering action of the healthy tissues of the economy, and the possibility of a successful combat of the normal tissues with the specific poison, gradually attenuating the virus and rendering it innocuous, till at last they gain a decided victory over their weakened foe, that finds no further nidus for implantation and finally succumbs. Whatever be the character of the poison or its composition, though not an entity, it is apparently never dormant, always eager to prey upon weakened tissues, and this will explain why tissues debilitated by constitutional vices, dissipation, and alcoholic excesses succumb readily. Hence it is of the utmost importance in the treatment of syphilis to have a patient in as good a physical condition as we may possibly secure. Some of the worst cases of tertiary syphilis we see in those who in their youth have wilfully abused their constitutions, and who appear not well able to cope with the inroads of disease.

Medicinal treatment of syphilis by mercurial salts has been well known for centuries. In fact, these salts have been eminently successful in the primary stages; but the same cannot be said of iodide of potassium, though it appears absolutely necessary in the later stages to facilitate the melting away of plastic material and young connective-tissue changes. Without mercury it is impossible thoroughly to eradicate the disease and ultimately cure the patient. Some observers contend that the iodides alone are curative. This is a doubtful assertion. Mercury forms the sheet-anchor and is the greatest foe of syphilis. Symptoms of the tertiary stage frequently appear of a dubious character, but the history of the patient and the subsequent objective signs create important links in the chain of our diagnosis. The etiological factor may long have been forgotten or may have been intentionally kept from the practitioner; the same may be said of the secondary manifestations, and no evidences may exist save a general adenopathy. Our diagnostic acumen is very much taxed, but the suspicion of syphilis lurks everywhere about the patient, and here we realize the necessity of the so-called unscientific therapeutic test. Many objections may be raised against this fallacious argument; it is only tentative, but as an example let us take an obscure cerebral disease, with an organic lesion possibly located, but whose character is unknown from its very obscurity; no history of primary infection in youth, no etiological factor to assist us, and yet we are forced to accept syphilis as the most probable factor of its existence, or at least we suspect it. The family history is blank; an examination of the iris and cranial nerves, and an ophthalmoscopic examination of the choroid and the optic nerve, may assist. Providing we find an absence of a definite cause and absolutely no evidence of constitutional syphilis, the query is, what our treatment should be and whether we are justified in tentatively using antispecific remedies.

On the strength of past numerous successes and the rapid amelioration of symptoms and objective signs, though we cannot demonstrate any evidence of syphilis, we are forced to admit the frequency of syphilis as a causative factor, and our justification is well supported by a possible recovery. I am well aware that I am generalizing my remarks and am treading upon somewhat foreign ground, but an admission of ignorance is better than confident assertion of controvertible statements. It is true that heroic antisyphilitic treatment has frequently caused marked amelioration of severe brain symptoms, supposedly due to syphilis, but later demonstrated to be due to other causes widely divergent and not specific in character. The truth of this objection has especially impressed itself upon me in cases of tuberculous meningitis of children, when an apparent lull in symptoms, even holding out hopes of recovery, was caused by the administration of large doses of the iodides and by inunctions, which fact tended to deceive us severely. It is difficult to account for these phenomena, save on the theory that the amelioration of symptoms could be ascribed to an increased absorption of liquid elements by a lymphatic system, whose activity had been markedly increased by the stimulation of the drugs administered. This test is not without its fallacies, and is consequently forcibly held out as irrational by the opponents of specific treatment in chronic cerebral disorders. Yet it must be contended that in these obscure cases palliation is the entire extent of our resources. The query naturally arises, whether we are justified in forcing the patient to submit to a heroic form of specific treatment when the etiological factor is in doubt. As a rule, very little detriment results from such a procedure, and much may be gained in a doubtful case. Justification of aggression by resultant cure in a single case, though it had been merely tentative, will well repay us for a dozen failures. While the plan seems unscientific and irrational, the patient's feelings are very little influenced by adherence to the strict rules of our science as long as we can hold out relief and a possibility of a cure. Especially does this apply to those young in life, when cure signifies much for their future welfare, or, if not a cure, at least a checking of the degenerative process and prevention of subsequent recurrence. Degenerative types of disease, especially with multiple patches of sclerosis as a basis, can be hardly expected to yield to treatment, though it be heroic, as no drug is known which will cause dissipation of firm scirrhous connective tissue. Though the so-called stages of syphilis are an arbitrary division, yet they help us to understand more thoroughly the pathological conditions and the principles upon which a rational treatment of syphilis is based. From our present knowledge we infer that the proliferative cell growth of syphilis produces accumulative lesions, which must be affected by drugs in a way to cause dissipation or dissolution, in all probability by a process of fatty metamorphosis. Syphilitic granulomata, more than any other tissue, in fact characteristically so, completely disappear under proper treatment, leaving no vestige of their presence. This property of causing fatty degeneration is ascribed to the mercurial salts more than to any other drug. When the deeper connective tissues are affected, the iodides are especially useful in stimulating the various lymphatics to increased absorption and in arousing the emunctories to eliminate the products of fatty metamorphosis. Regarding the quantities of mercury and the iodides that effect this change, every case is a law unto itself, except that the drugs should be administered with firmness and heroically. Iodide toleration is usually well marked in syphilis, though various idiosyncrasies play an important rôle in its administration. Iodism, with its well-marked rhinorrhœa, various skin eruptions, and gastro-intestinal irritation, are drawbacks familiar to all. Symptoms of iodism may primarily be well marked and cause an interdiction of iodides; again, they may readily disappear by persistence in the drug. H. Wood even goes so far as to say that if 4 gm. of iodide of potassium is administered three times a day without producing symptoms of iodism, it shows that the patient is afflicted with syphilis. This is a dogmatic assertion, for I have frequently seen proof that idiosyncrasy against the drug is overcome by energetic persistence of administration. On the other hand, a severe syphilitic case may not tolerate even minute doses of iodides without a profound impression and aggravated constitutional disturbance being produced. When danger is imminent and deglutition is impossible, iodides may be administered per rectum. Absorption is notably enhanced by dissolving the iodide in a warm saline enema. Oral administration in the ordinary case, which calls for no particular hurry, requires average doses of from ten to twenty grains three times a day: when danger is imminent, as much as one-half ounce may be administered three times a day, and this without apparent detriment to the patient's health; in fact, as the patient improves he may put on flesh and fat. As a warning in some cases, emaciation may set in and be rapid, owing to the large doses. Careful watch should be exercised to detect this beginning waste and check its further progress. Iodides should always be given well diluted with water, preferably after meals. In but two conditions am I aware of the harmfulness of iodides. The first is in some cases of optic neuritis, in which it facilitates the atrophy and loss of function. In the second, in cases of general or pulmonary tuberculosis, iodides increase the rapid wasting of the tissues. The disappearance or rapid amelioration of grave symptoms under iodide treatment would lead us to infer that the case is specific, or at least would offer strong presumptive evidence of syphilis, though we may have no right to assume this in the absence of a history to that effect.

Our materia medica teems with countless drugs, few of which can be considered true specifics, among which mercury occupies the foremost rank in the treatment of syphilis. Centuries have been unable to weaken the usefulness of this drug; rather has time tended to strengthen our opinion regarding its effectiveness if properly used. Besides having ascribed to it a specific action upon the doubtful germ of infection, it is supposed to act upon syphilitic granulomata, causing them to undergo a process of fatty degeneration which facilitates their absorption.

While the drug has innumerable advantages, it has many disadvantages, especially in the hands of the tyro. One of these is its marked tendency to cause local disturbances in the buccal cavity, affecting the gums and neighboring glands, giving rise to increased salivation and to pain and tenderness. Notably is the condition made worse by vulnerable spots in the mouth, especially diseased gums and teeth, which call for a thorough overhauling before a course of mercurial administration is begun. Certain salts of mercury are more prone than others to produce salivation. Whatever salt be selected by the practitioner, this tendency should always be kept in mind, and the method best adapted to the case should be chosen. There is no doubt that the economy is unable to assimilate the amount introduced, especially if given by mouth, when it has a marked tendency locally to affect the gastrointestinal tract, and if the secretions give a warning of their lessened activity. The emunctories require careful attention, especially if the kidneys seem to be in a state of acute or chronic inflammation, since they eliminate the metal and throw off quite a quantity from the system. A marked pathological condition of these organs may constitute a distinct contraindication to large doses of an irritating mercurial salt.

From time to time various plans of treatment with salts of mercury have been suggested, but the three most prominent ones are the expectant, the continuous, and the interrupted. Each has its advocates; however, rules, especially if absolute, never take the place of brains. From time immemorial the expectant plan has held sway, which consists in administering mercury only when symptoms or objective signs appear. After their disappearance no further treatment is deemed necessary, unless signs of syphilis should again present themselves. The fallacy of this plan is that recurrence in some form usually takes place; in fact, quite frequently an aggravated explosion takes place after a period of quietude. The numerous hospital and dispensary patients generally present themselves only when some manifestation of the disease appears, and receive treatment for the time being, to be lost to view after relief. Recurrences are consequently to be expected; in fact, it is surmised that many severe cerebral cases occurring late in life are due to the short term of medication, which allows the poison to remain latent and to show augmented activity in later life. The continuous plan of medication appears more rational and has many advocates, foremost among whom is the older Keyes, who has formulated many nice rules. He aims at obtaining a saturation point of the system by administering large and increasing doses, as large as the system will tolerate—this only for a limited time. Mild colicky pains and a serious diarrhœa determine this so-called saturation point. These are supposed to show a bare excess of the amount the system can take or tolerate, and half this quantity denotes the tonic dose. The toleration dose and the tonic dose are alternated, the possibility of abdominal symptoms being always kept in mind. After a continued administration of mercury the system seems to adapt itself to its presence, and the doses are apt to lose their therapeutic effect; markedly so is this the case in syphilis. In order to prevent this, some favor the withholding of mercury for some time, in the interim giving tonics and trying to build up the system. Owing to the necessity of withholding mercurial treatment for a short time, the interrupted plan has found many advocates, foremost among whom is Fournier. It must be remembered that those persons who are otherwise in good health present the best subjects for treatment. They respond far more readily; a less favorable nidus exists for the development of syphilitic cells, which are alert for a vulnerable point.

Hygiene offers us an important adjunct to treatment and is responsible for some excellent results obtained at local bathing resorts, where the habits of life of the individual are completely changed. Notable in such respects is abstention from alcohol and tobacco. It has already been indicated that oral administration of mercury calls for watchfulness for symptoms arising from the gums and the buccal glands. Though this is the favorite method of administration, it will be noticed that some salts of mercury produce salivation more readily than others, also that some are more effective than others. The insoluble salts of mercury are still in vogue, though soluble ones appear to have the preference. Green iodide, once a favorite, is weak in its action, while the soluble bichloride is more effective, especially if given in conjunction with the iodide. Oral administration of mercury is especially adapted to the early stages. When it cannot be thus given and when heroic dosage is required, inunctions and hypodermatic injections are preferable. Though the former constitute the most simple and the usual method, they furnish an additional way of introducing mercury into the system. The elegant preparation oleate of mercury has proved an almost signal failure in severe emergencies. Inunctions of unguentum hydrargyri, though not so cosmetic, can be depended upon when a rapid impression is desirable. One or two drachms should be thoroughly rubbed in for about one-half hour daily until physiological effects are produced. Rubbings are at the same time helpful when local lesions exist, though situated in the deeper tissues or in the vicinity. Warm baths in conjunction facilitate the absorption of the minute globules of mercury. The simplicity of this method of introducing mercury into the system has secured for it a host of friends, who prefer it to the hypodermatic method, which has for its bugbear pain. However, when rapidity of action and certainty of dose are desired it can be depended upon, especially if the soluble salt is used. Pain in some cases is probably due to a precipitation of the soluble salt in the blood plasma, which in turn dissolves in the alkaline fluids assisted by sodium chloride. Theoretically and practically, this gives us a hint to use a saline solution for our menstruum, in a syringe capped with a gold-plated needle. The site selected for the injection should be the nates and the deep intermuscular tissues. If injected into the deeper layer of the true skin, a slough results; if into the intercellular tissues, pain usually follows. It is a noteworthy fact that injections seldom affect the gastro-intestinal canal. Solubility of salt should be attained, as insoluble salts must first undergo chemico-physiological changes before they can become absorbed by the lymphatics and pass the lymph nodes. Osmosis becomes more difficult the more radically different the salt is from the composition of the blood serum. Hence it seems to me that oily menstrua holding these salts in suspension are objectionable. Liquid paraffin, almond oil, vaseline oil, etc., are as objectionable as is unaseptic gray oil. Insoluble salts are numerous; calomel seems the most preferable, from the fact that it can be freshly sublimed and is then in an aseptic condition. These injections, of about gr. i. to gr. iss., should be made in a suspended form into the intermuscular tissue of the nates and repeated not oftener than once a week, allowing the salt to become slowly brought into solution. Pain may thus last a number of days, as we have a foreign body in the tissues; and such complications as suppuration and embolism are rather the exception. It appears an unscientific and a risky procedure; one failure makes us apprehensive, and is apt to curtail its further use. On the whole, soluble salts are preferable; but kidney complications should always be kept in view. Intravenous injections of bichloride have been used, and with success, in tropical malarial toxæmia.

While I have but cursorily touched upon some of these interesting points of mercurial administration, much more could be said of a combination of drugs, of legions of drugs, especially of vegetable origin, which have proved signal failures in the treatment of syphilis. The necessity of improving the patient's general health and of placing him in the best hygienic surroundings must be obvious to all. By our knowledge of the physiological functions and of the action of drugs we assist nature to resist the action of venom and successfully to cope with disease. Through the agency of the fluid elements of the body we introduce medicaments known to be capable of coping with an enemy making serious inroads by his destructive ravages—while art assists, nature tends to heal. The deadly comrade of Venus continues to select its victims irrespective of rank or position. In the firmament of our materia medica the constellations present innumerable luminous foci, the majority of which are faint and lustreless, but among a few one remains fixed, full of lustre and lumen, with an indelible inscription upon it—"hydrargyrum."

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TREATMENT OF RHEUMATISM AT THE NEW YORK HOSPITAL.[1]

By HUGHES DAYTON, M.D.,

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The treatment of the various forms of rheumatism at the New York Hospital is practically the same during the terms of service of the four attending physicians, Drs. Peabody, Ball, Loomis, and Lambert.

I. Acute Articular Rheumatism.—In this form rest in bed and a milk diet are naturally employed during the presence of acute symptoms. After their subsidence the diet is increased to fluids, and then to "fluid and soft," as the appetite returns. As in other forms of articular rheumatism, the bowels are carefully kept open, avoiding salines in weak, anæmic subjects, and employing them in plethoric persons. Elimination is also encouraged by the liberal use of alkaline mineral waters. The patients are kept in bed for several days after symptoms disappear, in order to avoid exposure.

Treatment by alkalies has not proved satisfactory in many acute cases. Internally, sodium salicylate is chiefly relied upon, in doses of gr. x.-xv. every three hours except between 9 P.M. and 5 A.M. The frequency is reduced as the pain and temperature abate. If mild toxic symptoms—ringing in the ears and deafness—develop, they are controlled or diminished by the administration of sodium bromide, gr. xxx. with each dose of sodium salicylate, when it is deemed advisable to push the action of the latter as far as possible instead of diminishing the dosage. Poisoning by salicylate of sodium has occurred at the New York Hospital recently in two cases, in both of which only the usual quantity for medicinal purposes had been employed. As an instance of the small amount which may cause this result, the following case is briefly reported:

D. McM——, fifty years of age, was admitted on February 22, 1900, suffering from symptoms of acute articular rheumatism. He was treated by the local application of methyl salicylate to the inflamed joints, and was also given sodium salicylate gr. xv. every three hours, beginning at 2 P.M. After the eighth dose the symptoms had greatly diminished, and the drug was administered only three times a day. When two such doses had been received, the patient became actively delirious, insisted that he felt perfectly well, slept only three hours at night, refused all medication, and demanded his discharge from the hospital. His rectal temperature had fallen from 103.4° to 100° F. on February 24th. He was given sodium bromide ʒ iiss. in divided doses of gr. xxx. and ʒ i., and although the delirium became much less severe he went to his home on February 25th. He returned on March 7th with no mental symptoms, and suffering from general muscular rheumatism which had developed the day before readmission. Under phenacetin and salol the muscular pains rapidly disappeared.

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[1] Read before the Section on Medicine of the New York Academy of Medicine, March 20, 1900.

If sodium salicylate is not well borne by the stomach, salol in doses of gr. v. every three hours, and salophen gr. xv.–xx., have been satisfactorily employed. The salicylate of sodium has also been administered recently by rectum in a few cases for the same reason. A dosage of gr. xxx. in water ℥ ii. every three hours, and later three times a day, has been employed. No symptoms of rectal irritation have been observed.

In nearly all cases internal medication has been supplemented by local application of methyl salicylate, which has invariably given excellent results in rapidly relieving pain in the affected joints. This is renewed daily until the local symptoms subside. Many cases in which gastric irritability contraindicated treatment by mouth have quickly resulted in recovery when such local use of the drug alone was employed. Methyl salicylate, the synthetical oil of wintergreen, is applied upon a thin compress of gauze wrapped around the joint and covered by gutta-percha tissue, which is held in place by a bandage. The initial sensation of burning is soon followed by relief of local pain, and later of that in other joints. The rapidity with which the drug thus employed enters the general circulation is shown by the fact that its excretion in the urine has been found to begin within thirty minutes after application to the unbroken skin. At the expiration of this time the urine shows a marked reaction to ferric chloride.

If fluid persists in the joints after the other symptoms disappear, a cantharides blister or tincture of iodine is applied; and if infiltration of the surrounding tissues or stiffness of the joints remains, it is relieved by hot-air treatment. The anæmia accompanying the attack is combated with iron, arsenic, strychnine, and cod-liver oil; the cardiac and other complications are carefully watched for, and are treated by the usual methods in such cases and by increase of the salicylate.

Rheumatic hyperpyrexia is rarely met with, but when encountered is treated by large and frequent doses of sodium salicylate and the tub-bath at a temperature of 65° F. for ten minutes every three hours.

II. Subacute Articular Rheumatism.—In subacute articular rheumatism the same internal medication is employed as is used in the acute form, but it is pushed less vigorously. Alkalies and potassium iodide are the most favored lines of treatment, supplemented in all cases by tonics. Locally, methyl salicylate is employed for the relief of pain. Fluid in the joints is treated as in the later stage of acute articular rheumatism; and infiltration of the tissues around the joints by the local hot-air bath. This is applied for one hour daily, at a temperature ranging between 200° and 450° F., to the affected joints; and when persisted in, has given great diminution of the peri-articular enlargement and almost immediate alleviation of the disagreeable stiffness. A fairly liberal diet is allowed.

III. Chronic Articular Rheumatism.—Such cases are rarely accepted at the New York Hospital. They are given internally potassium iodide or alkalies, Vichy in large quantities, a liberal diet, iron, arsenic, strychnine, and cod-liver oil. Locally, the hot-air bath is used persistently. The diet is as nutritious as possible.

IV. Muscular Rheumatism is combated by the administration of sodium salicylate as in acute articular rheumatism, or by salol and phenacetin, āā gr. v. every three hours. Locally, methyl salicylate often gives great relief. Belladonna ointment or plaster is frequently used with the same result. In severe cases no remedy is more efficacious or more rapid in action than the thermocautery applied over the site of pain. One or two applications rarely fail to give complete relief.

V. Sciatica of rheumatic origin is often cured by the same treatment as articular rheumatism, including the local use of methyl salicylate. In the later stages counter-irritation by the cautery, blister, or mustard paste is very efficient. In obstinate cases stretching the affected nerve has been effective and causes only temporary increase of the pain.

VI. Tonsillitis in rheumatic subjects is amenable to salol and catharsis, while phenacetin and the frequent use of a very hot gargle of solution of sodium bicarbonate greatly diminish the distressing pain. Tincture of guaiac is employed in some cases.

VII. Peliosis Rheumatica, so called, though apparently not connected etiologically or pathologically with articular rheumatism, is treated with sodium salicylate in default of any other logical method.

To summarize what has been found at the New York Hospital to be the best routine treatment:

1. In acute articular rheumatism: bed, cathartics, milk diet during the acute stage, sodium salicylate by mouth or rectum, combined with sodium bromide if cerebral symptoms follow the administration of that drug, and methyl salicylate locally. In the later stages the methods employed in the subacute form are used.
2. In subacute articular rheumatism: bed if symptoms are severe, fairly liberal diet, alkalies or potassium iodide internally, methyl salicylate locally for the relief of pain, and the hot-air bath for stiffness or peri-articular enlargement.
3. In chronic articular rheumatism: nutritious diet, alkaline waters in large quantities, potassium iodide or alkalies, and the hot-air bath.
4. In muscular rheumatism: salol and phenacetin internally; locally, methyl salicylate, the cautery, or belladonna.

In conclusion I would call attention chiefly to the use of sodium bromide in combination with sodium salicylate for combating cerebral symptoms and permitting larger dosage; to the hot-air treatment in subacute and chronic rheumatic conditions; and to the value of local treatment by methyl salicylate, which possesses the following advantages: (1) Rapid relief of pain; (2) avoidance of gastric irritation.

NEW YORK HOSPITAL.

The Clinical Thermometer as a Germ Carrier.—W. L. Conklin examined six thermometers for bacteria. Four had been washed but not sterilized. Micro-organisms of one or another variety were found on each of the four. Two had been washed and then placed in a case containing bichloride solution. No micro-organisms were found on either. The author urges the necessity of a more thorough cleansing of thermometers, and describes the case which he fills with a 1:500 or 1:250 bichloride solution, in which he keeps his thermometer.—*Buffalo Medical Journal*, February, 1900.

SUMMARY OF CASES OF CARCINOMA AND SARCOMA TREATED BY THE WRITER'S METHOD OF CATAPHORIC STERILIZATION, TO JANUARY 15, 1900.

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PHILADELPHIA.

In the Medical Record for July 31, 1897, the writer reported a number of cases of malignant growths treated by a new method, involving the massive cataphoric diffusion of the nascent electrolytic salts of mercury. The interest aroused within the profession by the claims made in that article, and in other subsequent publications, suggests the present résumé of all cases treated by myself, which includes the ultimate results in quite a number of cases of from two to five years' standing.

The process may be described briefly as a cataphoric diffusion of nascent mercuric salts produced by the electrolysis of metallic mercury inserted by a gold-anode into the growth, the patient being usually under general anæsthesia, and the chemical and cataphoric force being a direct current of 200 to 1,200 milliamperes continuously employed for a time varying from fifteen minutes to two hours and a half. The immediate effects are the production of an area of necrosis involving the most evident portions of the growth, beyond which extends a zone of sterilization, in which the malignant germs are killed without destruction of the normal tissue elements. The zone of sterilization radiates in all directions, but more especially through cellular planes of cancerous proliferations.

Since the inception of this process of destruction and sterilization of cancerous growths in 1893 I have applied the method to thirty-seven cases, including a number that afterward showed that metastases had been present before the treatment. These cases may be classified as follows:

Operable cases: Cured, 4; probably cured, 1; failed to cure, 2; total operable cases, 7.

Inoperable cases: Cured, 6; probably cured, 2; probably failed to cure, 2; failed to cure, 20; total inoperable cases, 30.

Total cases, 37; cured, 10; uncertain, 7; failed to cure, 22.

Of the thirty-seven patients two died under treatment—one with an inoperable epithelioma of the tonsil and the other with an inoperable sarcoma of the orbit, the latter in a child aged five years. Of the ten patients cured but two showed recurrences, necessitating additional applications, and both patients are now well, after considerable periods since the second applications.

Summary of the cured cases:

Operable cases cured: 1. Epithelioma of the cervix uteri, confined in seat to the vaginal portion, in a lady aged forty-nine years. Repeated mild applications were made in June, 1896. The patient continues in perfect health, three and a half years after application.

2. Acinous carcinoma of the breast in a lady aged fifty-one years, without glandular involvement. The growth was about two inches by one inch in extent, situated in the lower outer quadrant of the right breast. One strong application (475 milliamperes) was made November 16, 1898. The patient remains in perfect health at present, a year and two months after the application.

3. Epitheliomatous wart on the face in a feeble man aged seventy-nine years, was removed by a series of mild applications in June, 1898.

4. Carcinoma of the breast, with infected axillary gland, in a woman aged forty-four years, was treated by one strong application, April 13, 1899 (300 to 500 milliamperes for one hour and twenty minutes). The primary growth was in the outer quadrant of the left breast, involving about one-quarter of the gland, the skin being adherent and changed in texture over the growth. There was one enlarged gland in the left axilla which was subjected to the treatment at the same time. The patient is well and with perfectly healthy cicatrices at the present time, nine months afterward, and possesses also the greater part of the breast intact.

Inoperable cases cured: 5. Sarcoma of the soft and hard palate in a man, aged thirty-eight years. The patient was nearly in extremis from suffocation and inability to swallow, the growth being the size of a goose egg and nearly occluding the fauces. The treatment was by repeated applications of the mild method in 1894. He continues well, at the end of six years.

6. Adeno-carcinoma of the upper rectum in a lady aged fifty years. Repeated applications of 100 to 125 milliamperes were made in 1895. The patient was well when last heard from, some years later.

7. Sarcoma of the upper maxilla in a man aged thirty-nine years. The growth filled the right antrum, causing a bulging of the cheek and flattening downward of the hard palate on that side, and projected into the mouth, having displaced four teeth. On October 11, 1897, an application was made under ether, 300 milliamperes being employed to electrolyze and diffuse the mercury for fourteen minutes, the result being incomplete by reason of the instruments being too short. Subsequent repeated mild applications were made without ether. The man has perfect health at present, over two years later, the distortion of the bony plates having disappeared, and a healthy sinus now leading into the antrum.

8. Recurrent carcinoma of the breast and axilla in a lady aged sixty-three years. The breast and a diseased gland in the right axilla had been removed by the knife ten months before the case was seen by the writer, December 11, 1897. The disease had recurred in the scars at both sites and in the skin of the chest between the breast scar and clavicle. On this date a cataphoric application was made with 500 milliamperes for fifteen minutes. The diseased scar in the axilla was not disturbed until a year and a half later, August 16, 1899, when an application with 200 milliamperes was made, lasting twenty-five minutes. The patient is in perfect health at present, with both scars soft and normal.

9. Inoperable carcinoma of the mouth in a woman aged fifty-six years. The growth was situated beneath the left side of the tongue, evidently developed within the left sublingual gland, with extension along the floor of the mouth as far back as the base of the tongue. On December 28, 1897, an application was made with 350 to 400 milliamperes for half an hour. The result appeared perfect for a time, but in June, 1899, there was evidence of a similar growth in the opposite sublingual gland, which received an application on June 24th, 4,000 milliamperes being employed to diffuse the mercury for one hour. This resulted in destroying the disease on that side, and a piece of devitalized lower jaw subsequently came away. On November 3, 1899, it was noted that a recurrence had appeared at the site of the first application, and a third cataphoric diffusion of mercury was made at this date. At the present time this has healed except for a portion of bone sequestrum which is coming away, and the patient appears to be free from the disease and in good health, though the tongue is somewhat bound down and the inner sides of the lips are contracted by healthy adhesions.

10. Inoperable rodent cancer of the face in a physician aged sixty-six years. The case was of twenty years' duration, had been operated on by the knife two years before, and had recurred in worse form when first seen, January 16, 1899. The disease was situated

on the right side of the face, extending from above the eyebrow to the middle of the cheek, the bone of the skull and upper maxilla being eroded, and the disease was just reaching into the orbit. The patient was placed on mild zinc-mercury cataphoric applications daily, and at the end of three months the whole of the area except a small spot had filled in with healthy skin and flesh—not scar tissue—the skin spreading inward from the edges. Another series of applications was made in the summer of 1899 to the remaining spot, and at the present time the disease is thoroughly eradicated, and the face has completely healed.

Cases probably cured: 1. Inoperable recurrent adenocarcinoma of the neck in a lady aged fifty-seven years, in whom the submaxillary gland of the same side had been removed by the knife one year before. An application was made June 23, 1899, the mercury being diffused by 300 to 400 milliamperes for fifty minutes. Condition, November 1, 1899, well healed with healthy scar. I have been unable to hear from the patient since.

2. Inoperable primary carcinoma of the uterus and vagina in a lady aged sixty-one years, in whose case surgical interference had been declined at the Cancer and Mt. Sinai hospitals in New York City. The growth was a scirrhous epithelioma arising in the cervix uteri and infiltrating the left broad ligament and vaginal walls, a large indurated mass extending down the recto-vaginal septum nearly to the anus. Application was made on December 10, 1899, the mercury being electrolyzed and diffused by a current of 400 to 600 milliamperes for fifty minutes. On recovering from the ether the patient noted a cessation of pains in the back and thigh, though the soreness from the operation was very great. At the date of discharge, January 10, 1900, the parts were well healed, leaving a recto-vaginal fistula, but the softness of the newly formed tissue within the vagina, coupled with continued absence of the cancer pains, made a cure seem possible.

3. Inoperable recurrent carcinoma of both breasts and both axillary regions in a lady aged forty-one years. The right breast and diseased glands in the right axilla had been removed by the knife in June, 1899. Three months later a second operation had been performed for recurrence in both scars and also for diseased glands in the left axilla. Three months later, when seen first by the writer, December 8, 1899, there were a recurrent growth about eight inches long in the situation of the breast scar, and recurrent growths in both axillæ. Across the upper portion of the left breast three nodules showed, revealing the lymphatic-vessel route by which the disease had gained access to the left axilla. An application was made December 16, 1899, of 600 to 700 milliamperes for two hours and a half, permitting the whole of the diseased areas to be gone over with the gold-mercury electrodes. The patient reacted well from the prolonged etherization, and has done well since, there being apparent evidence of all the diseased cells being killed in both axillæ and in the principal recurrent area, except possibly a small spot in the latter, which may demand a second application within a few weeks.

Analysis of the cases of failure to cure: Of the thirty-seven cases, twenty-four have been recorded as failures or probable failures. Deducting the two cases in which death occurred during the application, we have twenty-two cases of failure to arrest the disease, without any bad consequences following the treatment itself. The cause of failure to arrest the disease in nine of these cases was the development of latent metastases after the method had secured a local eradication of the primary growths, the metastases developing in each case without evidence of recurrence at the primary seat, showing that they were due to the lodgment of emboli from the primary growth previous to its destruction by cataphoresis. In the remaining thirteen cases there was failure to arrest the disease locally in the stage in which it was found, many of them being already recurrences after knife operations; and these failures to arrest were due to insufficient diffusion of mercury for various reasons: either failure to use anæsthesia and a strong current, or failures of batteries to give enough current in the early applications, or the fact that the growth was so close to the brain as to make an effective current impossible.

Prostatic Affections in Young Men.—James Ross says that the most important causation of inflamed prostate in young men is no doubt gonorrhœa. In the treatment of membrano-prostatic catarrh the writer has had good results from the topical application of nitrate of silver, beginning with a few drops of a solution five grains to the ounce and increasing the strength.—*Maritime Medical News*, January, 1900.

Operation on the Pharyngeal Tonsil; Hæmophilia; Death.—R. Sachs operated on a boy, aged ten years, under chloroform, using a modified Gottstein knife. The tonsil was removed in one piece as large as a walnut. Bleeding at the time was no more than usual, and the child was sent home, but he began to bleed again in a few hours. Hemorrhage recurred at intervals; it was temporarily checked, but recurred again, and the child died on the fourth day. Later inquiry revealed the fact that his maternal grandfather had died at the age of forty-two years of hæmophilia (renal hemorrhage). The child had also manifested in previous years evidences of the same disease.—*Journal of Laryngology*, February, 1900.

The Alterations in the Venous Coats in Varices.—Raffaele Ianni finds that in varicose veins the retrogressive changes in the walls are due not only to their passive distention but also to sometimes extensive new formations of connective tissue, chiefly in the intima—an endophlebitis resulting in nodes or plaques. The elastic fibres of the internal limiting membrane become thinner, and there is new formation of these fibres also. In the innermost layers of the media there is apt to be a circumscribed connective-tissue new formation in the vicinity of the nodes and plaques. This endophlebitis is primary, and does not possess the compensatory powers ascribed to it by Epstein.—*Gazzetta Internazionale di Medicina Pratica*, February 15, 1900.

A Type of Enteric Fever—Not Typhoid.—Otto Lerch claims that there is a type of enteric fever, not typhoid, which is probably caused by one of the varieties of the bacterium coli commune. He reports a case which he believes to come under this head, in which, after an illness somewhat resembling an atypical typhoid, the patient suddenly died of heart failure. In this case, the fever chart did not resemble typhoid, not even atypical typhoid: the onset was sudden, though prodromes seem to have preceded it; the eruption was peculiar, and tremor was not present, especially tremor of the tongue, a symptom to be looked for in typhoid; the examination of the urine showed the diazo reaction absent, and the blood count showed an enormous increase of white blood corpuscles, never met with in an uncomplicated case of typhoid. At the autopsy the gall bladder was found intact, and the mesenteric lymph nodes were not perceptibly enlarged. The author thinks that the foregoing summary justifies the conclusion that the case represents a type of enteric fever not caused by the bacillus typhosus.—*New Orleans Medical and Surgical Journal*, February, 1900.

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THE URIC-ACID DIATHESIS.

A PAPER on "Uric Acid and the Circulation, Some New Methods of Estimating its Effects," read at the meeting of the British Medical Association in August last, by Dr. Alexander Haig, and recently published in pamphlet form, is instructive even if regarded as simply elucidating the well-known original views of the author on the subject. Although Dr. Haig is decidedly too prone to lay at the door of uric acid most of the diseases to which the human race is liable, and thus prejudices his case by the very excess of zeal with which he fights for his cherished theory, nevertheless it must be admitted in common fairness that his investigations have not been unfruitful of results, and that he has done good service in insisting upon the importance of the part played by uric acid in the causation of certain diseases. There would at least seem to be a solid basis for some of his reasoning. Since the discovery by Garrod, in the middle of the last century, that the blood and interstitial fluids of gouty persons are surcharged with urates, pathologists have been veering with ever-increasing steadiness to the conviction that uric acid is the ruling factor in the causation of gout. It is also conceded that uric acid may probably be rightly regarded as a dominant cause of other diseases, notably migraine. The medical profession considers that this supposition requires further and stronger proofs before being accepted as an established fact. As yet many links are lacking to render the chain of argument complete.

Haig states in regard to migraine that "the greater the relative excess of uric acid and the greater its absolute excretion per hour, the more severe the headache." Dr. Lichty, of Pittsburg, questions the accuracy of the statement, in an article published last year in the *Journal of the American Medical Association*, Dr. Lichty having demonstrated by careful experiments on persons suffering from migraine that the quantity of uric acid excreted was not increased during the most severe part of the attack. But the particular point upon which Dr. Haig differs most widely from other authorities is as to the means whereby uric acid obtains ingress into the system, asserting that it is introduced into the body as such in certain articles of food, and he further claims to have detected uric acid in the blood by microscopical examination, a contention stoutly denied by other workers in the same field of research. The opponents of the first theory declare that these conclusions have been reached by processes altogether unsatisfactory to an organic chemist; while in regard to the second theory Dr. Luff says that uric acid has never been demonstrated in the blood by the one infallible test—the murexide test—and his opinion is that it is urea in the blood which has been converted into uric acid in the kidneys.

The writer of a review in the *British Medical Journal* on the last edition of Dr. Haig's work, "Uric Acid as a Factor in Disease," records his views as follows: "Numerous investigations have plainly proved that uric acid is entirely absent from the blood of a healthy man, as also from the blood of other mammals and birds. Dr. Haig's explanation of the causation of the numerous diseases attributed by him to uric acid is based upon the assumption that uric acid is deposited in the colloid form throughout the organs and tissues of the body." Dr. Haig in his paper thus describes his methods of estimating the effect of uric acid on the circulation. He first refers to the tediousness of the ordinary tests made use of for this purpose, and goes on to say: "I have therefore been in search of a test which might be completed more quickly in patient after patient without loss of time and almost without any instruments. This test, it has long appeared to me, I might obtain if I could measure accurately the capillary circulation or its effects in the retina, for instance; and an observation made by Raynaud led me to the more generally useful measurement of the rate of capillary circulation in the skin. Raynaud says that when the vessels in the skin of a finger affected by local asphyxia are emptied by pressure, as much as thirty seconds may elapse before it regains its color, while in the skin of a normal extremity the color returns in one or two seconds. It struck me that if there is all this difference between the normal return and the pathological return, and if Raynaud's disease is, as I have suggested, due to collæmia, I might find differences in time of return of the blood corresponding to the physiological drug action, and other pathological fluctuations of uric acid. . . . I accordingly began to measure experimentally the times of what I call the capillary reflux—that is, the time in which the color returns in, say, a given area in the back of the hand when removed by pressure. And after a time I adopted an instrument which gives a constant definite area of pressure, a definite and measurable force, the pressure being applied for a definite and constant time, measured by a metronome beating half seconds, the length of time the blood and color take to return being measured by the same instrument. With regard to the eye, I eventually adopted the measurement by the same metronome of the duration of a certain phase of the 'after image' produced by a constant light at a constant distance, and with a constant time of exposure." Dr. Haig says that he found that these tests recorded in the most striking manner all the marked fluctuations in the excretion of uric acid, whether due to the physiology, drug action, or pathology. The capillary reflux acts synchronously with high blood pressure and with the disappearance of the after or fatigue image in the retina indicating the capillary circulation there. He therefore claims that testing this capillary reflux is an index of the amount of uric acid in the blood and urine, and that capillary circulation is controlled by uric acid.

If, as asserted by Dr. Haig, high blood pressure and defective capillary circulation are constant concomitants of the headache and mental depression due to uric acid, and if uric acid can be introduced into the body by means of food, and if it is present in the blood of a healthy man, then the tests devised by Dr. Haig to estimate its effects on the circulation would certainly be in a high degree useful. But the fact must be borne in mind that there is no absolute proof that migraine is caused by an excess of uric acid, although the observations of Dr. Haig in his own case, and his successful treatment of those who have been guided by his advice, would seem, so far as that disease is concerned, to point that way. In regard to the other two theories, they are, as we have said before, judging by the mass of evidence brought against them, entirely hypothetical.

WOMEN AS ARMY NURSES.

In the treatment of the sick and wounded in war-time careful and tender nursing is almost as important as is skilful surgical and medical attention. The surgeon, especially after a great battle, cannot give much time to each patient, and must depend upon the nursing corps for the minute carrying out of his directions. It is therefore a matter of the first moment that this necessary branch of the medical department of an army in the field should be thoroughly well trained and organized. Military nursing differs in so many respects from ordinary hospital nursing, that a special course of instruction is requisite in order to gain a competent knowledge of the duties which may devolve upon an army nurse when a campaign is in progress. The question was raised in our war with Spain and is again being brought into prominence in the South African war, as to whether men or women are better fitted to fill the position of army nurses. So far as the nursing itself is concerned, there can be little doubt that women are superior to men. Sir William MacCormac considers women better fitted both physically and morally for the charge of the sick. He has put it on record that in his opinion no male nursing can be compared with a woman's, although no one insists more than he upon the necessity of training.

In the Crimean war, after Florence Nightingale arrived upon the scene, and in the Franco-Prussian war almost all the nursing of the British and German troops respectively was performed by women. Nevertheless many experienced authorities hold, among whom are Surgeon-General Sternberg and those at the head of the British Army Medical Corps, that the front is no place for women. A writer in *Blackwood's Magazine* for March writes as follows:

"There is no doubt that in the line nearest the enemy, where work must be to some extent rough and ready, when grave danger is hovering near, and a hospital must, as it were, 'come into action' with the utmost rapidity, and not always under the most favorable circumstances, the men of the Royal Army Medical Corps are the best possible nurses. It has been suggested that some lady nurses should be attached to the field hospitals; but the consensus of opinion among those who are responsible that the work is well done, and among the poor Tommies who form the cases, is that the ladies would be quite out of place so near the battlefield and that it is much better to rely entirely on the men who have always proved themselves to be so good and efficient. It is obvious too that if a lady nurse falls sick it would be impossible in a field hospital to provide that she should have the care and privacy due to her sex. The British Army Medical Corps consists not only of medical officers but of a large body of trained male orderlies. These latter are the real nurses who do the actual nursing work, and they are under the orders of a highly efficient and limited body of trained lady nurses who act practically as ward sisters, and who while directing the orderlies do not take any active part in nursing the wounded. . . . The first and second lines of assistance are entirely composed of men, and it has comparatively seldom happened that a female army nurse has ever been anywhere near a field of battle except owing to some circumstances over which her medical superiors had no control."

But although women may not be physically capable of coping with the onerous duties which fall to the lot of nurses with an army in action, still this is no reason why their services should be wholly dispensed with in time of war. The hospitals in the rear should always provide an ample field for their usefulness, and it seems to us that the nursing staff of these hospitals might be with advantage largely if not entirely composed of women—that is, of women who have been well trained in the routine of army hospital methods. In order to have an efficient women's nursing service in time of war it will be needful for the United States army authorities to see that the candidates are carefully selected and afforded the opportunity of gaining experience in army methods.

THE MIDWIVES BILL IN GREAT BRITAIN.

The licensing of midwives in Great Britain, despite the fact that, as shown by the result of the ballot among the medical practitioners of that country initiated by *The Lancet*, the profession as a whole is strongly opposed to the measure, will, it appears, shortly become law. The necessity for such legislation is no more apparent to the medical men of England that is the proposed legislation for the licensing of midwives in this city to the physicians of New York. *The Lancet* says in reference to the obnoxious bill: "What now remains to be done is for the medical profession to bring such influence as they possess to obtain modifications in the measure: (1) whereby the general practice of midwifery in our country may not fall into the hands of a semi-educated class; (2) whereby the scope of the licensed midwifery shall be defined; and (3) whereby encroachments upon medical practice and infringements of the medical acts may be obviated." The same journal thus defines what should be the scope of a midwife: "The due limits of the midwife's work in an ideal condition of things would keep her to nursing and nothing but nursing, including the first care of the infant if healthy. In such an ideal condition of things the whole province of obstetric medicine belongs to the fully qualified medical man, for it is obvious that at one particular place or another a case passes from physiology to pathology."

The licensing of midwives is a retrograde step and one likely to prejudice severely the interests of the medical profession. It will establish a precedent for the licensing of so-called experts of every description, and will open the door to quackery generally. Laws medical and otherwise are made only for the protection of the public. No class of the community needs protection more than parturient women, and it would therefore appear reasonable that the law should insist that women in this condition should have the benefit of skilful and intelligent treatment. This object will not be effected by the licensing of midwives.

ISCHÆMIC PARALYSIS.

Paralysis of a member with rigidity or contracture is sometimes observed following the application of a bandage, and the condition has usually been attributed to nerve pressure too firmly made or too long continued. In the latter event some importance has also been attached to want of use. On the other hand, interference with the blood supply, with the resulting nutritive disturbance in the muscles, has been thought to be the active pathological factor. Necrobiotic changes have been found in muscles that have been rendered bloodless by circular constriction and also after exposure to severe cold. Once developed, the disorder has proved a most obstinate one. In a case in which such a condition developed in a child four and one-half years old, following a fracture of the humerus and the application of splints and a bandage, Page (*Lancet*, January 13, 1900, p. 83) secured a satisfactory result by lengthening the tendons of the affected muscles and long-continued massage and electric treatment. The disabled extremity was the seat of great pain, and the wrist and fingers were in a position of marked flexion. The ulnar distribution in the hand was anæsthetic, and degenerative reactions were present in the affected muscles. Improvement was slow, but eventually quite considerable. The opinion is expressed that the condition, in this case at least, is not primarily or even in the main due to a nerve lesion, but is dependent upon the combined effects of pressure, immobility, and diminished blood supply upon the muscular elements, the connective-tissue elements, and the nerve elements present in the muscle.

A New Hospital for the Insane has just been completed at Bridgeton, N. J., the handsome and commodious structure being formally turned over to the county by the building-committee on March 29th.

News of the Week.

Dr. Schenk, recently dismissed from the chair of embryology at the University of Vienna for having exploited his theories of sex determination in the newspapers, announces that he will probably come to America.

Statistics of Laryngectomy: A Correction.—Dr. D. Bryson Delavan writes: "In the Medical Record of March 24, 1900, page 523, I am reported as having said in the discussion of a case of laryngectomy presented to the surgical section of the New York Academy of Medicine by Dr. A. T. Bristow: 'Partial laryngectomy does not show more valuable statistics than the complete operation, and the results of complete extirpation are so much better that there can be no choice between the operations,' etc. The statement bears upon a subject of such great importance that the misquotation of it should not go uncorrected. What I actually said expressed not only my own views, but the generally acknowledged opinion with regard to this matter, namely, that exactly the contrary of the above-quoted statement is true."

Work among the Lepers in the Far East.—One of the most interesting themes that will be considered at the Ecumenical Missionary Conference in New York, April 21st to May 1st, relates to the work done for lepers in various parts of the world. It is to be specially reported on by Wellesley C. Bailey, secretary and superintendent of the Mission to Lepers in India and the East, and by Miss Mary Reed, a missionary to the lepers. The mission to lepers in India begun in 1874 found a necessitous sphere of work among this large and afflicted class. There are nearly half a million lepers in India alone, and large numbers are to be found in other eastern lands. There are now fifty-two leper asylums in India, Burmah, Ceylon, China, Japan, and Madagascar. Much of this advance is said to be due to Mr. Bailey, who joined the American Presbyterian Mission in the Punjab in 1869, and spent twelve years in India, working among the lepers and part of the time having charge of two leper asylums. In 1874 he visited Ireland. Securing the promise of $150 annually for the relief of lepers, he established the mission for them. In 1893 the title was enlarged and the society became "the Mission to Lepers in India and the East." In 1897 the mission helped nine British and several other missionary societies, and had twenty hospitals of its own, a number of homes for the untainted children of lepers, and expended $37,960 in its work. The number of inmates in the mission homes is about one thousand, and there are about seventeen hundred in aided institutions.

A Physician Punished for Incapacitating Recruits.—Dr. Adolph Ziel, of Elberfeld, Germany, has just been sentenced to a year's imprisonment for having assisted conscripts in avoiding military service. His plan was to give some cardiac poison just before the conscript was to be examined, so that the heart would be found irregular in its action. He had cheated the government out of over three hundred soldiers before he was apprehended. Several military surgeons were also sentenced to short terms of imprisonment for complicity in his scheme.

The Medical Association of Missouri.—The forty-third annual meeting of this society will be held at Mexico, Mo., on May 15th–17th. The subject for formal discussion will be "Gall Stones."

The Pennsylvania Society for the Prevention of Tuberculosis.—The annual meeting of this society will be held on Wednesday, April 11th, at 4:15 P.M., at the Academy of Natural Sciences, Logan Square, Philadelphia.

The Middleton Goldsmith Lecture of the New York Pathological Society will be delivered at the Academy of Medicine on Friday evening, April 13th, at 8:30 o'clock, by Dr. Simon Flexner, of the University of Pennsylvania. The subject of the lecture will be "The Pathology and Etiology of Dysentery."

Normal Appendectomy.—The St. Louis *Medical Review* of March 17th contains replies from eighty-nine surgeons in different parts of the country regarding the advisability or justifiability of removing the normal appendix as a prophylactic measure. Only one expressed unqualified approval of the operation, and three seemed to be in favor of it with reservations.

A Memorial to Dr. Love.—The Love Memorial Association of Montclair, N. J., has presented to the Free Library Association a bronze bust of the late Dr. John J. H. Love, made by J. Scott Hartley. Charles H. Johnson, president of the association, reviewed the life of the physician and his services to Montclair, and then formally presented the bust to the library. Edwin B. Goodell made the speech of acceptance.

A Mental Healer Not Wanted in Belgium.—It is reported in London that a "professor of mental healing," an American citizen, has complained to the government of this country that he was expelled from Brussels by the Belgian minister of justice. It is to be hoped the Belgian authorities will be induced to retract their edict of expulsion, otherwise the "healer" might return to this country.

The Louisiana State Medical Society.—At the meeting of this society in New Orleans, on April 19th–21st, there will be a special subject for discussion before each of the several sections. In the section on medicine the subject will be "Tuberculosis"; in that on surgery, "Local and Regional Anæsthesia in its Applications to Minor and Major Surgery"; in that on obstetrics and gynæcology, (1) "Surgical Aspects of Salpingitis," (2) "Electricity in Gynæcology"; in that on pediatrics, "Measles and Smallpox in Children."

The Plague.—It is stated that two hundred and seventeen deaths from plague occurred in Calcutta on March 27th, the number of new cases reported the same day being one hundred and fifty-seven. In Sidney, N. S. W., eleven new cases were reported on April 1st, and two deaths occurred. In Honolulu, on March 24th, it was stated that no new cases of pest had developed in over a week, and the board of health was considering the advisability of announcing officially that the epidemic had run its course.

The New Naval Hospital at the Mare Island yard in California has been completed and is now ready to be turned over to the government. It is pronounced one of the best-equipped hospitals in the country.

Typhoid Fever on the Prison Ships.—A despatch to *The Sun* from Cape Town says that rumors are current there that there are not enough doctors and nurses on the prison transports, upon which an epidemic of typhoid fever is raging. Many civilians have offered their services.

The New York City Hospital for Consumptives.—Dr. Henry's bill to provide for the establishment by the city of New York of a hospital for the regular treatment of pulmonary tuberculosis, and appropriating $350,000 therefor, passed the Assembly last week. The local board of health is to have jurisdiction over the new hospital.

St. Bartholomew's Clinic.—A member of St. Bartholomew's Church has given $155,000 for a new building and equipment for the eye, ear, nose, and throat clinic maintained by that parish. Ground has been purchased, and the new building will soon be erected on East Forty-second Street adjoining the present mission building.

The Hospital Ship "Maine."—A protest was recently lodged by the committee in London against the return of the *Maine* from South African waters. General Buller in reply said he thought that the ship in going to England would confer the greatest benefit upon the sick and wounded, as, with her excellent medical staff, she would aid in that way the evacuation of bad cases from the congested hospitals. He added that if she went to England, her return would be desired at the earliest possible moment.

Hospital-Ship Investigation.—The Secretary of War has appointed Brig.-Gen. Alfred E. Bates, paymaster-general, Major Henry S. Kilbourne, surgeon, and Major John M. Carson, Jr., quartermaster, on a board to make inquiry into all the facts relating to the equipment of the hospital ships *Missouri* and *Relief*. The cause of the appointment of the board was a request for a large sum of money to place the ships in a seaworthy condition. As both were only recently fitted up at great cost, the secretary wishes to know why they have so soon become unseaworthy.

Progress in Great Britain.—At an inquest recently held in Belfast the coroner remarked that the post-mortem examination had been made very satisfactorily by Dr. Harriett Niel, and that this was the first instance on record in the country of such a public duty having been discharged by a woman. Another sign of diminishing prejudice is furnished by the announcement that medical women will be admitted to the Liverpool School of Tropical Medicine on equal terms with men. In view of the fact that many medical missionaries are women, it would seem only reasonable to give them every opportunity to fit themselves for their future work as far as possible before leaving England.

The Eastern Medical Society.—The annual dinner of this society took place at the St. Denis Hotel on the evening of March 23d. There were one hundred and seventy-five guests, including ladies.

The American Surgical Association.—The annual meeting of this society will be held in Washington, in connection with the Congress of American Physicians and Surgeons, May 1–3, 1900. The address of the president, Dr. Robert F. Weir, of New York, will be on "Perforating Ulcer of the Duodenum." The subject for set discussion will be "Surgery of the Stomach." Titles of voluntary papers will be received by the secretary, Dr. Herbert L. Burrell, up to April 10th.

The Tropical Army Ration.—Dr. Munson, in the essay which was awarded the prize of the Military Service Institute offered by Dr. L. L. Seaman, holds that the present army ration contains too much nitrogenous food and hydrocarbons and not enough carbohydrates, and the ration in general is too large. "It is evident," he says, "that such changes as are advisable in the adaptation of the United States army ration to tropical conditions are chiefly in the line of a reduction in the quantity of the foods at present provided by a too generous government. It is true that the sugars and starches should be slightly augmented, but their increase is small when compared with the considerable reduction of nitrogenous and fatty matter which is proposed. Many of the components of the present ration, as is seen by the table, require no change in the consideration of the tropical dietary, being not only admirably selected, but also properly proportioned." The quantities of the various components of the rations are given in the following table:

Articles.	Quantity per Ration (ounces.)
Fresh beef (quarters)	10.00
Fresh mutton	10.00
Pork	6.00
Bacon	6.00
Salt beef	10.00
Dried fish (cod)	10.00
Fresh fish, average (whole)	14.00
Flour	18.00
Soft bread	20.00
Hard bread	18.00
Cornmeal	20.00
Beans	2.40
Peas	2.40
Rice	4.00
Hominy	4.00
Potatoes	16.00
Potatoes, 80 per cent. and onions 20 per cent.	16.00
Potatoes 70 per cent. and canned tomatoes 30 per cent	16.00
Dried fruit (average)	3.00
Sugar	3.50
Molasses	1 gill
Cane syrup	1 gill

Philadelphia Neurological Society.—At a stated meeting, held March 26th, Dr. F. A. Packard presented a case of possible acromegaly. The patient was a young man who presented enlarged nasal bones, overhanging brows, a projecting lower jaw, immense maxillary arches, somewhat enlarged hands, and a striking facies, but there was no headache or bitemporal hemianopsia, or other symptom of pituitary tumor. There had been no recent marked increase in growth, and the patient had presented a similar appearance for many years. There was present also a condition resembling elephantiasis of the legs, but this was attributed to repeated inflammation of the cellular tissues. Dr. F. X. Dercum exhibited a man who presented tonic spasm of various muscles on voluntary effort after a period of rest. The condition was not believed to be Thomsen's disease, and its nature was not clear, further than it appeared to be a form of multiple myospasm. Dr. W. G. Spiller reported a case of poliomyelitis resembling Landry's paralysis in an adult. He exhibited also the brain from a case of congenital blindness. The patient had been an idiotic boy, without eyeballs and orbits, who had never spoken, and there was found an absence of the optic nerve and of the chiasm. The pulvinar was preserved, as well as the anterior quadrigeminal body, but the external geniculate body was absent. The entire occipital lobe was much diminished in size, and particularly the cuneus. The upper portion of the anterior central convolution on one side was much narrowed, and this seemed to account for a contracture that was present in the upper extremity on the opposite side. The external arciform fibres of the medulla were unusually distinct. Dr. Stewart Paton presented a communication entitled "The Study of Mental Diseases." He dwelt upon the utility of laboratory investigation, but pointed out that careful clinical study is not less essential. He briefly outlined the plans contemplated for the Sheppard and Enoch Pratt Hospital for the Insane near Baltimore. Dr. J. Hendrie•Lloyd read a paper entitled "Rhythmic Motor Disorder in Hysteria," in which he referred to the case of a girl who presented rhythmic movements of both extremities on one side which were dissipated by suggestive therapeutics, and in whom convulsive seizures apparently of epileptic character also occurred.

Pure-Food Legislation.—The MEDICAL RECORD is in receipt of a communication from Hon. H. C. Adams, dairy and food commissioner, Madison, Wis., referring to the criticism of the Babcock bill in our issue of March 17th. He says: "Section 8 of the Babcock bill, which authorizes the food commissioner to call upon the Association of Official Agricultural Chemists to determine standards, was put into that bill rather against my judgment. As I stated before the Pure-Food Congress and also before the committee on interstate commerce, I do not believe that any outside official body can have the power to determine standards which shall be accepted in court, because it would appear to be a delegation of legislative authority which no man or body of men outside of a legislature could exercise. I agree with you that that section ought to be eliminated, and shall so inform Mr. Babcock. I have observed the comments in the MEDICAL RECORD with reference to section 11. I think you misapprehend the purposes of this section. It is not to protect manufacturers, manipulators, compounders, or dealers in compound mixtures or imitation, but it is to relieve transportation companies from prosecutions under the law. You can readily see that it is almost impossible for a transportation company to know what is the character of the products which it transports. A transportation company certainly could not be expected to open packages and subject them to chemical examination, and the purpose of that section is to throw the whole burden of the law upon the men who make or deal in goods the sale or manufacture of which is prohibited by law. I think you will decide, upon reflection, that that section is a reasonable one." Mr. Adams, we understand, was one of the authors of the Babcock bill.

Dr. Edward Chapin, of Brooklyn, has been appointed by the State board of regents a member of the New York State board of medical examiners. to fill the vacancy caused by the death of Dr. A. R. Wright, of Buffalo.

Addition to a Hospital.—A structure four stories high, with a frontage of eighty-five feet and a depth of one hundred feet, is to be built as an addition to St. Mary's Hospital, Philadelphia, providing greatly increased accommodations.

Reform in Bake-Shops.—At a recent meeting of a labor union one of the delegates from the Bakers' Union lodged a complaint against a number of bake-shops which he said were in a filthy condition and a menace to the public health. He said that men and animals slept together in these bake-shops, and he asked the Union to request the board of health to make an investigation.

General Endowments.—By the will of the late Mahlon H. Dickinson, of Philadelphia, a member of the State board of charities, the sum of $5,000 each is bequeathed to the Children's Homeopathic Hospital of Philadelphia, the Pennsylvania Hospital, the German Hospital, the Episcopal Hospital, St. Mary's Hospital, and the Jewish Hospital, for the endowment of free beds in perpetuity.

Philadelphia County Medical Society.—At a stated meeting held March 28th, Dr. Mordecai Price exhibited a specimen from a case of perforative appendicitis, in which operation had been performed successfully. Dr. John G. Clark delivered an address entitled "The Anatomical Basis of the Menopause," illustrated by a lantern demonstration. He showed that the function of the ovaries depended largely upon their blood supply, and that the gradual destruction of ovisacs culminated in the menopause. Dr. James C. Wilson read a paper entitled "The Symptoms and Complications of the Menopause." Dr. John B. Chapin read a paper entitled "The Psychoses of the Menopause," in which he pointed out that the mental derangements that occurred in this connection did not differ essentially from those that occurred under other conditions. There was a mistaken notion that this period of life peculiarly predisposed to the occurrence of psychoses, but the actual evidence did not support this view. Such mental derangements might be expected at the menopause as would occur in predisposed persons in the presence of any other critical situation. Dr. J. M. Anders presented a paper entitled "The Cardiac Manifestations of the Menopause," referring especially to palpitation and tachycardia. Dr. F. X. Dercum made some remarks upon "The Neuroses of the Menopause," pointing out that this period was one at which neurotic disturbances were prone to occur, though not presenting any distinctive character. Dr. Judson Daland related a case in which periodical gastric disturbance occurred in a woman at the menopause. Dr. J. Madison Taylor suggested that nervous disturbances of the menopause might be more common in the leisure class than in those more humbly circumstanced.

Dr. Horner and Appendicitis.—On page 519 of the MEDICAL RECORD, March 24, 1900, under the heading "Medico-Surgical, Cr.," "Recoveries from interval operations" should read "Recoveries from operations advised by physicians in primary cases."

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending March 31, 1900. March 27th.—Assistant Surgeon J. T. Kennedy ordered to additional duty at the marine recruiting rendezvous, San Francisco, Cal. March 29th.—Pharmacist J. F. Pearson appointed pharmacist from March 26th.

Dr. St. George Mivart died suddenly in London on April 1st. He was born in London in 1827. He was formerly lecturer on zoölogy at St. Mary's Hospital Medical School, and professor of biology at the University of Louvain. He was a doctor of medicine, but did not practise. He was recently excommunicated by the Roman Catholic archbishop of Westminster for asserting that to ask a reasonable man to believe such "puerile tales" as those of the Tower of Babel, of Jonah, and of the creation of the world in six actual days, was an insult to his intelligence. He was a fellow of the Royal, of the Linnæan, and the Zoölogical Society. Among his publications are "Genesis of Species," "Nature and Thought," "Types of Animal Life," "The Cat," "An Introduction to the Elements of Science," "Man and Apes," and "The Origin of Human Reason."

Obituary Notes.—DR. JOHN COOPER, of Brooklyn, died at the Seney Hospital on March 29th, of gangrene of the foot. He was born in London in 1815, and obtained the qualification of the Royal College of Surgeons in 1837. He became attached to the medical corps of the British army, and later settled in New South Wales, where he was a member of the medical board for several years. In 1846 he came to this country and began practice in Huntsville, Ala., where he remained twelve years, and then removed to Brooklyn.

DR. ALFRED E. JONES, of Brooklyn, died at the Home for Aged Men in that borough on March 30th. He was born in Lexington, Ky., in 1810.

DR. DAVID N. TAYLOR, of Amsterdam, N. Y., died on March 28th at the age of forty-four years. He was born in Albany and was graduated in medicine from the Long Island College Hospital Medical School in 1884.

Dr. William W. Rodman, of New Haven, died at his home in that city on March 30th, of acute bronchitis, at the age of eighty-three years. He was a graduate of the Jefferson Medical College in 1844.

Dr. Francis G. Warren died in Biddeford, Me., on April 2d, at the age of seventy-two years. He was a graduate of the Jefferson Medical College in 1861, and served during the civil war as surgeon of the Fifth Maine regiment.

Dr. Joseph H. Vondy died at his home in Jersey City on April 2d, at the age of seventy years, from pneumonia. He was born in Miramichi, N. B., and was graduated from the New York University Medical School in the class of 1851.

Dr. James Cummiskey died at Philadelphia of pneumonia on March 25th, aged sixty-four years. He was graduated from Jefferson Medical College in 1856, and was for many years physician in chief to St. Mary's Hospital.

Dr. Franklin B. Hazel died at Philadelphia on March 28th, at the age of fifty-four years. He was graduated from the medical department of the University of Pennsylvania in 1870.

Dr. Frank B. Keller died at Pottstown, Pa., on March 24th, from erysipelas and septicæmia, at the age of fifty-one years.

Dr. Edwin M. Smith died at Philadelphia on March 29th, aged seventy-seven years. He was graduated from Jefferson Medical College in 1846.

Progress of Medical Science

Medical News, March 31, 1900.

Myocarditis in Infancy and Childhood.—Henry Koplik states that the pathological anatomy of this condition has received most of its facts from autopsies upon infants and children dying of the infectious diseases. This affection is one of the most important conditions met with in the sick infant and child. The myocardium is peculiarly susceptible to the action of any toxin. Symptoms of functional cardiac disturbance may appear in the convalescence, not only of diphtheria, but of any severe throat disease of the streptococcus or staphylococcus variety. The writer then quotes cases showing the effects of malaria and pneumonia on the heart muscle, and then mentions the relations of pertussis and rheumatism to the heart. This organ must be carefully guarded, and depressing drugs should be cautiously used. The hope of these cases lies in well-sustained nutrition.

Uterine Fibroids Complicated by Pregnancy.—Willis E. Ford draws the following conclusions from several quoted cases. When the lower third of the uterus and the entire cervix are free from any neoplasm, the physician may safely await the result of the pregnancy, even if the fibroid is of considerable size. If a neoplasm of any considerable size is found opposite the internal os, especially if it is large enough to block in any way the birth canal, then the question as to waiting until the child is viable and doing a Cæsarean section, or whether a total hysterectomy must be done early, is determined by whether the fibroid is in the anterior or posterior wall of the uterus. The dangerous position of the fibroid is in the anterior wall of the uterus, low down.

Alcohol as a General Stimulant and Heart Tonic; its Use to the Animal Economy in Health and Disease.—T. J. Hillis believes that alcohol should never be given in lingering diseases, nor in convalescence from acute diseases, if it irritates or upsets the stomach. Alcohol should never be taken after eating. It cannot aid digestion, and so must retard it by its weight and bulk. Further, it precipitates the digestive ferments, coagulates the albuminoids, and often completely arrests the digestive process. The amount to be consumed varies with the individual and the circumstances. Alcohol is a form of food already digested, but it is not adapted to the normal wants of the body, and is indicated only at a time and under conditions which render the digestion and assimilation of other foods impossible.

A Case of Pneumohydrothorax with Great Permanent Displacement of the Heart.—Charles Ross Jackson quotes the case of a young man, seventeen years of age, in whom the cardiac impulse is present in the right fifth intercostal space in the nipple line. Dulness extends almost from the nipple line to about the right sternal border and upward to the third space. The past history is of a pain in the chest, which began about a year ago and became chronic. In an acute attack which followed, the perforation probably occurred, and pneumothorax developed. Creosote and tonics ameliorated these symptoms. The prognosis is unfavorable.

Toxins from a Chemical and Pathological Standpoint.—A. E. Austin quotes Gautier's description of the nature of toxins: "All infectious microbes act upon the organism by the poisonous products or toxins which they secrete. These poisonous products are chemical substances susceptible of filtration, precipitation, and resolution. These toxins are usually complex, made up of an alkaloidal material and a nitrogenous substance, which is very active. The primary effect of all these toxins is rise of temperature, and probably all fever is produced by the agency of some one of them." Austin then gives several methods of extraction.

The Treatment of Whooping-Cough.—Henry Coggeshall first cocainizes as much of the nasal mucous membrane as can be done by the use of a spray, followed by cotton-tipped probes wet with the solution; then an application of a two- or a four-per-cent. solution of nitrate of silver to the nose and naso-pharynx, to be followed by a mild alkaline and antiseptic wash by spray or by post-nasal douching. He also speaks of belladonna and suprarenal extract.

Journal of the Amer. Med. Association, March 31, 1900.

Observations in Laryngotomy; Tracheotomy; Intubations; Based on Clinical and Experimental Evidence.—George W. Crile says that for these experiments the animals were reduced to full surgical anæsthesia by ether, and were killed before recovery therefrom. The results of the tracheotomy experiments are of practical importance mainly in pointing out the very great safety of operative procedures, so far as the immediate results are concerned, on the trachea, as compared with like operations on the larynx. The intubation experiments show that the reflex inhibition is due to efferent impulses set up by mechanical irritation of the terminals of the superior laryngeal nerves. The author urges the necessity for a differential diagnosis between obstruction from membranes pushed down and the collapse from reflex inhibition. As to the prevention of collapse from reflex inhibition, so far as the heart is concerned, this is done by a preliminary hypodermic injection of atropine. Or the local application of cocaine on the laryngeal mucosa may prevent not only the reflex inhibition of the heart, but of the respiration as well.

Albuminuria.—Charles Alling Tuttle considers albuminuria from the point of view of its prognostic value in chronic nephritis. He says that the mass of evidence which has come to us of late from the autopsy table shows conclusively that chronic nephritis exists and is an unrecognized cause of death in a proportion of cases far beyond ordinary belief, and the comparison of carefully kept records of cases before death with autopsy findings shows that little reliance can be placed on the mere urinary examination, either positive or negative, as a means of absolute diagnosis or prognosis of Bright's disease. The writer's own experience leads him to believe that (1) Bright's disease may exist without the ordinary urinary manifestations, viz., albumin or casts; (2) albumin and casts may be found in the normal urine and do not necessarily mean Bright's disease; (3) given a case of chronic Bright's disease with albuminuria, the fact of its presence, its constancy, or its amount has absolutely no prognostic significance.

Notes on Fractures of the Long Bones without Deformity; the Sub-Periosteal Type of Fracture in the Young.—James Porter Fiske's conclusions are that (1) subperiosteal fractures usually present certain typical features which we should be able to recognize and differentiate from complete fractures; (2) their union is characterized by the formation of a slight amount of callus, and solid union takes place in much less time than in complete fracture; (3) in every contusion to the limbs in the young, no matter how slight, a systematic search should be made for this particular lesion; (4) in rickets there is a greater liability toward the occurrence of incomplete fracture; (5) many cases of subperiosteal fracture are undoubtedly converted into simple fracture through improper manipulation or by too forcible examination.

A Pathological Study of Eighty Tumors of the Mammary Gland, with Special Reference to the Occurrence of Malignancy.—Fritz Carleton Hyde gives the results of a microscopical analysis of eighty tumors of the breast, which he classifies according to their histological structure. The relative occurrence of the different varieties of the eighty cases is as follows: Carcinoma, 70; carcinoma medullare, 12.5; carcinoma simplex, 27.5; carcinoma colloides, 6.25; carcinoma scirrhosum, 12.5; adeno-carcinoma, 10; sarcoma, 7.5; tuberculosis, 3.75 per cent. Five per cent. not classified as carcinomata show carcinomatous proliferation. The writer concludes that it seems justifiable, from the microscopical examination only of these eighty cases, to state that there is no strictly benign tumor of the breast, and that the only rational treatment is complete removal as soon as discovered.

Are We Degenerating? If So, Why?—E. Stuver says the enormously increased percentage of the insane as compared with the whole population within the last twenty or thirty years is a strong proof that mental stability is not increasing, and that the spread of venereal diseases, tuberculosis, and carcinoma, together with the widespread use of stimulants and narcotics, has done much to taint the blood and lower the vital resistance of the people. Also that the intellectual faculties have been cultivated at the expense of the moral nature, with the result of asymmetric development.

A Physiological Consideration of the Food Value of Alcohol.—Frank Woodbury and Seneca Egbert, in considering the experiments of Professor Atwater, are forced to the conclusion that he has produced practically no evidence whatever to support the claim that alcohol is a wholesome or useful food, nor to change the generally accepted view that its physiological action on the human body is destructive and never constructive.

A Study in Anæsthesia.—Rosalie M. Ladova submits a record of one hundred and one cases of anæsthesia in which notes were taken as to the duration, pulse and respiration range, condition of the pupils, gastric irritation, how soon anæsthetized, how soon out, and the amount of the anæsthetic. The writer thinks it inconceivable that the idea of a trained anæsthetist in every hospital should gain ground so slowly.

The Interdependence of Physiology and Morphology, and their Educational Importance. — James Weir says biology should be taught in every school in the land, and that medical schools especially should establish biologic chairs, from which should be taught the great truths of physiology, morphology, and psychology.

Simple and Ethereal Sulphates.—G. W. McCaskey describes a simple and rapid method for the separate determination of these bodies, which, he says, are an indication of the intensity of bacterial processes. The principal compounds of this class of aromatic substances are phenol, indol, skatol, cresol, and pyrocatechin.

The Humane Side of Warfare.—N. Senn says that war is gradually becoming more humane, a result largely contributed to by the Geneva Convention. He gives some personal experiences from the Santiago campaign.

Boston Medical and Surgical Journal, March 29, 1900.

Typhoid Spine.—R. W. Lovett reports a case of muscular rigidity, excessive pain in the lumbar region, tenderness of the spine, and pain referred to the peripheral end of the nerves, following typhoid fever. The tuberculin test was negative. The Widal test was positive. Recovery followed in less than a year. The typhoid bacillus has frequently been found in bone marrow. The author holds that, reasoning from the analogy of other post-typhoidal bone lesions, we may conclude that an osteomyelitis, or possibly periostitis, of the vertebræ is present in some of the cases which have been supposed to belong in the neurotic class of typhoid spines.

Idiopathic Pneumohæmothorax with Recovery after Aspiration.—Elisha S. Boland describes a case which he calls idiopathic, because to all appearance there was no objective or subjective evidence of pre-existing trouble. The case suggests: (1) That we can have (practically) a primary pneumohæmothorax; (2) that without diagnostic aspiration we cannot be sure of the nature of any pleural effusion; (3) that aspiration may precipitate an influx of air into the pleural cavity, even if the lung is not touched by the needle; (4) that the pleural cavity can unaided take care of aseptic blood as well as of air.

The Open or Operative Treatment of Fresh Fractures; is it Ever Justifiable?—Charles L. Scudder concludes from the previous number an article which is the result of an analysis of one hundred and fifty-three cases of fracture of the lower extremity. The ideal result to be aimed at is union of the fracture without deformity or impairment of the function of the limb. The usual methods are often unsatisfactory. Anæsthesia and the *x*-ray afford the means of accurate diagnosis. Sepsis is practically abolished.

Closed fractures can safely be treated by open incision when other methods fail to secure reduction and immobilization.

Bradycardia, with Intermittent Albuminuria.—Andrew H. Whitridge reports a case in which there was a period of permanent bradycardia of three months, with intermittent albuminuria of over two years' duration. The etiological factors were probably occlusion of the coronary arteries, Bright's disease, and irritation caused by the removal of a lipoma of the neck, causing stimulus to the vagus nerve.

New York Medical Journal, March 31, 1900.

Report of a Case of Tumor of the Cerebellum with Drainage of Fluid through the Nose.—The case of a young woman, aged twenty years, is reported by G. W. McCaskey. Her history, which began after an attack of the grippe, extended over three years, the diagnosis being an inoperable tumor at the base of the brain located in or adjoining the pons on the left side. Autopsy showed the tumor to be a mixed angeioma, having an apparent origin from the anterior margin of the left lobe of the cerebellum. About two months before death the patient began to have a daily serous discharge from the right naris amounting to several ounces. At times the discharge was so profuse as to threaten strangulation. Another curious feature was that the escape of the fluid was followed by a partial restoration of hearing, which for three months had been in complete abeyance.

Spontaneous Discharge of Cerebro-Spinal Fluid from the Nose.—W. Freudenthal reports the case of a woman, aged fifty years, who had for over a year a dropping from the nose. The amount was increased when the head was bent forward. Examination of the discharge showed a watery appearance, with alkaline reaction, and a specific gravity of 1.007 +. The results of chemical analysis seemed to prove beyond a doubt that it was cerebro-spinal fluid. There were loss of smell, nasal polypi, and chronic otitis media. The general nervous condition was one of blunting of mental activity. The author discusses the literature of this class of cases, about which so little is known. Stoppage of the flow seems to excite the cerebral symptoms. Concerning treatment we know nothing, nor has any satisfactory theory of causation yet been established.

Arthritis Deformans and the Benefits of Electrical Treatment.—M. A. Cleaves gives the clinical histories of two cases. One was treated with Franklinic current, negative insulation, convective discharge with crown electrode for ten minutes, and with the brush electrode to the entire general surface (nutritional), localized to the affected joints (pain and disability). This patient was a laundress, aged fifty-one years. The other patient, a typewriter, aged nineteen years, received a continuous current bath, active contact, body immersed in decinormal salt solution in an insulated porcelain tub. Results in both cases were excellent.

Diabetes Mellitus with Special Reference to the Treatment with the Double Bromide of Gold and Arsenic.—G. D. Barney dilates upon the efficacy of this combination in the treatment of diabetes mellitus. He believes that it affects the nervous system, restoring the integrity of the glycogenic centre. It acts also as a powerful vasomotor regulator, increasing the vascular tone and diminishing the amount of blood supplied to the liver. It improves the digestion and the blood state itself. Clinical tables from three cases are given showing effects as measured by reduction of sugar and increase of hæmoglobin.

Leucocytosis.—J. H. Burch states that nearly all inflammatory and infectious diseases are characterized by leucocytosis, the exceptions being typhoid, measles, grippe, malaria, and tuberculosis. The author gives the results of blood tests made in pneumonia, typhoid, and tuberculosis, his findings being the same as already noted by other observers. He gives, as a fairly accurate average of the normal relationship of the leucocytes, the following figures: Two polymorphonuclear leucocytes to each microscopic field, one small lymphocyte to every five fields, one large lymphocyte to ten fields, and one eosinophile to twenty fields.

Is there a Rheumatic Periostitis?—Basing his opinion on the literature of the subject and one personal case, A. Stern believes that we have a true periostitis as the result of the rheumatic poison. In a boy aged ten years, who had had scarlatina and measles, upon the subsidence of the latter the joints began to swell, but were promptly relieved by the salicylates. Later a painful spot developed on the sternum, followed by swelling in various joints, also relieved by the salicylates. Gradual recovery supervened; but later a heart murmur appeared, with chorea.

Philadelphia Medical Journal, March 31, 1900.

A Case of Poliencephalitis in an Adult.—De Witt H. Sherman and William G. Spiller report a case of this nature in a medical student, twenty-one years old. There was no history of mental or nervous disease in the family, and the patient's previous history was good. The disease presented the clinical picture of Landry's paralysis, and terminated fatally in thirty-eight hours after the appearance of the first definite symptoms of motor disturbance. From a study of the clinical symptoms and the autopsical findings, the conclusions are arrived at that (1) Landry's paralysis may be due to poliomyelitis; (2) the latter is an infectious disease, the inflammation being greatest in the anterior horns, but occurring also in the posterior horns, the white matter, and the meninges; (3) the symptoms are motor in type, because the disease is especially of the anterior horns; (4) meningitis is not uncommon in poliomyelitis; (5) poliomyelitis in the adult is essentially the same disease as poliomyelitis in the child; (6) it is related pathologically to the non-purulent form of encephalitis and to the poliencephalitis of Wernicke.

The Inaccuracies of Home Modification of Cow's Milk.—Charles E. Woodruff discusses the difficulties of modifying milk accurately at home: 1. To be accurate, we must know the exact composition of the ingredients, which is impossible outside of a laboratory. 2. Extreme accuracy does not seem to be so necessary as we have been taught. 3. Women are so inaccurate in their methods that the specific directions of the physician are not carried out. 4. Infants vary so much that one cannot tell beforehand what any individual one will like. 5. Specialists are not agreed as to the proportions of proteids, fats, and sugar to use.

The Prevalence and the Diagnosis of Leukæmia.—George Dock gives the statistics of this disease, which lead him to think it is more common in Ann Arbor than in Germany. The diagnosis is difficult, and can rarely be made except by a blood examination. Pallor is not always present at first, but shortness of breath is common. The splenic tumor almost always has the characteristic sharp edge on the right side, and the anterior surface is large, smooth or broadly curved, and firm to the touch. Notches on the edge are not always found in a leukæmic spleen. Pain is almost invariably present.

Research into the Cause of Collapse or Death from Blows upon the Lower Chest and the Epigastrium.—George W. Crile concludes from animal experiments that the solar plexus may be disregarded as a factor in these cases, and that the cause of the collapse or death is the mechanical violence exerted either upon the heart muscle itself or its nerve mechanism. Collapse may be caused entirely independently of the vagi, though injury to these nerves probably contributes slightly to the result in most cases.

An Unexplainable Congestion and Enlargement of the Left Arm Cured by an Exploratory Operation; Splenectomy.—Orville Horwitz reports these cases. The first one occurred in a man, age not stated. The operation consisted in exposing the subclavian artery and vein and exploring the axilla. Nothing abnormal was found. The second case was in a woman, thirty-five years old, who had a splenic tumor weighing nine pounds. The patient died on the fourth day after operation.

A Case of Membranous Non-Diphtheritic Croup with Recurring Laryngeal Stenosis.—Herman B. Sheffield reports a case of this kind in a child two and one-third years old. The dyspnœa was relieved by intubation. Repeated cultures revealed no Klebs-Loeffler bacilli.

British Medical Journal, March 24, 1900.

A New Method of Performing Perineal Prostatectomy.—In describing his operation, P. J. Freyer says that, while advantage is taken of the perineal incision recommended by Dittel, Nicoll's object is attained by a much less heroic and dangerous proceeding than suprapubic cystotomy, namely, by a preliminary perineal opening into the urethra. The advantages claimed are: (1) The preliminary external urethrotomy permits of the introduction of the finger into the bladder, which, with a finger in the rectum, enables the surgeon to define accurately the shape, density, size, and extent of the prostatic growth. (2) The finger can be hooked over the enlarged lateral lobe and the latter pushed well into the ischio-rectal wound, thus to a large extent obviating a deep and dangerous dissection. (3) With the tumor pushed well into the wound, the capsule is easily incised and erased, and the cutting forceps and scissors are easily applied. (4) The finger in the bladder enables the surgeon to feel when the cutting instruments are approaching that viscus, so that he can remove the whole growth, except a thin layer for the support of the mucous membrane of the bladder and prostatic urethra. (5) The tube inserted into the urethral wound carries off all the urine, and prevents the perineal wound from becoming septic.

Vomiting Considered from Some of its Surgical Aspects.—William H. Bennett limits his observations to two classes of vomiting: (1) Vomiting occurring in connection with operations; (2) feculent vomiting, which is sometimes curative. With regard to the first, he says that when there is any possibility of the stomach being a reservoir for offensive material or half-digested food, the proper practice is to adopt stomach lavage, in order to prevent the possibility of lung implication from the passage of portions of the contents of the viscus down the trachea. As to the second point, the author concludes that in cases of abdominal disease or injury feculent vomiting as such is no positive indication for surgical interference, unless it is accompanied by increasing abdominal distention.

Punctured Wound of the Skull with Escape of Brain Substance.—William Odell reports a case of a child, aged sixteen months, who fell, piercing its head with a carpenter's gouge. After the child had recovered from the shock, which lasted till the second day, there was no rise of temperature or apparent constitutional disturbance. The child now seems perfectly well, has no squint, and its intellectual progress has been maintained.

Gastric Ulcer in Pregnancy and Hysteria.—J. W. McIntosh reports a case of a primipara (sixth month), in whom characteristic symptoms of gastric ulcer were present, including paroxysms of pain, vomiting, and hæmatemesis. Rest in bed, lavage, medication, abstinence from food for thirty-six hours, followed by a very gradual restoration of diet brought about a return to her normal condition.

A Case of Smallpox during Pregnancy.—In this case, reported by A. Dean Roberts, the disease resulted in premature labor. The only ill symptom was extreme weakness. The strength was maintained with plenty of liquid nourishment, and the patient made an uninterrupted recovery. She had been successfully vaccinated as a child, which probably saved her life by mitigating the severity of the disease.

When is Cancer Cured?—E. T. Fison reports a case of mammary cancer. The patient is now seventy years of age. Twenty-five years ago the left breast was removed; immunity existed for fifteen years, and recurrence took place ten years ago, yet the patient is still living.

Kernig's Symptom in Meningitis.—James Barr quotes several cases in which Kernig's sign occurred in the upper as well as the lower extremities, and says that he does not consider the sign necessarily diagnostic of cerebro-spinal meningitis.

The Lancet, March 24, 1900.

The Typhoid Bacillus and Typhoid Fever.—P. Horton-Smith gives a general description of the bacillus and enumerates its culture reactions. He believes that there is no proof as yet that the bacillus can multiply outside the human body. It has, however, great power of resisting the effect of desiccation, and hence may cause disease a long time after the original infection has existed. It produces a weak toxin. Further points in the lecture discuss the relative frequency of the germ in the different bodily organs, the eruption, the excretions, etc. We can no longer look on the disease merely as affecting the alimentary canal. It is rather a modified septicæmia.

Practical Observations on Cancer of the Breast.—W. M. Banks, in the second of the Lettsomian lectures, mentions the fact that these growths are frequently without pain, cachexia, nipple retraction, and other clinical manifestations generally spoken of as characteristic of the affection. Cancer may be simulated by chronic mastitis, small chronic abscess, small fibro-adenoma, and small, very tight, simple cyst. Special mention is made of acute mania after operations for removal. Finally the author calls attention to chronic interstitial mastitis, which, he thinks, is liable to become carcinomatous.

The Surgery of the Stomach.—A. Mayo Robson discusses dilatation and atony, due to various general and local causes, and persisting after the original cause has disappeared. He gives a statistical table of gastroplication (gastrorrhaphy), speaks of acute gastric dilatation, and describes gastro-enterostomy, tetany and tetanoid spasms in association with gastric dilatation, injury to the stomach, and finally cancer and other tumors of this organ. The lecture closes with statistical tables of the various surgical procedures.

Phosphatic Diabetes.—G. Rankin calls attention to a form of phosphaturia in which the urine contains excess of phosphate of lime, is of low gravity, and later may contain albumin and sugar. The patient complains of thirst, polyuria, and languor. Later symptoms are those of the diabetic coma type. No treatment is of avail, though buttermilk seems to have given some relief.

A Case of Irreducible Dislocation at the Elbow.—H. H. Russell describes this case, which was the result of a football accident in a boy of eight years. Both bones were dislocated backward. Reduction under chloroform was impossible, and an operation was performed. The eventual result was good.

On the Influence of the Temperature of Liquid Air on Bacteria.—A. Macfadyen's experiments show that bacteria may be cooled down to −190° C. for a period of twenty hours without losing any of their vital properties.

Note on the Causation of Cancer.—J. Sawyer attributes the increase of cancer in England to the increasing consumption of fresh meat, which is relatively undercooked.

Medical Press and Circular, March 21, 1900.

General Paralysis of the Insane.—Fletcher Beach says causes are physical and moral; the chief physical ones are excesses, syphilis, cranial injury, and heredity. Among moral causes are anxiety, prolonged intellectual labor, etc. The most common moral symptom is perversion of moral sense; another is irritability, or loss of determination. Intellectual change is the next most important symptom; absent-mindedness, loss of memory, mental confusion, inability to make calculation; sometimes hypochondriasis. The disease almost always ends in death. The diagnosis is from syringomyelia, diphtheritic paralysis, multiple peripheral neuritis, disseminated sclerosis, and bulbar paralysis. The patient in whom premonitory signs appear should be sent to the country. If there is excitability, bromides should be given, and especially if there are epileptic seizures.

The Influence of Heredity on Disease.—Hamilton says there are two theories, Darwin's of pangenesis and Weissmann's of the germ plasm. Tuberculosis is now believed by most pathologists not to be hereditary and seldom to be congenital. Of all diseases the neuroses are the most markedly hereditary. Syphilis is not regarded as an hereditary disease, while hæmophilia is eminently so. Since it is transmitted to males along the female line, it might bear some analogy to menstruation. There is no evidence that diseases due to external agencies can be transmitted. Hereditary tendencies to disease occur as variations of the germ plasm. These variations arose far back in the history of the race, and have been perpetuated, or may recur atavistically. There is little evidence of the importance of maternal impressions. Telegony may prevail in the case of hereditary disease.

Contributions to the Topical Diagnosis of Cerebral Disease.—H. Oppenheim reports a number of cases. After a fall on the head, there was dulness of intellect, sensory and amnesic aphasia, alexia, agraphia. Tumor of the left hemisphere was assumed, extending to the large ganglia and to the gyrus fornicatus. Trephining and evacuation of fluid gave temporary improvement, but after death a tumor was found as suspected. Other cases are given. After convulsions a patient became blind. At autopsy a tumor in the cerebellum was found compressing the left hemisphere. A case of carcinoma metastasis to the brain is mentioned.

Cases of Skin Diseases Presenting Unusual Features.—Arthur Hall found the frequent application of rectified spirits, with a little menthol added, useful in cases of lupus erythematosus. Parakeratosis palmaris was treated with pumice stone and salicylic-soap plaster. A spreading ulcer at the root of the nose proved fatal in an infant. A recurrent ringed vesiculo-bullous eruption in children is mentioned. An erythema induratum in a young woman had recurred each autumn for four years, lasting through the winter. Sherwell's treatment for scabies is recommended.

Berliner klinische Wochenschrift, March 12, 1900.

Glass-Blower's Mouth and its Complications.—Scheele calls attention to a dilatation of Steno's duct and consequent parotid symptoms from the enormous pressure exerted in the anterior oral cavity from glass-blowing. Players on wind instruments are not subject to the lesion, for in them the air pressure comes from the back of the pharynx, and the anterior oral cavity becomes a mere conduit for the air. He makes the suggestion that it may become possible by a suitable mechanical device to employ compressed air in glass-blowing, instead of using the breath as is now done.

Pathogenesis and Therapy of the So-Called Anal Fissure.—C. Rosenbach finds the most common cause of the affection to be a disturbed innervation of the muscular apparatus of the lower bowel, as a result of which the rectal sphincter does not relax from various forms of irritation, while the muscular fibre higher up continues to contract. This causes a great strain on the rectal mucosa, producing partial or complete rupture of the same and the fissure formation. He recommends digital manipulation of the lower rectum, with the later use of the soft tube and irrigation.

South Africa; its Prevalent Diseases and Sanitary Conditions.—W. Kolle describes the geography and climatic conditions of the country and the organizations of the various departments of health in the different sections. He then calls special attention to typhoid, dysentery, smallpox, syphilis, and other affections as seen in this part of the world. Tuberculosis is not an indigenous disease, and most of what there is has been introduced by foreigners. He also briefly describes some of the affections peculiar to this region.

Wiener klinische Wochenschrift, March 8, 1900.

The Radiographic Appearance of the Normal Thoracic Aorta.—G. Holzknecht states that the result of both sagittal trans-illuminations from before back, and *vice versa*, is that no part of the thoracic aorta is visible as a distinct shadow in the picture, but the whole normal thoracic aorta is covered by the middle shadow. The trans-illumination in the frontal direction can be made from right to left, and *vice versa*. The most valuable trans-illuminations for the estimation of the condition of the aorta, next to the sagittal method discussed in the beginning, are the four following: The direction of the projection is, oblique through the thorax: (1) From left back to right front; (2) from right front to left back; (3) from left front to right back; (4) from right back to left front. The frontal plane of the patient is in every case brought to an angle of 45° with the direction of the rays.

A Case of Congenital Stenosing Hypertrophy of the Pylorus.—Franz Hansy reports a case of this kind which is comparatively rare, and which does not commonly present itself for operation. It is certain from the observations made during the operation that the case is one of congenital hypertrophy of the pylorus, which has resulted in relative stenosis of the pylorus, and that has led gradually to a decided dilatation of the stomach. There is no question about the correct treatment: gastro-enterostomy in front of or behind the colon with the Murphy button or suture, according to the nature of the case, should be performed.

Contribution to the Biology of the Malarial Parasite.—Xaver Lewkowicz says that there are clinical grounds for assuming that in cases of intermittent fever at long intervals—twenty-three-day type—it takes the crescents twenty-two days to develop. The benign tertian, the twenty-three-day type, and the malignant tertian are due to the same polymorphous parasite. All of these forms are due to mosquito inoculation.

Münchener medicinische Wochenschrift, March 20, 1900.

Upon the Indications for Operation in Appendicitis.—Adolf Schmitt takes up the recent statement of Gossman that in Munich operation is too infrequently undertaken, and considers the question from the standpoint of hospital cases, which are getting more frequent because the indications for operation are becoming each year more clearly defined. Operation is imperative in large peri- and paratyphlitic abscesses. The course of treatment is most difficult to decide in the great majority of cases. The attack itself is usually recovered from under expectant treatment, but the underlying condition remains, predisposing to recurrence. Internal treatment and surgery should here go hand-in-hand. The indications and operative measures are considered *in extenso*.

A Serious Danger from Faulty Injections in Gonorrhœa.—From a reliable source is published an account of severe complications extending over a period of nine months following a gonorrhœa treated by injections of zinc. There were besides epididymitis, prostatitis, etc., large abscesses and vesico-rectal fistula necessitating operations. It was discovered too late that the acorn-pointed syringe had been inserted within the lips of a phimosed prepuce, and the injection made so that the preputial sac had been distended and the smegma probably washed at different times into the canal, aided by manipulations carried out by the patient to make the fluid penetrate.

A Case of Acute Cocaine Poisoning.—Dr. Bergmann gave a cocaine injection of 5 cgm. of the drug for the relief of severe pain. Within five minutes the pain had all disappeared. The next day 3 cgm. only were injected, when within three minutes there was a faint feeling, with collapse, followed by rapid heart action and respiration; after ten minutes clonic contractions occurred, with widened pupil, bulging globes, and other severe symptoms. These all passed off, and by the next day the man was out. The pain, which had been of long standing in the region of the hip joint, did not return.

Experiments with Alcohol as a Local Application in Gynæcology.—Ludwig Seitz cites instances of chronic metritis, gonorrhœal infections, etc., in which the local use of alcohol has been tried, and concludes that, with the exception perhaps of tuberculous processes in the peritoneum, the results are not very encouraging. In one case only of chronic endometritis and metritis, with excessive secretion, was the action favorable. The power of abstracting fluid from the tissues may make alcohol useful in such cases, and in tuberculous peritonitis it should have further trial.

Hemorrhoidal Nodes in Earliest Childhood.—Dr. Burwinkel says the books teach that hemorrhoidal nodes are among the rarest observations. He relates the case of a girl about two years of age, who soon after birth showed this condition, which after eleven months of general treatment disappeared. He attributes their occurrence largely to the lack of submucous fat deposit about the rectum, due to a general marasmic state.

Flexible Aluminum Splints.—Dr. Steudel already in 1896 recommended pliable aluminum for splints. The bending apparatus has been improved, as shown in an illustration, while other figures show its mode of employment at the bedside. The price in the various widths is quite moderate.

Bulletin de l'Académie de Médecine, March 6, 1900.

Dysenteric Abscess of the Liver.—M. Kelsch and M. Minier hold that in the light of modern pathological findings hepatitis and dysentery are alike in their elementary lesion, which is a necrosis, differing in course only by reason of the difference of structure in liver and intestines.

Treatment of Obesity.—G. M. Debove treats obesity by a diet unmodified by cooking or preserving, such as raw milk, eggs, meat, salads, and fruits. He reports the case of a man whose weight after less than a year of treatment was reduced from 148 to 93 kgm. (325 to 204 pounds).

French Journals.

Symptoms and Pathogeny of Isolated Paralysis of the Great Denticulated Muscle.—A. Souques adds some new cases to the short list in which the serratus magnus has alone been implicated in paralysis. The signs vary with examination in repose and when the arm is voluntarily raised. The opinions of various observers are given. The truth, he thinks, lies between the extreme views of Duchenne and of Berger, and that there is moderate displacement of the scapula, which may escape superficial examination. To the sixteen cases collected by Barreiro he adds one of his own and two found in literature, and studies them together. He advances the theory that the paralysis is consecutive to sudden violent effort. It occurs almost always in men and upon the right side. In one case, involving the left, it was found that the man was left-handed.—*Gazette des Hôpitaux*, March 17, 1900.

Treatment of Muco-Membranous Entero-Colitis.—G. Lyon concludes his paper, discussing the injection of large quantities of oil in spasm of the intestines; various sedatives, prolonged baths, thermal treatment, painful paroxysmal crises, febrile forms, and treatment in infantile forms, etc.—*Revue de Thérapeutique Médico-Chirurgicale*, March 15, 1900.

The Necessity of Stomach Lavage Preceding Gastro-Enterostomy.—René Belin concludes that whatever may be the condition of fatigue of the patient, it is indispensable in interventions for pyloric affections, contractions, or cancers, to place lavage of the stomach at the head of the list of the necessary precautions before operation.—*Le Progrès Médical*, March 17, 1900.

International Medical Magazine, March, 1900.

Tuberculosis of the Nervous System.—D. J. McCarthy states that in this field there must be differentiated those processes in which the tubercle bacillus itself is the causative factor, and those in which poisons produced by tuberculous processes elsewhere in the body are at fault. He then speaks of the different varieties of tuberculosis of the nervous system.

Tuberculin, Anti-Tuberculin, and Anti-Tubercle Serums.—Joseph McFarland says that tuberculin is prepared from the fully-grown cultures by a process of concentration. He then speaks of progressive administration of tuberculin to animals and the development of an anti-tuberculin. He mentions the anti-tubercle serums of different investigators.

Diagnosis and Treatment of Tuberculosis of Bones and Joints.—De Forest Willard states that this diagnosis when the disease comes from acute osteomyelitis or epiphysitis is usually readily determined by the sudden onset of these latter conditions with extreme pain, and the rapidity with which they advance to destruction of bone and suppuration.

The Treatment of Pulmonary Tuberculosis.—S. Edwin Solly believes that the great defect in the treatment of tuberculosis is the time of its application. The tuberculous as a rule do best in high climates which are sunny, but in which the air is dry and cool rather than warm.

Tuberculosis of the Skin.—Jay F. Schamberg speaks of tuberculous ulcerations of the skin (tuberculosis cutis orificialis), anatomical tubercle (tuberculosis verrucosa cutis), scrofuloderma, and lupus vulgaris. In all of these affections the tubercle bacillus may be found in the skin.

Tuberculous Ulcerations in the Stomach and Intestines; the Use of Tuberculin.—Boardman Reed declares that as far as his experience goes in the use of tuberculin for tuberculosis of the stomach and intestines, the remedy is perfectly safe in proper doses, and is curative when there is no septic complication.

The Treatment of Consumption.—W. Blair Stewart advises fresh air, as perfect hygienic surroundings as possible, a careful diet, and exercise. He approves of the use of guaiacol carbonate, strychnine, capsicum, and quinine—also belladonna or codeine if sweating and cough are bad.

The Laboratory Diagnosis of Tuberculosis of the Urinary System.—W. Wayne Babcock advises the necessity of greatest cleanliness in this manipulation. It is well also to examine the urine immediately after it has been voided.

Annals of Gynæcology and Pediatry, February, 1900.

Intra-Abdominal Adhesions.—A. L. Beahan states that operative procedures have taught us all we know regarding abdominal adhesions. It is possible that they bear close relations as a factor to the production of malignant disease. Their prevention requires that all raw surfaces be covered and possibly dusted with powder; that bleeding be checked and oozing be stopped; while open treatment with drainage completes the toilet. Drained cases are always safest and least painful.

Tolerance of the Gravid Uterus, with a Case.—H. C. Young cites the case of a woman, thirty-five years old, who on becoming pregnant had a convulsion about five weeks after conception. The cervix was painted with tincture of iodine, and later dilated several times with the introduction of bougies. Finally, all measures failing to give relief, or to cause expulsion of the fœtus, the cervix was manually dilated and the fœtus delivered.

Exploration of the Abdomen as an Adjunct to Every Cœliotomy.—Howard A. Kelly states that there are three classes of cases to which this examination may be applied: (1) When it is made simply as a routine procedure; (2) when, on opening the abdomen, contrary to expectation no disease is found near at hand; (3) when the disease operated on is probably complicated by the affection of some other organ.

Notes on the X-Ray; its Usefulness and Mistakes.—J. Rudis-Jicinsky describes the usefulness of the *x*-ray in the detection and diagnostication of fractures and dislocations. Calculi and encapsulated trichinæ may sometimes be seen. Chest affections without physical signs may be diagnosticated. The manipulator must know "how to read the shadows," in order to avoid mistakes.

Oöphorectomy for Gross Functional Nervous Diseases Occurring during Menstruation.—D. C. Brockman, after reporting four cases of this nature, says that it is only by patient, painstaking work along this line, with the careful experience of three or four years, that we shall learn on what cases to operate, and what not to treat surgically.

Obstetrical Prophylaxis in Gynæcology.—James Clifton Edgar affirms that a large proportion of cases that apply to the gynæcologist for relief of crippled pelvic organs owe their condition to mismanagement or avoidable accidents of the pregnant, parturient, and lying-in states.

Meddlesome Gynæcology.—Herman E. Hayd believes that, in spite of the cry that too much operating is done nowadays, most of the symptom-producing definite and discoverable lesions in women are cured best and quickest by operative measures.

How to Prevent and How to Treat Ununited Fractures.—A. C. Bernays says that non-union can always be prevented by proper approximation and immobilization, in the absence of a constitutional vice.

Illinois Medical Journal, March, 1900.

A Mechanical Method of Treating Sciatica.—C. C. Hunt advocates the use of the Hodgen splint, which prevents movements which are the result of the action of muscles of the hip and thigh over which the great sciatic nerve presides, but scarcely interferes at all with passive motion, especially at the hip joint. The patient can move from one side of the bed to the other, or turn slightly on the opposite side, and the toilet of bed and body can be arranged with little discomfort. In about sixty cases treated by the author pain was relieved in from one to six hours after the splint was adjusted, and in two weeks practical cure resulted.

The Medico-Legal Aspect of Bright's Disease.—Columbus Barlow believes that if the cerebral symptoms in cases of nephritis are marked, the patient's mental capacity should be tested before he is allowed to make a will.

Why and When to Operate for Appendicitis.—W. F. Grinstead believes in treating a first and second attack of catarrhal appendicitis medically, and in an interval operation after a second attack.

Diagnosis and Clinical Course of Puerperal Eclampsia.—Frank B. Earle attaches much importance to severe frontal or unilateral headache, associated with insomnia, as one of the earliest symptoms of eclampsia.

An Unusual Case of Perforating Gastric Ulcer.—C. W. Hall reports a case of four severe gastric ulcers without any history of gastric disturbance.

Two Affections of the Knee Joint.—George N. Kreider reports a case of gonorrhœal synovitis and one of loose body in the joint.

University Medical Magazine, March, 1900.

Absorption and Metabolism in Exclusive Rectal Feeding.—D. L. Edsall narrates his experience with enemata in a case of gastric ulcer occurring in a housemaid who was under close observation for a considerable time. The enemata consisted of 250 c.c. of peptonized milk with the yolks of two eggs, given three times daily, and in each instance being preceded by a cleansing enema of plain water. Results were most satisfactory. Edsall calls attention to the fact that the mere retention of rectal enemata is no sufficient evidence that the patient is being properly nourished by them.

Report of the More Interesting Cases in a Month's Service in the University Maternity.—By A. H. Remington. The following were reported: Cæsarean section; abdominal section for extra-uterine pregnancy or sepsis following abortion; the same for appendicitis complicating pregnancy and the puerperium; the same for streptococcic infection and an enormous necrotic ulceration of the caput coli, and the same for late infection in the puerperium; two cases of primary repair of lacerated cervix.

On the Use of Antitoxin in Diphtheria with Special Reference to Small Doses.—J. H. Musser employs in children up to six or eight years an initial dose of 500 units, to be repeated at intervals of six hours if the fever does not fall, if the strength of the patient does not improve, or if the local manifestations are spreading. For children over eight years, 1,000 units are given as an initial dose, and this is repeated at intervals of eight to twelve hours as needed.

The Fertilization of the Egg and Early Differentiation of the Embryo.—By F. G. Conklin. A paper read before the University of Pennsylvania Medical Society, February 16, 1900.

Correspondence.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

More Remarkable Recoveries from Bullet Wounds.—The remarkable recoveries from bullet wounds which Sir William MacCormac and Mr. Frederick Treves, the principal civilian surgeons serving as consultants with the British forces, have already recorded, still continue. Sir William MacCormac sends the notes of twenty cases to *The Lancet*, which had been brought under his notice since his publication of the series which I have already quoted to you, and I can only echo his astonishment at the favorable results of treatment. Among other cases he mentions the following:

An officer received a shell wound in the head, five inches long by three inches at the widest part, the skull being exposed over the mastoid process. He was also shot transversely through the back at the level of the ninth dorsal vertebra. Within three weeks the wounds were practically healed, and the paralysis of the lower limbs which was at first present disappeared.

A bullet entered the skull in another case just outside and slightly above the left ala nasi, and emerged behind the tip of the right mastoid process. There were copious epistaxis and deafness of the right ear. The wounds healed at once, and the man is quite well, though the deafness persists.

A bullet in a third case entered the sternum at the junction of the manubrium with the gladiolus, and emerged just external to the juncture of the right arm with the thorax posteriorly. There was hæmoptysis, but the wounds healed without pulmonary trouble, though neuralgia of the arm and wrist-drop ensued.

Another patient, a colonel, was wounded by a shrapnel bullet which entered one inch below the spine of the left scapula. It was cut out beneath the skin one inch to the right of the xiphoid cartilage. In this case also there were hæmoptysis and symptoms of nerve-lesions in the arm, but no pulmonary trouble.

An officer was shot beneath the outer end of the right clavicle, the bullet emerging just to the left of the spine of the fifth dorsal vertebra. Cough, hæmoptysis, and dyspnœa gradually gave way to convalescence.

A bullet in another case entered at the inner end of the fifth right intercostal space close to the sternum, and emerged half an inch below the twelfth right rib, and two and a half inches from the middle line of the back. There was hæmaturia, which subsided, and the patient recovered with no further symptoms.

In the case of a private wounded at an unknown range, the bullet after traversing the left arm entered the thorax one and a half inches internal to the left nipple, and emerged through the trapezius muscle at the level of the spine of the sixth cervical vertebra, two inches to the right of the middle line. There was hæmoptysis, which ceased, and the wounds healed without any untoward symptoms.

In another case the bullet entered at the eighth right intercostal space in the mid-axillary line and emerged half an inch above and two inches posterior to the left anterior superior spine of the ilium. The patient vomited after the injury, but recovered without further symptoms.

These eight cases are perhaps the most astonishing of Sir William MacCormac's latest series, but several of the others are nearly as wonderful. There can be no doubt that in the cases I have briefly noticed tremendous injuries must have occurred—injuries of the sort that until recently surgeons have considered fatal—with no disastrous sequels. In the last case the bullet must have traversed the liver and probably the intestine; in the case preceding it the escape of the big vessels is marvellous, while the lung must have been wounded; and in the case recorded before that the kidney was clearly injured. Perforating wounds of the skull, abdomen, and thorax, if made with a Mauser bullet, appear to have no particular terrors.

Mr. E. L. Acutt, a Durban resident, has given to the British hospitals one hundred and fifty portable and comfortable sick-beds. They are distributed between the hospitals at Frere, Chieveley, and Estcourt, and have been immensely appreciated by the wounded. Mr. Acutt also offered to equip and maintain at his own expense a hospital of one hundred beds, but in view of the large amount of voluntary aid received by the British in this direction the principal medical officer did not consider it necessary to accept the offer. Mr. Acutt has certainly done as much as any one citizen could be expected to do without maintaining a hospital at his private expense; but the authorities at the Cape and the organizers of charity in England ought to make their stories agree. The Duchess of Montrose has quite recently appealed to Scottish residents in London for subscriptions, on the ground that the army medical department has stated that "further hospital accommodation is greatly needed for the troops in South Africa."

Dr. Conan Doyle has started for South Africa to act upon the staff of the Langman Hospital. If Dr. Doyle can put into practice just those marvellous qualities of patience, discrimination, and keen observation with which he endowed his popular hero, what an ideal scout he would make! I do not suggest that such qualities are thrown away upon medical work, for medical work may be described as scouting to find out where pathological foes are lurking and threatening; but it is a noteworthy thing that Sherlock Holmes should have been selected by Colonel Baden-Powell, the defender of Mafeking, in his recent pamphlet upon scouting, as the type of man required as a scout, and that now Sherlock Holmes' creator should be gone to the seat of war. It is rather a long time, I believe, since Dr. Doyle was occupied in practical medicine, while he has been using his faculties of imagination and intuition unceasingly; and I am tempted to suggest—without conveying the least reflection upon the medical novelist's therapeutic skill—that he should be allowed out scouting.

Miss Mary Kingsley, the celebrated traveller in South Africa, has arrived in Africa as a nurse. She is the daughter of the late George Kingsley, and niece to the authors of "Ravenshoe" and "Hypatia."

As late as March 23d the relief of Mafeking had not been effected. Probably when it comes it will come at no particular moment and with no dramatic entry following upon a pitched battle. What will happen will be that Colonel Plumer advancing from the north and the Kimberly relief column coming up from the South will threaten a union that would be fatal to the investing force, which will then disappear. It must be remembered, however, that both relieving columns can advance only slowly, as they must carry with them sufficient food and medical stores for both themselves and Mafeking, otherwise their presence would only add to the straits of the garrison. Colonel Plumer, moreover, is meeting with fierce resistance.

OUR LONDON LETTER.

(From our Special Correspondent.)

TWO DISCUSSIONS ON RHEUMATISM—SKIN AFFECTIONS IN BRIGHT'S DISEASE—MORTALITY RETURNS—ROYAL ARMY MEDICAL CORPS—DEFENCE UNION—A FAT LEGACY—PROFESSOR CAMERON—SIR WILLIAM GAIRDNER—TROPICAL EXPEDITION—COURT SURGEONS—DEATHS OF DRS. GRIGG AND CORY.

LONDON, March 23, 1900.

Two lengthy discussions on the same disease within a week may be thought to exhaust the subject. Yet I cannot say they have done so, for the subject was rheumatism. Dr. Caton introduced it to the Clinical Society of London in a paper referring chiefly to the prevention of cardiac complications, founded on some five hundred cases treated in the different ways prevailing for the last twenty years. About fifteen years ago he formulated a plan which he has followed since, and which consists in (*a*) absolute rest in bed for several weeks; (*b*) a series of flying blisters, each rather less than a florin, in the course of the first, second, third, and fourth dorsal nerves, followed by a poultice; (*c*) sodium or potassium iodide, gr. viii.-x. ter die. Sometimes small doses of mercury were given. Omitting all cases of slight transitory bruit, all of hæmic origin, and all which seemed due to a weakened or dilated ventricle, eighty-five cases with distinct signs remained. Of these fifty-four patients had a bruit on admission, probably of recent origin; twenty-four of them left with sound hearts, and twenty with valvular disease. Out of thirty-one cases in which the complications came on in hospital or had been observed just before admission by the practitioner attending, twenty-seven left with apparently sound hearts, three with valvular affection, and one remained under treatment. Dr Caton believes that there is a brief stage in endocarditis when treatment is effectual, and in adults this does not last longer than two or three weeks, though in children it is longer. Persistent rest is the most important measure, but he holds that there are more recoveries when all three are persevered in for at least six weeks. The bruit becomes softer, variable, and eventually vanishes. It is, however, advisable to avoid active exertion for a further two months.

The other discussion took place at the Chelsea Clinical Society, which has lately made efforts to come to the front. It was opened by Dr. W. Ewart in a long, didactic paper setting forth various opinions on various points, such as the prevalence, mortality, and preventability of the disease as compared with phthisis; infectivity and the arguments about that hypothesis; the various cases called rheumatic, with a classification; the liability of the several forms to cardiac complication, and the several methods of treatment in vogue, whether directed to the joints or to the heart. This *résumé*, able enough in its way, scarcely gave a clear idea of the author's own views—indeed it requires very close attention to disentangle disputed points in a paper of this kind read at a society. He concluded, however, with the remark that the main questions he submitted for discussion were how to prevent rheumatism and how to put a stop to the rheumatic heart evil.

As to the two discussions following these papers, I must, out of respect to your space, treat them together and that in the briefest way, touching only some of the points raised, for you may be sure the differences of opinion were marked.

Dr. Maclagan, as the introducer of the salicylate treatment, which has obtained such extensive vogue, naturally put in a plea for his own method. Salicin, he said, has an absolutely curative action on both joints and heart. What recovered in the one recovered in the other—the one structure which was not apt to do so being the endocardial lining. He could not, therefore, accept Dr. Ewart's statement that the heart was more often affected under salicylates than under other treatment, and asked what support could be produced for such an assertion. If salicylates controlled the rheumatic process, they must act on the heart as well as the joints. The difference is that the heart recovers more slowly because we cannot give it the absolute rest that we can to the joints.

Dr. Sansom and others expressed their confidence in the salicylates, Dr. A. E. Garrod remarking there must be something in a treatment that had been almost universal for twenty years, although he did not think its influence over the heart very marked. Dr. Hood fancied that there was more crippling after this treatment, and that we must not be led astray by its great power to relieve pain. He had collected ninety cases in which cardiac disease came on while the patients were under the influence of salicylate. He usually employed a modified alkaline treatment. Here I may say many practitioners of experience are in the habit of combining the alkaline and salicylate treatments in various ways. Others prefer the iodides, especially later on, or as soon as the salicylates have arrested the pain. Comments were also made on the comfort of the patient under the salicylates, though it was asserted that these had also disagreeable and sometimes dangerous effects.

Now, as to blistering. The plan is older than any of the speakers seem to remember. No one referred to Cotugno, and only one to the late Dr. Herbert Davies, who published in the "London Hospital Reports" for 1864 a series of twenty-four cases treated exclusively by blistering, and all of these left the hospital without any cardiac imperfection. I remember very well Dr. Davies and this treatment of acute rheumatism. With much swelling, he put a small blister near to the joint, and his success was great, both as to pain and fever.

Sir D. Powell suggested that in young or nervous patients blistering might somewhat interfere with the absolute physiological rest that was of the greatest moment. This, however, has not been the experience of those who have tried it.

Dr. Sansom professed to have seen the treatment by blisters, both big and little, and thought they only added to the patient's discomfort. Dr. Longhurst would not blister nervous women or children, nor would he confine himself to any one plan of treatment. Dr. Seymour Taylor said a blister gave the greatest relief to a rheumatic joint. If applied for the heart, it should be over the upper dorsal segments of the cord. Dr. A. Morison found a blister over the heart quieted it to a marked extent, and he mentioned that the late Dr. Hope advocated blisters some sixty years ago.

The question whether the blister should be opened was mentioned. If it acted by removing the poison, one would consider that the fluid should be evacuated, but one speaker said no, as the serum would be antitoxin, which is certainly carrying the serum notion far. Effusion into the joints is generally accompanied by relief to the general symptoms, and it is natural to attribute this to the withdrawal of the poison. If this is so, blistering would be a reasonable attempt to withdraw it from the system. That the toxin should then change to antitoxin is a mere assumption.

At the last meeting of the Medico-Chirurgical Society Dr. Hugh Thursfield read a paper on "The Skin Affections Met with in Bright's Disease," and so gave the dermatologists a chance of which they were slow to avail themselves. Dr. Crocker indeed made some remarks, but admitted his experience did not show whether an eruption necessarily suggested renal origin. Considering the relations of the skin to the kidney, one might anticipate a more frequent complication than is actually found. But unless the skin affection is very troublesome, it would be neglected in the presence of so grave a disease as Bright's. Dr. Thursfield proposed to classify the affections thus: (*a*) Those in the early stages, as pruritus, eczema, and urticaria; (*b*) those in the final stages, as erythematous, bullous, and desquamative eruptions; (*c*) purpura and hemorrhagic cases; (*d*) those seen with marked œdema, and he thought due to local infection by pyogenic microbes. There was some conversation on the supposed influence on prognosis and other points, but it did not appear that the speakers had any exact information to give.

The mortality returns show further improvement. In the large towns the rate has fallen to 20.3. London's register of deaths last week was 1,659, which is 315 below the average for the corresponding week.

Lord Methuen, in an official dispatch, brings to the notice of the authorities Major O'Donnell and Lieutenant Delass, of the Royal Army Medical Corps, for their "indefatigably attending the wounded under fire." The last named, he says, advanced in the open and attended Captain Gordon, and afterward Major Robinson and others, "under a fearful fire." Other reports of this kind are adding to the fame of the Royal Army Medical Corps. The gallantry and devotion of the corps has also been acknowledged by the government in the House of Commons, and that in a manner which should warn the War Office that its treatment of the medical service will be one of the counts in the indictment to be tried after the war.

The Medical Defence Union held its annual meeting last week. There was some talk about amalgamation, but it was stated that the Council had decided against the proposal. It seems a pity that division should weaken the two societies.

The late Prof. David Edward Hughes, F.R.S., has left a sum of between three and four hundred thousand pounds to the London, Middlesex, Charing Cross, and Kings College hospitals. The capital is to be kept under certain conditions.

Dr. Hector Cameron succeeds Prof. George Buchanan in the chair of clinical surgery the latter has resigned in Glasgow University. I also hear that Sir William Gardiner is resigning the professorship of medicine in the same university. This veteran clinical teacher finds with advancing years that it is a strain on his eyesight to keep up with bacteriological and microscopical work.

A second malarial expedition is organized by the Liverpool Tropical School.

Lord Lister succeeds the late Sir James Paget as sergeant-surgeon to the Queen, and Mr. Treves is appointed one of Her Majesty's surgeons extraordinary.

The death is announced in his sixty-first year of Dr. W. C. Grigg, late physician to Queen Charlotte's Hospital, and a past president of the Gynæcological Society. He recently retired from active practice. He went to South Africa, thinking he might be of some use, but contracted typhoid at the Modder and died in Wynberg Hospital on the twelfth inst. He was an Edinburgh graduate, a genial gentleman, and long enjoyed a good position among the obstetrical men of London.

Another death I must note is that of the director of the Animal Vaccine Establishment, Dr. Robert Cory, which took place on Monday. He was a Cambridge graduate, a F.R.C.P., and physician in charge of vaccination at St. Thomas' Hospital.

EARLY OPERATIONS FOR CANCER.

To the Editor of the Medical Record.

Sir: The discussion on cancer before the New York Academy of Medicine cannot have failed to interest a large number of your readers.

Leaving out cancer of the respiratory and digestive tracts, because cancer in these locations does not often come under my observation, I will refer only to malignant disease of the uterus and female breast. In the paper on cancer of the breast, by Dr. Abbe, and cancer of the uterus, by Dr. Coe, early and complete removal of the diseased organ was advised; and in the case of the breast removal of a large area of skin together with fat, glands, and pectoral muscles was insisted upon. This is as it should be, for anything short of this would probably not confer immunity from recurrence. The difficulty in the way of a complete cure from operation in cancer of the breast and uterus lies in the carelessness of the laity, and to a great extent of the profession, in regard to this subject. When a patient over thirty-five years of age consults a physician in regard to a small tumor of the breast, which she may have noticed some weeks or months previously, the doctor, after a very cursory examination, is apt to say, "Yes, madam, you have a lump there, but I hope that it is nothing serious; paint it with iodine or rub it with camphorated oil, and let me see you again after a while." "After a while" not being a very definite period, the patient returns any time between six months and a year later; she then has a tumor the size of a hen's egg. The nipple is retracted, the axillary glands are enlarged, and the patient suffers from lancinating pains in the breast and sometimes in the arm of the affected side—in fact, when any old woman could make a diagnosis. The case is now referred to a surgeon, who does as radical an operation as can be done under the circumstances; but the disease recurs in a few months and the patient dies a short time later. The practitioner who first saw the case lays the flattering unction to his soul that he has done his duty by his patient—he has not been rash, but conservative. Could the grave speak, how eloquent and damning an accusation could be brought against this sort of conservatism, which ought rather to be called criminal procrastination!

In cases of cancer of the uterus the same carelessness is met with. A woman about forty years old begins to have irregular discharges of blood from the vagina. She consults some elderly dame, who says, "It's all right, dear. I had that myself when I was getting change of life." It may be that she consults the family physician, who indorses the opinion of the old lady to the effect that the irregular bleeding is due to the advent of the menopause. He prescribes ergot or hydrastis or some equally useless stuff, and sends the patient away satisfied that all will be right in time. Delusive hope! The bleeding continues; leucorrhœa and an offensive watery vaginal discharge supervene, and at this stage the patient is advised to consult a gynæcologist, who finds that the disease has passed the operable stage. Had the physician who was first consulted made a careful vaginal examination, it is probable that the true nature of the disease would have been detected; and if the patient had been promptly referred to an operative gynæcologist, and a vaginal hysterectomy performed, the chances of a radical cure would have been very good.

Vaginal hysterectomy for cancer of the uterus in the early stage gives excellent results, but if the disease has invaded the vaginal walls and broad ligaments, even though the operator may be able to extirpate the uterus, no benefit results from the operation, as the disease always recurs and rapidly goes on to a fatal termination. It is highly desirable that the laity and a large proportion of the members of the medical profession should realize that the so-called change of life is a physiological process, and quite as natural as the coming on of the menstrual periods in a young girl, providing the generative organs of the woman are in a normal condition; and that unusual symptoms connected with the pelvic organs occurring at that time of life are probably dependent upon some pathological condition which demands recognition and proper treatment. Viewed in this light the menopause as such will cease to be a bugbear to womankind in general—a period in her existence during which all sorts of terrible occurrences are supposed to be entirely *en règle*—and when symptoms indicative of disease of the genital tract show themselves she would appreciate their importance and apply for treatment before it is too late. Viewed in this light by the medical practitioner the menopause will cease to be for him a stumbling-block and a rock of offence.

G. H. Balleray, M.D.

New York, March 24, 1900.

Circumcision.—Inject one drachm of a five-per-cent. solution of eucaine beneath the prepuce and retain it there. With a three-per-cent. decinormal saline solution of eucaine inject just beneath the skin about two minims at each puncture, each new puncture being at the margin of the preceding bleb, until the line to be incised is anæsthetic. Now let out the solution held beneath the foreskin and proceed with the operation, using carbolic or chinosol solution and not bichloride. —Gerald Dalton.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, March 20, 1900.

John Huddleston, M.D., Chairman.

Treatment of Rheumatism at the New York Hospital.—Dr. Hughes Dayton read a paper on this subject (see page 585).

Treatment of Rheumatism at Mount Sinai Hospital.—Dr. L. A. S. Bodine read this paper. He said that in acute articular rheumatism, after a thorough clearing out of the alimentary canal by means of calomel and salines, sodium salicylate was used, in doses of gr. x.–xv. every three hours. Sodium bicarbonate was often associated with it in order to maintain a proper alkalinity of the urine. In addition, rest in bed and fluid diet were insisted upon. If, for any reason, the salicylates were not well borne, owing to tinnitus aurium, eruptions, or gastric disturbances, either oil of wintergreen or the citrate or acetate of potassium was used as a substitute. The bowels were kept open by cathartics, preferably by the use of salines and by enemata. Phenacetin, acetanilid, antipyrin, and codeine were all used to relieve pain, and sometimes, though rarely, morphine. To produce sleep, trional, in combination with sodium bromide, was a favorite remedy. During the acute stage only a fluid diet was permitted. Nitrogenous food was avoided as much as possible, and large quantities of water were taken by the patients daily. The salicylates were always given well diluted, and never on an empty stomach if this could be avoided. Methyl salicylate was used locally. Tincture of iodine, bandaging, ice-bags, and elevation of the limb were measures in use for inhibiting the exudation. If in spite of these the effusion continued to increase, the joint was aspirated to determine the nature of the contents of the joint cavity. Hot-air baths at a temperature between 200° and 400° F. had been used locally for from twenty to thirty minutes daily. During the convalescent stage iron, strychnine, and quinine were administered. The salicylate of iron was often employed. After the temperature had remained at the normal for two or three days, the diet was enlarged to consist of eggs, bread, potato, toast, and fresh vegetables, but meats were still excluded. All patients were kept in bed for three or four days after the temperature had reached the normal point.

Differential Diagnosis of Chronic Rheumatism.—Dr. James J. Walsh read this paper. He said that there were four classes of cases, viz., (1) recurring subacute rheumatism, the attacks occurring at short intervals and yielding rather promptly to the ordinary treatment for rheumatism; (2) cases presenting symptoms of articular rheumatism, and recurring again and again in children, especially during damp weather, or alternating with chorea, tonsillitis, or certain cutaneous manifestations; (3) cases in which the joint lesions occurring during an acute attack persisted and became worse, sometimes permanently injuring and deforming the joint—true chronic rheumatism; (4) a numerous class of cases often diagnosticated as chronic rheumatism, but really consisting of a varied assortment of ailments. The latter were specially characterized by pain, and this pain was often relieved by the treatment usually employed for rheumatism. The reason was that this medication usually consisted in the administration of the coal-tar products, which relieved pain not only of rheumatism, but pain in the peripheral nerves produced by a great variety of causes. Any one who knew how soothing were the salicylates when used in surgical dressings could readily understand this. A similar method of treatment had proved exceptionally useful in relieving the pain associated with the formation of an abscess at the root of a tooth. A very common affection often diagnosticated as rheumatism was weak foot, or flat foot, and it was frequently difficult to convince such patients that the cause was not rheumatism. If, however, a small pad of felt was placed under the inner border of the sole of the weak foot, it would not be difficult to convince one's self of the correctness of the diagnosis. A somewhat similar condition was found among dentists from the frequent use of the dental engine. In these instances the pain was not felt in the foot used to operate the engine, but in the other foot which sustains the weight of the body at that time. There were, of course, many other occupation neuroses which were apt to be confounded with rheumatism. These should be excluded before diagnosing chronic rheumatism. Many of these functional cases were observed in persons who had become anæmic, or whose general health had become temporarily deteriorated. He had recently known of two cases of varicose veins of the leg of slight degree that had been treated for rheumatism because of the pain that had been felt in the vicinity of the knee.

The Hot-Air Treatment of Chronic Rheumatism.—DR. THOMAS E. SATTERTHWAITE spoke of this method of treatment. He said that it was an old one, but until quite recently had been carried out only under certain difficulties. The great objection to the older bath method of giving it was the breathing in by the patient of the superheated or moist air, and to obviate that the well-known "hot box" had been devised. In this the body, excepting the head, was exposed to the heat. In the modern machines, such as those exhibited by him now, the temperature could be readily raised to 400° F. The essential idea was to keep the body dry while the air about it was superheated. The hot air was not allowed to impinge directly upon the skin, because unless provision was made for the absorption of the perspiration the skin would be scalded. By wrapping the limb in Turkish towelling this was accomplished. Again, the inner surface of the cylinder was lined with asbestos to avoid contact of the skin with the heated metal. These forms of apparatus had been used since May 30, 1893. The speaker said that the claim put forward for such apparatus by those competent to judge was that the superheated air was merely an adjuvant to other treatment. Dr. George L. Kessler, of Brooklyn, after an extensive experience with the method, had drawn the following conclusions as to the effect of the treatment: (1) It produced contraction followed by dilatation of the superficial blood-vessels; (2) the pulse became more rapid, but at the same time its strength was improved; (3) the bodily temperature rose from one to six degrees, and the accompanying perspiration was profuse and acid; (4) the respirations were also increased; (5) nerve exhaustion was experienced if the treatment was too prolonged. The limb should be snugly swathed with about four thicknesses of blanketing or Turkish towelling. If this was not snugly applied, the perspiration might lodge between the towelling and the skin and cause blistering of the skin.

Brief Notes on Rheumatic Joints Treated with Hot Air.—DR. H. W. GIBNEY gave, in this paper, extracts from the clinical records of several cases which he had successfully treated with the portable hot-air apparatus. He said that in several cases of rheumatic flat foot he had been able to break up the adhesions more satisfactorily by first exposing the part to the hot air.

Use of Electricity in Chronic Rheumatism.—DR. W. J. MORTON read a paper on this subject, dealing chiefly with the effect of the high potential high-frequency current. He used the current in one of its forms in the treatment of chronic rheumatism. The current was obtained from a powerful influence machine, using a condenser. One form of this current, but little known as yet, was that designated as "the electric-wave current." The patient, in this instance, was subjected to what might be called a "condenser current." With long sparks passing the patient becomes practically one coating of a Leyden jar, and was subjected to very powerful condenser waves. Under the use of this current, heat production was increased, and while the body weight was diminished during these applications, it was restored to its former amount in the interval. The therapeutic effect of the increased nutritional activity of the patient's organism was an improvement in the general health and nutrition. These currents could be applied locally as well as generally. Most chronic diseases were constitutional, and many forms of chronic arthritis might be so considered. Certainly, in most cases of rheumatism the physician aimed to treat the diathesis as well as the local manifestations. The electrodes might be of any pliable material, block tin being specially suitable. The spinal electrode used by him measured one inch by twelve inches. When a strictly local effect was desired, a small electrode was selected. These block-tin electrodes were wrapped about the joint without any moistening or covering. Instead of block tin, he often made use of metallic cloth, such as was furnished by military clothing stores. From this cloth rude garments could be quickly made and applied. All cases received an application of the wave current for a period varying from fifteen to thirty minutes. If the patient felt exhausted after the treatment, it was evidence that the application had been too prolonged. The application of the sparks would, in a single treatment, temporarily relieve the pain and increase the mobility of the affected part. In subacute and chronic rheumatism the treatment was general, after the manner described, and this was followed by a local treatment with the sparks if these could be borne. He had tried the hot-air treatment and many other methods, but had found none of them equal to the electrical treatment just described. It was particularly applicable to gout, and when there was only a watery œdema present the relief was apt to be permanent. The speaker said that the progress of rheumatoid arthritis could be arrested in any stage of the disease. If seen in the early stages, it could be arrested easily and quickly; if it was already more advanced, such a result would be secured only after more prolonged treatment. The long spark applied to each individual joint affected seemed to him essential in establishing a new and improved joint nutrition. One of the first effects noticed was that the shiny appearance of the skin disappeared. In private practice he placed all his rheumatic patients on a meat diet.

DR. WILLIAM M. LESZYNSKY commented upon the fact that a large number of patients complaining merely of pain were not examined, by many physicians, but were treated for rheumatism or neuralgia. Nothing had been said that evening regarding a simple method of local treatment—the wet pack. He thought much could be accomplished in many cases by means of the wet pack, assisted by massage and passive motion. A recent case was recalled in which there had been much swelling, stiffness, and pain in the hand following an attack of acute rheumatism. In this case complete recovery had taken place at the end of three weeks simply from the use of the wet pack at night, and the local application of oil of wintergreen and massage during the day. This was no unusual experience with him. He had not personally had a satisfactory experience with the use of static electricity in the treatment of chronic articular rheumatism, although he had, like many others, obtained most brilliant results from such electrical applications in cases of muscular rheumatism. In private practice he had not been willing to confine himself to the use of static electricity. A common fault was, not to apply this current long enough, and hence the frequent assertion that this treatment succeeded chiefly by its mental effect.

The Splint Treatment.—DR. MORRIS MANGES said if one were dependent solely upon the use of the salicylates convalescence would be slow and unsatisfactory, and there would be many complications. It would not be too emphatically stated, to say that we were far from having any specific treatment for rheumatism. To treat rheumatism by the salicylates alone was certainly an error. The physicians at the Mount Sinai Hospital had been particularly impressed with the intense anæmia observed in their cases of rheumatism. Another fact which had impressed them there was the value of splinting the affected joints. These joints should be absolutely immobilized, leaving, if desired, an opening for local medication. Any one who had not tried this method would be agreeably surprised at the result. It was exceedingly important also to watch the urine, for this alone afforded a proper index to the quantity of alkali to be given. The urine should be made alkaline, and kept alkaline. If a pronounced alkaline treatment was combined with a moderate salicylate treatment, and proper attention was given to the immobilization of the affected joints, and to the care of the heart, the results would be good. The hot-air apparatus was useful, but should not be relied upon too much. There were certain drawbacks to the use of this apparatus, one of these being danger of fire. He knew of one or two instances in which a subacute rheumatism had been rendered acute again by the chilling which had followed the exposure of the part to the cooler atmosphere of the treatment room after having been removed from the hot-air chamber.

DR. MARY PUTNAM JACOBI said, with regard to the question of differential diagnosis, that no mention had been made of the tendency to confound incipient rheumatoid arthritis with gouty deposits around the joints. She had recently had an opportunity of witnessing the good results obtained by Dr. W. B. Snow in rheumatoid arthritis from the use of the electric-wave current. There could be no doubt about the excellent effect of electricity in muscular rheumatism.

Lactic Acid a Useful Remedy.—DR. G. L. KESSLER said that he had treated about three hundred and fifty cases of rheumatism with the Sprague hot-air apparatus. In the chronic form of rheumatoid arthritis he had found the deformity lessened and the mobility increased. Out of twenty such cases, eighteen had been positively benefited, and five of the patients had resumed work, although unable to work for several years previously. In the cases in which the joints suddenly became stiff good results were obtained from the use of hot air locally, and the free use internally of lactic acid. He did not pretend to say how this remedy acted, but was positive of the good effect. The treatment should be continued for a number of months. He would not think of treating a case of acute articular rheumatism without the aid of the salicylates, because he looked upon rheumatism as an acute infectious disease. He would never think of immobilizing a rheumatic joint, because he met with so many such joints which had become stiffened, and which proved most obstinate to subsequent treatment. He did not think it safe to run the temperature in the hot-air apparatus above 350° F. In such apparatus the temperature was indicated by a thermometer affixed to the top, but there the temperature was at least 20° lower than in the lower part of the hot-air chamber. Burns should not occur if the temperature did not exceed 350° F. For the local application of heat in cases of gout, the Japanese hand-warmer would be found exceedingly convenient. Certain cases of neuralgia seemed to relapse after the hot-air treatment, apparently from the subsequent chilling of the part.

SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Stated Meeting, March 22, 1900.

J. RIDDLE GOFFE, CHAIRMAN.

New Operation for Repair of a Complete Laceration of the Perineum.—DR. J. RIDDLE GOFFE expected to present a patient showing the results of a new operation which was suggested by Dr. Kelly at the meeting of the American Gynæcological Society, which met in Philadelphia last year. It was suggested for those cases in which the tear went through the sphincter muscle, and up to the rectal wall. Instead of splitting the tissues and dissecting off the mucous membrane of the vagina, one should commence above and work down, so forming an apron, which turned down and covered the anus, and which was held in position by an artery clamp. Using a figure-of-eight suture, the fascia of the sphincter muscle was taken up and ligated; this drew together the fascia and brought up the sphincter muscle until it got in the middle line. Dr. Ristine, of Knoxville, Tenn., had been using this same procedure during the past two years, and Dr. Kelly acknowledged his prior claim. In this operation nothing must be done within the rectum whatever, and so dangers from infection were lessened.

DR. EDWIN B. CRAGIN said the advantage of this new operation was that the rectum was left intact, and the only objection was that there was a flap which was liable to superficial sloughing. He thought the operation would come into general use.

DR. GEORGE G. WARD had operated last summer on three cases in which he did not use this new method, and all did well. He was careful not to tie the sutures on the rectal side. The torn roof of the rectum was picked up but not penetrated. The ends of the sphincter muscle were dissected out, and, with traction, silver wire sutures were passed, and these were reinforced by catgut. In none of these cases did a fistula result.

DR. SIMON MARX thought that another objection to this operation was that the line of union between the mucous membrane was such a small one that possibly sloughing of that part might occur. In a case he had operated upon that day he found that he did not have enough vaginal tissue to make an anterior rectal wall. He feared sloughing of the tissue.

DR. BALLERAY said he was not disposed to try this new operation just yet, because, up to the present time, he had had but one failure. In the earlier days he had practised the method of Emmet, regarding which operation he once heard Dr. Price say that it was a wonder that the patients did not die of tetanus; but he got excellent results. In lacerations not involving the sphincter he did the Pozzi method.

Results of Conservative Treatment.—DR. GEORGE G. WARD had operated upon a case recently which was interesting because two years ago the patient had had a laparotomy performed for ovarian disease, and the left tube and ovary had been removed, the right ovary being left *in situ*. Last Saturday he operated because there was an ovarian cyst upon the right side the size of a small orange. When the abdomen was open, he found great difficulty in freeing the cyst on account of the extensive adhesions. The bowels were adherent in three distinct loops to the side of the uterus, and it was difficult to tell which was cyst and which was bowel. In one of these cases the bowel was torn through and in the other two there was denudation of the peritoneal covering. The point of interest was as to the conservative work done upon the ovary; it was a question how far we could go in conservative work. Was an ovary treated conservatively apt to undergo cystic degeneration?

An Enormous Corpus Luteum.—Dr. Harris, of Paterson, N. J., described an interesting case which showed the importance of conservatism. A trained nurse, aged thirty-three years, from whom a large cyst and the left ovary had been removed when she was twenty years old, presented herself to him about four months ago for a slight hernia occurring in the abdominal incision. When he opened the abdominal cavity, he thought he would investigate the condition of the right ovary on account of the pain that she complained of. He did so, and found a condition that he then did not understand. The ovary was about the normal size, with a reddish-brown colored mass overtopping it. With a scalpel there was no difficulty in shelling out about two-fifths of the ovary. This overtopping mass was about one and one-eighth of an inch long, and occupied about two-fifths the entire length of the organ, and was of an entirely different color. This mass was removed and sent to the bacteriologist at Johns Hopkins Hospital, Baltimore, who pronounced it a corpus luteum.

Dr. Edwin B. Cragin thought that each case should be decided on its merits. If the patient was young, and expected to be married, she should be given the benefit of the doubt, and the ovary should be left; but if the patient was an elderly woman, and had given birth to a number of children, and if one suspected the ovary to be diseased, it should be taken out.

Submucous Fibroids.—Dr. Simon Marx showed these specimens, two in number, and referred to the difficulty of the diagnosis in one case and the ease of diagnosis in the other; again, both operations were done with the greatest facility, yet one patient made an uninterrupted recovery, while the other died three hours after operation. In the case that offered difficulty in diagnosis, the patient was rather an ignorant woman, who had been married eight years. She was well up to two years ago, when there was discovered a small tumor in the pelvis; otherwise she was perfectly well. Until six months ago she menstruated every four weeks, the discharge lasting five days, and not being excessive. During the past three months she had menstruated scantily. Examination showed a tumor with a soft, boggy feel, reaching as high as the umbilicus. The doctor first thought of pregnancy. Examination for the fœtal heart did not reveal any. Hegar's sign was not present. Intermittent uterine contractions were not present. Abdominal section was advised because of the pressure symptoms, the dyspnœa, and the symptoms referred to the bladder and rectum. The abdomen was opened, and he then thought he had to deal with a pregnant uterus, but the history of the case prompted him to go on and do a total extirpation; he knew the tumor had been discovered six months ago and had been growing since, but he could not hear the fœtal heart, no fœtal life was indicated, and Hegar's sign was not present. The tumor proved to be a large submucous fibroid. The other case referred to was that of a woman who died three hours after the operation, probably from shock. She had atheromatous blood-vessels, which no doubt were a factor in its production.

Two Cases of Appendicitis.—The next specimen shown by Dr. Marx had been removed from a young girl about twenty-two years of age, who had had repeated attacks of appendicitis; she desired operation because she was going abroad and wished to be cured here. The McBurney operation of splitting the muscle fibres was done, and she made a good convalescence. Another specimen had been removed from a single woman aged thirty years. She had had one mild attack of appendicitis three years ago. She complained of intense headache, and almost constant vomiting every morning. She was repeatedly examined, but no diagnosis was made. Her eyes, nose, and all parts were treated without benefit. A rise of temperature gave severe headache. McBurney's operation was done, and the tip of the appendix was found bent upon itself and adherent at the base, where it sprang from the cæcal wall. She made a good recovery.

Appendicitis; Operation, Infection, Death.—This patient, Dr. Marx reported, had had a baby two or three years ago. She had considerable trouble on the right side, which was thought to be due to movable kidney. The kidney was stitched in place, but the pains continued. She developed quite evident symptoms of recurring appendicitis. Because she had an adherent and retroverted uterus an operation was decided upon and done, the appendix being taken out; it was quite long and full of pus. The left ovary was liberated from adhesions and the uterus sewed in place. The convalescence was an ideal one, the pulse seldom being over 80. On the day she was to be discharged, when the speaker went to bid her good-by, he found the pulse 100, and the temperature 100° F. That night the temperature was 103° F., and there was pain in the abdomen. A boggy mass was found posterior to the uterus. A posterior section was made through the vagina, and stinking pus was discharged; the finger on being introduced passed up into the cæcum. A rapid acute peritonitis developed, and the patient died with absolutely a normal temperature, but an enormously rapid pulse. The speaker asked: Why had she a normal convalescence, and why, at the end of the fifteenth day, did she have these symptoms, and within twenty-four hours develop an enormous boggy mass? He did not know, unless it was from a late catgut infection. Catgut infection, sloughing of the appendix stump, and the development of a sero-purulent abscess, were the conditions that probably followed.

Dr. Balleray related an instance of a woman aged thirty-five years who had recurring attacks of pain. Examination showed a short pedicle, partially twisted, and he wondered whether the pedicle did not twist itself, giving the patient pain, and then untwist itself.

Cases of Ectopic Gestation.—Dr. Balleray showed this specimen. The patient was unmarried but was leading a dissolute life. She entered the hospital with an acute gonorrhœa. She had skipped over her period six weeks, when she was taken with severe pain. There were two small masses posterior to the uterus, the mass on the right side becoming larger when pain was present. The abdomen was opened, and the mass on the right side was found to be a blood cyst, which accounted for the sudden increase in size when pain was present. On one side there was a pus tube. The entire pelvis was swabbed out, and the patient put to bed with the pelvis elevated. After the operation the temperature never rose above 100° F. It was interesting to note that there was an absence of drainage when drainage seemed to be indicated. In this instance there was a ruptured ectopic gestation, with a pus tube and a cystic ovary on the opposite side. In another case, also shown by Dr. Balleray, an ovary and a tube had been removed from a woman twenty-five years of age, who had been married three years. She had never borne children, but had suffered all her married life. Soon after marriage she had had menorrhagia, very profuse, and later metrorrhagia. She had a pyosalpinx. When she was operated upon, no blood was found in the peritoneal cavity. The tube was adherent to the rectum. On the other side was a small mass which was thought to be an ovarian cyst but proved to be a small cyst in the broad ligament. There had been a ruptured ectopic pregnancy in the early stage, in which the fœtus and a small amount of blood had escaped into a circumscribed space in the pelvis, which was made by adhesions formed by a chronic disease of the ovary and tube.

Some Points in the Management of Obstetric Cases in Private Practice.—Dr. J. B. Cooke read this paper. He emphasized the importance of physicians making more careful and accurate histories of all their cases. He advised the use of certain cards which could be carried in the pocket; one card related to the history of the pregnancy, the second to the labor, and the third to the puerperium. These cards were very complete, and, when used, should be placed on file for future reference. The importance of an examination of the urine was entered into, and, on account of patients neglecting so often to comply with requests to furnish urine, he advised the use of labelled bottles, which were to be sent to the physician's office on certain days at a certain time. Such a procedure impressed the patients, and one could get the desired urine. He emphasized the point of maintaining absolute asepsis from the beginning of labor to the end, and told how he attained it. Boxes containing sterilized water, certain solutions, gauze, etc., he had packed at his office and ready for transportation. When summoned to a case the Manhattan Delivery Company called for and carried one of these boxes to the patient's home.

Dr. Simon Marx thought that accoucheurs had trouble enough in carting instruments and dressings, without being obliged to carry sterilized water. He said he was a nihilist so far as the uterine douche was concerned. It was supposed that the woman was healthy; that the living baby, or a baby that died within a few hours, was also aseptic; that the hand of the accoucheur was also aseptic; therefore he seldom used the douche before or after labor unless there was a bad discharge or a putrefied child. He was also a nihilist in regard to urinary analysis. He examined the urine of a pregnant woman once in every two weeks; he seldom examined for albumin, but always for urea. He believed that more women died from the toxæmia of pregnancy than from the true acute nephritis of pregnancy. He had seen women die when there was not a trace of albumin, and others get well when the urine was filled with albumin. If the amount of urea was diminished, he believed something was wrong with the patient. If a woman had a large amount of albumin in the urine, only one kidney might be affected, and the woman should be allowed to go to term. He did not believe so much in pelvimetry. Personally he had found small pelves and small children in many instances, and no trouble was experienced in handling these cases. On the other hand there was the greatest source of danger to women from a form of contracted pelvis in which there was minor contraction but a very large child. He knew of three cases, in two of which preparations were made for doing a Cæsarean section, and, too, by a distinguished operator; the labor progressed without interference, and he was later called in to sew up a tear. In another case a symphyseotomy was thought to be indicated; in this instance the position, which was a mento-posterior at the brim, was not taken into consideration; the correction of this was soon followed by delivery. His method of procedure was as follows: From the seventh month, if he found a relatively normal pelvis, he attempted the engagement of the head by Hofmeier's method; if the head would not engage he induced labor. Many of these heads would accommodate themselves and readily engage by the suprapubic method.

Dr. Balleray advocated the douche before and after labor. He had seen a case of puerperal sepsis following a normal labor; if the douche had been used before labor puerperal sepsis would never occur. He used a solution of creolin and green soap as a preliminary douche, which was followed by a solution of bichloride of mercury, 1 : 5,000, and then by sterilized water. After labor he used the douche as long as the patient remained in bed, giving it twice daily. He agreed with Dr. Marx that pelvimetry gave many misleading indications. He had known cases in which there was supposed to be a contracted pelvis, and a Cæsarean section was performed; subsequently the woman gave birth to a child in the natural way by natural efforts, and the child was as large as its predecessor. He knew of another instance in which symphyseotomy was done; here, again, subsequently a child of about the same size was born naturally.

Dr. Edwin B. Cragin thought the great advantage to be derived from Dr. Cooke's paper was in emphasizing the importance of details in the care of the women before and after pregnancy. Regarding the examination of the urine he could hardly agree with Dr. Marx. He believed both albumin and urea should be tested for; either one might be present as a danger signal. These occurred in some cases as premonitory symptoms, and should be looked out for. Regarding pelvimetry all physicians acknowledged that they were much disappointed with it. At the Sloane Maternity, pelvimetry showed sometimes that they had to deal with a small pelvis, yet the child came through all right. Pelvimetric instruments were only an additional help in determining the relationship between the head and the pelvis. In regard to douches, when he went on duty at the Sloane Maternity Hospital it was customary to use the douche before and after labor; he allowed them to continue the practice for a number of months. He then thought he would try to do without douching. In looking over the temperature charts he found there was just a little increase in temperature during those months, so he ordered the douching to be resumed. A few months later the temperatures, as a whole, went higher than they did when no douches were used, so the douches were stopped altogether, and had not been used for several months, unless special indications were present. The parts might be disinfected when soap, bichloride, ether, etc., were used, but he did not believe the douche could do it. He wished to emphasize the importance of instructing the nurse to take the baby's temperature as well as the mother's, during the first week. This starvation temperature showed whether the mother was furnishing her child with proper nutriment.

Dr. Marx asked Dr. Cragin if it was the urea or the albumin that killed in these cases.

Dr. Cragin replied that either acted as the "red flag."

Dr. Marx said it was the urea that killed; even if the urine was loaded with albumin, it was the urea that killed.

Dr. Cragin stated that one year ago he tried the expectant plan with albuminurics, and he found the mortality was higher, and he regarded this as one of the reasons why women thus affected had better not go on with pregnancy. He agreed with Dr. Marx that the examination for urea was very important, and in fifty or fifty-five per cent. of the cases in which it was present he found that the urea did not subside under rest in bed, flushing the alimentary tract, hot baths, and stimulating all the emunctories, and that it was better to remove the pressure by inducing labor. He did not believe that all was known about this toxæmia.

Plastic Operations on the bladder are often useless, since the bladder has diminished resisting and expulsive power, and incrustations are apt to form.—Sonnenburg.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, March 19, 1900.

FREDERICK HOLME WIGGIN, M.D., PRESIDENT.

Report of a Successful Case of Excision of the Cæcum with End-to-End Anastomosis.—DR. FREDERICK HOLME WIGGIN reported a case of this kind in which there had been long-standing and continued recurrences of appendicitis, which had led to complete occlusion of the bowel. The patient, a woman of fifty-four years, had been seen by him in consultation with Dr. D. R. Rodger, of Woodbury, Conn. She gave a history of recurring attacks of appendicitis extending over a period of ten years. Her last attack had been exceptionally severe, and had begun about six weeks previously. She was emaciated and mentally depressed, and examination showed that her gums and tongue were swollen and red, and that there were ecchymotic spots all over her body. Her pulse was 74 and her temperature 99.4° F. Bimanual palpation revealed a tumor attached to the uterus and broad ligament, and extending up into the right inguinal region. An incision was made over the right rectus muscle, and the tumor exposed. It proved to be within the cæcum and appendix. Fearing that malignant disease was present, the bowel had been divided on either side, some distance from the tumor. The mesenteric attachment was clamped off before the vessels were divided, and then the vessels were caught with forceps and ligated, so that it was estimated that the patient had not lost over an ounce and a half of blood during the whole operation. In making the anastomosis the suture method of Maunsell with some modifications was followed. Large quantities of foul fecal matter had been discharged from the bowel during convalescence, showing that it must have been retained in the intestine a long time. Convalescence was satisfactory, but was rendered somewhat tedious by the presence of a condition analogous to scurvy. The condition of the tongue and gums at the time of operation, and the occurrence of a bloody vaginal discharge shortly afterward, served to emphasize the nature of this constitutional vice. Convalescence was greatly assisted by the early and constant use of saline enemata and by the early administration of food in considerable quantity. Dr. E. K. Dunham had examined the specimen, and had found evidence of nothing more than a chronic inflammatory growth.

Symposium on Serum Therapy.—DR. E. K. DUNHAM introduced the general subject by a brief paper. He said that the practice of serum therapy was based on the fact that animals or man could acquire immunity against a given infection. The blood and the lymph of the body were known to confer immunity in some instances, especially when freshly drawn, and it was probable that this action was dependent upon the presence of certain enzymes or ferments, which had a solvent effect on the bacterial cell and its envelope. It was probable that this action was closely related to the agglutination familiarly exemplified in the Widal reaction for typhoid fever. The most philosophic theory of immunity was one based upon the chemical theory of the action of poisons. It was known as Ehrlich's "side-chain hypothesis." The protein molecule was known to be one of very great complexity. The chemist expressed the constitution of such complex molecules by means of a nucleus, consisting of closely united atoms, and added to these other atomic combinations or radicles composed of atoms more loosely attached. These were known as "side-chains." The molecule might suffer cleavage, splitting into simpler combinations, and the direction of such cleavage would depend upon the conditions under which the splitting took place. Under ordinary circumstances the tissues of the body possessed a certain reserve of activity. When this was drawn upon, it was not merely replaced, but an additional store was laid by. Ehrlich supposed that such an excess of side-chain radicles might be stored up and appear in the circulation as an antitoxin.

Natural Immunity.—An animal might be naturally immune to substances poisonous to other animals. Thus, rabbits were not affected by atropine; fowls were not susceptible to the toxins produced by the tetanus bacillus. According to Ehrlich's theory, natural immunity would be the necessary result of the absence of side-chains having an affinity for a particular poison, and the blood of naturally immune animals would not contain any antitoxin because the conditions for its production were not present.

Active Immunity.—Active immunity was that which resulted when gradually increasing amounts of poison were introduced into the organism, whether in solution or formed in the body by the growth of bacteria. It was not essential for the growth of active immunity that toxic symptoms should be produced. An excessive dose of toxins, according to the theory of Ehrlich, arrested the function of the cells, but in smaller dosage it caused the formation of an additional store of side-chains. The theory also showed that the antitoxin introduced must bear a definite chemical relation to the poison which had called forth its production. It did not follow that all of the cells of the body were equally affected; the toxins might be localized. When this localization obtained, the particular side-chains having an affinity for the toxins must be confined to the tissues susceptible to the poison. In the case of tetanus, they should be found in the nervous system, but those tissues should be able to neutralize to some extent the toxins. Experiments with tetanus had shown this to be the case, particularly with animals that were remarkably susceptible to the tetanus toxin. The side-chains affected by diphtheria antitoxin were probably situated in the lymphadenoid tissues, the bone marrow, the spleen, and the lymph nodes. If the animal had been partially immunized, these tissues had a distinct antitoxic value. An exceedingly interesting fact was that other complex proteid poisons besides those of bacterial origin produced effects very similar to the latter, and could induce the production of antitoxins.

Passive Immunity.—Passive immunity differed from active immunity in that in the former the free antitoxins introduced into the blood were not replaced by a fresh supply, but were gradually eliminated. In order to obtain a curative result from the use of antitoxins, it was necessary to use much larger quantities than were required to confer passive immunity. It was possible that a toxic radicle might leave a side-chain, which was already partially satisfied by union with a central nucleus, to unite with similar side-chains when they were present in a sufficient abundance and in a free state. The antitoxic character of immunity, and of immunity to infection, though closely related, were two distinct conditions. An animal might be inoculated with a given species of bacteria and not suffer because the bacteria were killed or could not develop, and yet the animal might be susceptible to the toxins produced by these same bacteria. This side-chain theory seemed to the speaker to explain more satisfactorily than other theories the subject under discussion.

Tuberculins and their Use.—DR. E. A. DE SCHWEINITZ, chief of the biochemical division, Bureau of Animal Industry, United States Department of Agriculture, at Washington, D. C., read a paper on this subject. He said that two different preparations passed under the general name "tuberculin," and were respectively designated as "old tuberculin" and

"TR." The old tuberculin was prepared by using a culture medium consisting of ordinary beef broth, salt, peptone, and from five to seven per cent. of glycerin, and inoculating it with tubercle bacilli. The cultures were then allowed to grow in a thermostat for several weeks until the germs had become well developed, and then the flasks containing them were placed in a sterilizing oven and heated for about half an hour to a temperature of 120° C. They were then removed from the oven and heated to the boiling-point, and, while boiling, were filtered. The filtrate was concentrated over a water-bath. This tuberculin contained the materials used in the preparation of the culture media, the products of the growth of the germs which had passed into solution during their development, and also those products which had been retained within the cell walls, and which had been extracted during the preparation of the tuberculin. The newer tuberculin, or "TR," contained, on the other hand, none of the materials entering into the composition of the culture media, but only the cell contents which had been produced by the growth of the bacilli, and had not passed through the cell wall into the media. The old tuberculin was a solution containing a number of foreign substances in addition to the poisons of the germs, whereas "TR," or "tuberculo-plasmin," as it was sometimes called, was a solution of the substances which had been produced within the cells as the tubercle germs developed. In the new tuberculin the contents of the germ cells had never been raised to a temperature sufficiently high to destroy the germs or affect in any way the products, and, in this respect, differed very markedly from the old tuberculin. Brieger, the chief of staff in Koch's laboratory, had made the assertion only a few months ago that the old tuberculin was not without some value. The following conclusions regarding the old tuberculin seemed to be warranted: (1) It apparently had a decided curative action for lupus; (2) It was a valuable diagnostic agent, both in animals and in man, and it should be used very much more extensively than heretofore in diagnosing incipient cases. Beck, of Berlin, reports that from 1891 to 1897, out of 4,254 patients admitted to the Institute for Infectious Diseases, 2,508 received the tuberculin injections. Of these, 1,525 reacted. If 371 cases, including phthisis, bone tuberculosis, and lupus were deducted, which could have been easily diagnosticated without tuberculin, there remained 1,154 cases in which the diagnosis had been determined by the use of tuberculin. Such a result certainly warranted the belief that tuberculin should always be used by skilful hands in diagnosing disease, and in determining if the disease had been arrested or cured. Tuberculin TR might contain in much smaller quantity than the old tuberculin what was known as "the necrotizing substance." This being the case, different results were to be expected from its use than from old tuberculin in producing immunity in animals and man. In the experiments that he and his associates had been conducting for some years, the animals had been uniformly treated with a solution of the germ entirely free from the culture media. It seemed to him that the results obtained with these tuberculins indicated that in the incipient stages the disease might perhaps be arrested, and partial, if not permanent, immunity secured by injecting into the patient the products of the bacilli, provided these had been freed from the necrotic principle already referred to. Such a serum could be readily obtained if the extract was made from attenuated instead of from virulent germs.

Antipneumococcus Serum.—Dr. Alexander Lambert, in this paper, referred to the use of this serum in pneumonia. Comparing the pneumococcus serum with those of diphtheria and tetanus, it would be found, he said, that it had a different action in the body. This serum was antitoxic, neutralizing the toxin absorbed from the localized focus of infection. This serum was not bactericidal, but bacteriolytic. The serum alone had no effect on virulent cultures of the pneumococci, but when the pneumococcus serum and the leucocytes from immune or non-immune animals were mixed with the cultures the leucocytes in a short time became filled with the germs. For this reason this serum alone could not bring the infective process to a close. The blood-vessels surrounded the exudate, and absorbed from it the deleterious products of the myriads of cocci. This germ was a septicæmic germ, and tended to invade the system and produce a general infection. There was a physical limit to the amount of protection that any serum would give. Any pneumococci left alive had the power to increase in number and augment the toxin, thus necessitating the use of more and more of the serum. If a certain leucocyte could destroy six or eight germs, and could neutralize the toxins of these germs, it might take into itself other germs whose toxins it could not neutralize, and hence be itself destroyed, allowing these organisms to continue their growth. Dr. Lambert said that the serum he had used had been obtained from horses, and it would invariably protect when 0.1 c.c. was mixed with 1,000 cc. of culture and injected subcutaneously. This serum in the laboratory would invariably protect the animal against a subsequent dose of a culture not overwhelmingly large, but if the cocci were already present in the blood, even several large doses of the serum would not save the animal, though it would prolong its life. He had used this serum in twelve cases, with nine recoveries and three deaths. The serum seemed to cause a slight reduction in the temperature and improvement in the pulse, but it did not bring on a crisis in any case, or cut short the pneumonic process. In one patient it caused a disappearance of the pneumococci from the general circulation, though it did not prevent the development of an empyema. This patient eventually made a good recovery. In two alcoholic cases the serum had had absolutely no effect, and both cases had terminated fatally. He had not persisted in the use of the serum because he could not see that it shortened the disease or held in check the pneumonic process. It had seemed to do good in one or two cases only. In certain cases it did seem to prevent a general pneumococcus septicæmia.

Diphtheria Antitoxic Serum.—Dr. W. H. Park read this paper. He said that when a minute quantity of diphtheria antitoxin was mixed with a quantity of toxin it completely neutralized the toxin in about twenty minutes. Recent investigation seemed to prove that the antitoxin acted in the body on the diphtheria poison. Its action was to neutralize the toxins in the blood, not to heal cells already injured by the disease process. Secondary pneumonia and septicæmia came, as a rule, only after the diphtheria poisons had prepared the way for such infection by injuring the body cells. This was another argument in favor of the early use of diphtheria antitoxin. Diphtheria presented peculiarly favorable conditions for the application of serum therapy, for we were in possession of a strong antitoxin, and the diagnosis could be made early. According to the records of New York City, in the pre-antitoxin days, about every sixth year the deaths from diphtheria amounted to 3,000, and would then gradually diminished to 2,000. For the fifteen years prior to the introduction of diphtheria antitoxin, the average number of deaths annually from diphtheria was 2,373, the highest number having been 3,287 in 1881, and the lowest 1,653 in 1883. In the year next preceding the introduction of antitoxin, or 1893, the deaths had been 2,870. In the last four years, during which diphtheria antitoxin had been quite generally used, the average number of deaths had been 1,341 annually, or more than 1,000 less than the average for the previous years. The same remarkable decrease in the average number of deaths had been noted in all parts of the world in which diphtheria antitoxin had been extensively employed. Statistics made it very clear that the death rate rapidly rose in those cases in which it was not given until late in the disease. Regarding immunizing injections he stated that from January 1, 1895, to January 1, 1900, 6,500 cases had been immunized by the board of health. Twenty-eight cases had developed in the first twenty-four hours, and all had resulted in recovery. After twenty-four hours and within thirty days, twenty-seven patients had developed the disease, and all of these had recovered. The only one dying within one month was a case of scarlet fever and diphtheria, dying in the first two or three days of the sickness. About three per cent. of the persons injected had shown rashes, and about five per cent. febrile disturbance. In several the symptoms had been quite distressing for twenty-four to forty-eight hours, but in no instance had any permanent injury been done. The average mortality in the Willard Parker Hospital before the use of antitoxin had been thirty per cent.; since its use, twenty-three per cent.

Dosage of the Serum.—The serum should be clean-looking and sterile, and should not be over six months old. Old antitoxin contained nothing objectionable, but it did not contain the original quantity of antitoxin, and hence the dosage must be very uncertain. Other things being equal, the higher grades of serum were better and more convenient than the lower ones. There was still some difference of opinion among observers regarding the dosage of antitoxin. In cases seen early and presenting a mild onset, he would recommend a dose of 1,000 units; in cases seen early but having severe symptoms, the dose should be 2,000 to 4,000 units; in cases seen late but apparently mild, 1,000 to 2,000 units should be given; in severe cases showing necrosis, swollen glands, and laryngeal stenosis, 3,000 or 4,000 units was the dose. The local disease should not extend after the administration of a sufficient dose of antitoxin; the swelling and hyperæmia should lessen and the constitutional symptoms should abate within twelve hours after the injection. If this did not occur, the dose should be repeated, and, in rare instances, even a third dose might be required at the end of another period of twelve hours. In a child under one year he would advise more than 3,000 units in the severest cases, and in a child of six months or under, not over 2,000 units. In a small percentage of cases diphtheria antitoxin had produced very unpleasant but, so far as known, not serious symptoms. In closing, he would recommend the use of the antitoxin in all suitable cases for immunization. It guaranteed immunity for at least two weeks.

Yellow Fever Antitoxic Serum.—Dr. Alvah H. Doty, health officer of the port, being unable to be present, sent his associate, DR. CHARLES B. FITZPATRICK, who presented the results of their use of this serum at the quarantine station. He said that the serum prepared from the bacillus icteroides had been used on a dozen or more selected cases, and had apparently exerted no controlling influence upon the disease. The same strength of serum had been used as that employed by Sanarelli. Eleven cases had been treated at New Orleans by a physician, using the Sanarelli serum, but no curative effect from it had been noted. Professor Lutz, of Santos, had carefully investigated this subject, and had also been unable to observe any curative effect from this serum. The use of the prophylactic fluid, prepared by Haffkine's method from the bacillus icteroides, had given favorable results in animals, but had not as yet been tried on man. The serum therapy of yellow fever, therefore, was still in the stage of investigation, and one was not warranted in drawing any conclusions other than that the blood serum of the bacillus icteroides of Sanarelli did not cure or modify the disease, and that further investigation was necessary.

Typhoid Serum.—DR. WILLIAM H. WELCH, of Baltimore, sent a communication stating briefly his views on this subject. Concerning the value of this method of treatment, he stated that it did not appear to him that we had at present any satisfactory experimental or clinical evidence in support of the opinion that this method of treatment was beneficial, but there was a fair experimental basis to justify, under proper circumstances, the use of the vaccine which had been introduced for the prevention of typhoid infection. The data were as yet insufficient, and for manifest reasons extensive and prolonged observation would be required before any conclusion could be reached. Such evidence as was now in our possession was sufficient to encourage a continuance of this prophylactic measure.

Antirabic Serum.—DR. ROBERT J. WILSON, of the board of health, read a brief communication on this subject. He said that the method consisted in giving the animal to be immunized seventeen injections in a period of twenty days, and, after twenty-five days, collecting the serum in the usual way. The immunizing dose was one part of the serum for every twenty-five thousand parts of body weight. Much had been claimed for this method, but there were good reasons for doubting the genuineness of these claims. The serum might, however, be useful in those cases in which a long time had elapsed between the infection and the commencement of treatment. The best method of preventive inoculations failed completely after the advent of symptoms, and here the serum might possibly be of benefit. The serum, unlike the attenuated virus, conferred its protective action immediately.

Antistreptococcus Serum.—DR. H. LILIENTHAL read this paper. He said that no case which he had observed had ever resulted in recovery when streptococci had been clearly demonstrated in the blood. Recovery, however, was by no means common when staphylococci, even in the blood, were the offending germs. In his earlier cases the dose of the serum had probably been far too small. Not less than 20 c.c. of the serum should be used. Troublesome urticaria had followed the use of the serum in a number of instances. Abscesses containing streptococci had appeared at the site of the injections in one case in which the germs had been previously demonstrated by blood culture. The serum in this instance had been procured from the New York board of health, where it had been carefully tested and proved sterile. The case was one of general sepsis, following amygdalitis and cervical abscess. The only fairly constant effect of each dose had been a temporary lessening of the delirium. Whenever there was severe sepsis with a visible cause, the first thing was to remove or thoroughly drain the contaminating foci. The sediment from the urine obtained by catheter should be stained for bacteria and examined. The discharge from the wound should be smeared upon a slide and examined with the microscope. Cultures should be made from the wound discharges and from the blood. If streptococci were found in the urine, the serum treatment should be at once instituted in addition to the proper local measures. If streptococci were found in the wound discharges, and not in the urine, it was better to await the result of the blood culture test, treating the patient meanwhile on general principles. So far the efficacy of the serum had not been proved. Antistreptococcus serum might be used in any case of bad sepsis when the exact bacteriological diagnosis was in doubt, but never to the exclusion of other rational therapy.

Serum Containing Mixtures of the Toxins of Erysipelas and Bacillus Prodigiosus.—Dr. William B. Colev presented this paper. He said that his recent experience had given no reason for changing the conclusions advanced in his earlier papers. He still used the mixed unfiltered toxins of erysipelas and bacillus prodigiosus, made from cultures grown in the same bouillon. In patients much reduced in strength, and in children, it was safer to use the filtered toxins. The dose depended very largely upon the vascularity of the tumor and the condition of the patient. The initial dose should seldom be larger than half a minim. The injections should be made into the tumor itself, and should be repeated on alternate days, or sometimes every day. The temperature reaction should not be allowed to rise above 103° or 104° F. If within three or four weeks improvement was not noted, it was hardly worth while to continue the treatment. These toxins could be given at short intervals for a long period of time without harm. In a few instances they had been administered for three or four consecutive years. He believed that the action of these toxins furnished additional evidence in support of the infectious nature of cancer. Eleven of his successful cases had been of the spindle-cell variety, and four of the round-cell type. In a former paper he had detailed thirty-five cases more or less successfully treated by other surgeons, in twenty-six of which the tumors had disappeared. In a few instances the patients had been known to be alive six or eight years after the treatment. He had used the method in two hundred and thirty cases, with only two deaths, and these two deaths had occurred in his early experience, and in patients who had been so nearly moribund that the treatment should never have been begun.

Dr. W. Travis Gibb spoke of the use of antitoxin in diphtheria. He had used it in nineteen fully developed cases of the disease, in all of which a bacteriological diagnosis of true diphtheria had been made. Two cases had proved fatal, one of the patients having been moribund at the time he had been first seen. In this case, although the antitoxin had been given early in the disease, the latter had progressed apparently without any effect from the antitoxin. The speaker had ordinarily employed somewhat smaller doses than were generally recommended. In his experience the temperature had been markedly and permanently reduced, usually in twenty-four hours, and the extension of the exudate had been checked and its exfoliation hastened. He had never seen any unpleasant constitutional symptoms follow the use of the antitoxin, and the only local effect had been an urticaria in the vicinity of the puncture, lasting for a day or two.

Dr. S. A. Knopf said that it was certainly most difficult to determine the true value of tuberculin in the treatment of pulmonary tuberculosis, because no physician would feel justified in treating this disease with tuberculin alone, neglecting all those measures well known to be useful. He failed to see that any figures had been presented pointing definitely to the curative or beneficial effect of this treatment. He had tried the antistreptococcus serum in a few cases, but had not felt that the results were sufficiently definite to justify conclusions regarding its value.

Varicose Ulcer.—The excellent results obtained in mal perforans by elongation of the plantar nerves have led Dr. Chipault (*Le Bull. Méd.*, November 4th) to extend this procedure to the relief of obstinate varicose ulcers of the leg. In five cases he has had complete success, two patients being well after an interval of two years. The most frequent indication is for elongation of the musculo-cutaneous, associated or not with that of the internal saphenous.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting March 26, 1900.

George B. Fowler, M.D., President.

Senate Bill for the Prevention of Cruelty to Animals.—This bill had been sent to the committee of the United States Senate for action. It was the bill that sought to place restrictions upon experiments on animals, and was calculated to hamper the advance in, and imparting of, knowledge indispensable to science. It was resolved that the Medical Society of the County of New York protest against the favorable report of this bill.

Some of the Reasons Why the Surgical Treatment of Nasal Disease Had Been Placed upon a Conservative Basis.—Dr. Clarence C. Rice believed that specialists were hampered by certain limitations. One of the reasons why surgical operations upon the nose and throat had been modified in frequency and character was that the specialists were better educated and were taught that no one portion of the economy could be considered apart, *i.e.*, independently of the body as a whole. The difference in nasal operations to-day as compared with those in the earlier days was due to the kind of instruments advised at the different periods. A few years ago tissues which were the seat of vascular swellings were thought to be suitable for the use of the snare, hence the turbinated tissues were encircled by the cold wire and removed. This was a temptation for physicians to perfect themselves in the use of the snare, also in the use of the galvanocautery, as well as of drills and trephines. The injudicious use of these instruments injured the specialists. Some specialists were operating all over the country. At the daily clinics the use of these instruments was demonstrated. Men became infatuated with the desire to become nose and throat specialists. This infatuation he thought was now rapidly waning. The nasal cavities in the anterior parts were so easily reached that much surgical work was encouraged. This was really the source of much trouble. A large proportion of cases of nasal swelling formerly supposed to be characteristic of hypertrophic rhinitis were really due to irritation from other parts of the chambers, and the passive hyperæmia was due to disease of organs of the body quite distant. It was difficult for rhinologists to determine whether the swellings in the nose were due to causes remote from the respiratory tract or not. Etiological factors should be recognized. Before the use of cocaine it was impossible to determine whether these swellings were due to remote or local causes. Men got bad reputations from the distressing constitutional disturbances, due to septic absorption, which followed surgical work on the nose; to-day this was not true. Nasal surgery had been greatly improved by the use of formaldehyde preparations, and greater cleanliness. The etiology of nasal disease was now better understood, and so operations were less frequent and smaller amounts of tissue were sacrificed. With proper treatment many nasal difficulties now disappeared without surgical interference. Alcohol and tobacco were powerful factors in causing nasal disturbances. Operations upon persons accustomed to their use were followed by a dry, atrophic condition; often a traumatic dry rhinitis was caused. He believed that swellings at the posterior ends of the turbinated bodies, whether composed of dilated blood-vessels or not, depended upon anterior obstructions and would disappear when the septal deformities were removed. The results of surgical treatment in the field of rhinology were far better to-day than years ago; this was due to the increased knowledge and a clearer understanding of the etiology of nasal affections; and operators had a greater desire for conservatism.

Dr. Beverley Robinson said that a few years ago the general conditions of the body, different diathetic influences, the habits, surroundings of the patient, etc., were supposed to be more important than any local conditions found in the nose. The judgment formed by him twenty years ago he still retained. At one time a great many men made skilful use of these instruments, and they found they could take away tissue with relative impunity; a time came, however, when accidents followed these nasal operations. Sometimes these accidents happened during the operations, and sometimes they occurred subsequently. A certain number of nasal affections required the physician only, and others remained within the province of the surgeon. When an operation upon the nose of some moment was required, previous training was very essential. Unfortunately a number of men were going into this specialty, and this fact caused him considerable dread. The majority of young fellows, he thought, could make a fair diagnosis, but they did much harm. Advice should be given only by thoroughly trained men, those who have had opportunities of learning what to do and knew how to do it, who have had such previous education as to render them fit to work without doing harm by useless interference. He hoped to remain long enough in the Academy of Medicine to see every general practitioner control every specialty in the land, and to tell one how far to go and that he should go no further. The dermatologist thought the human body could not be right unless the skin was right; the rhinologist thought that the body could not be right unless the condition of the nose was correct; and so with every specialty. He wished to convey the idea that it was impossible for a man in any specialty, no matter how trained, not to take an exaggerated view of his own work. He advocated common "horse sense."

Dr. W. C. Phillips thought the remarks on an unqualified specialist were out of order in connection with any medical discussion. All present knew that a little knowledge was dangerous in any department of medicine. Many who worked in this region of the body had come to the conclusion that simply because they looked into the nose and found a swelling over the turbinated bone, or a congested septum, surgical interference was necessary. These conditions were very frequently, in his opinion, symptoms of some disease in a remote part of the body. He wished to emphasize the point that no specialist could attain great proficiency without having had large experience as a general practitioner. Only that day a patient had been sent to him to have a nasal polypus removed; the patient had an atrophic rhinitis and slightly swollen tonsils, but required no surgical interference because he had no polypus. The speaker referred to disturbance of the gastro-intestinal tract as a causative agent in certain diseases of the nose and throat; he thought this was one of the most common causes of nasal symptoms. The over-use of alcohol and tobacco entered largely into the causation of nasal troubles. He looked upon the presence of "colds in the head" in many individuals as something else than exposure to draughts and other causes. Two patients might be dressed about alike, and go out on certain days, using great care to prevent taking cold, yet one would catch cold and the other would not: why? He believed the exciting causes here were over-work and lack of rest, or fatigue. Again, he believed that there were many pathological conditions in the nose that could be relieved only by surgical interference. When certain conditions which caused the patient suffering were found and removed, he called that conservatism.

Dr. Francis J. Quinlan emphasized the importance of removing the cause and not the effect of diseased conditions. He referred to certain dyscrasiæ or diatheses, especially the syphilitic and tuberculous. Prophylaxis was something in the reach of everybody, and he considered the greatest of all such measures water, both without and within; sunshine, air, and exercise. These four factors could destroy more disease than could anything else. If one destroyed the turbinals, he thought one destroyed the portal to the lungs. In the study of many of these conditions "knowledge came but wisdom left."

Dr. Emil Mayer said it was not generally known how many sins the general practitioner had to answer for in the use of the electro-cautery; a large percentage of the work done by rhinologists was in correcting the work done by the general practitioner in the use of this instrument. In the nose, the use of the electro-cautery was very limited. He believed that any work done was worth doing well, and therefore he never performed the simplest operations without using the most rigid aseptic details, with a trained assistant and trained nurse.

Dr. David Goodwillie referred to the importance of a knowledge of the physiological processes concerned in respiration. The gateway to the nose was very important. The mucus in the nose was of use in keeping the nasal membrane from becoming dry, and the extra amount of it protected against irrespirable gases or bad air. He had great respect for the mucous membrane of the nose, which covered so large a surface in so small a space. In the treatment of diseases of the nose he believed we should be more careful in saving the muciparous glands. He never forgot the experience of a friend of his, who went to a rhinologist, who removed hypertrophied tissue and the mucous membrane covering it; his friend has since wished he had never gone, on account of the ease with which he "caught colds." Much injury was done to the Eustachian tubes and the pillars of the palate by bad surgery.

Dr. Rice, in closing the discussion, said that every man was entitled to breathe through his nose, and if the occlusion in the nose was permanent, it must be relieved, and the nasal surgeon was competent to do this, in a conservative way. A great many cases must be operated upon no matter what the source of irritation was. The specialist could help the general practitioner, even in cases of intestinal catarrh; here he could help by curing the existing upper catarrh, and so preventing the patient swallowing the mucus and pus.

The Requisites of the Modern General Practitioner; his Relation to the Community and to Specialism.—Dr. Augustus Caillé read this paper. He said the time was in the memory of all present when the family practitioner was a trusted counsellor. The introduction of general and local anæsthetics, asepsis and antisepsis, and serum therapy, etc., gave such opportunities of diagnostic and therapeutic possibilities that one could not grasp them all. The introduction of cocaine had been followed by rapid development of the nose specialist. Bacteriological and chemical research gave such a complexity of terms, and an avalanche of literature that completely swamped the ordinary medical man, and he could not keep abreast with the times. These vast strides made the position of the general practitioner a peculiar one; every young practitioner felt superior to the older ones. To what extent should we encourage young men and women to take up the practice of medicine for a livelihood? It would appear that medicine was looked upon as a promising field. That was not so now if the existing conditions were studied. During the past ten years the profession had been overcrowded; there had been a production of medical men far above the demand.

He advised that no one should enter upon this career without appreciating the difficulties to be overcome and the hard work and drudgery that were entailed. Competition was a strong master; it elevated and degraded. He then briefly discussed what was the place in society of the family practitioner, and under what conditions he would be in demand. He did not believe that the family practitioner was to become extinct, for two reasons: first, many intelligent people would refuse to give up a good practitioner; second, the public had already largely and seriously suffered by indiscriminate consultations with immature specialists. Much of the specialists' operative work deserved the highest praise, yet the families turned to the general practitioner. He felt convinced that all medical men would become competent diagnosticians and formulate plans of treatment without using so many worthless drugs, and that they would do more work at the bedside. The family practitioner must (1) be master of physical diagnosis; (2) he must have some laboratory training; (3) he must be able to make local or regional examinations; (4) he must have a good knowledge of hygiene and dietetics; (5) he must be able to perform minor surgery as well as emergency operations; (6) when feasible, obstetrical cases should not be handled by the general practitioner. The difficulties of making correct diagnoses were not great if one went about it in a systematic way. For some years past he had used diagnostic charts, which he found to be a great help in making and recording diagnoses in the office and at the bedside, or in hospital. The reasons why the general practitioner should not attend obstetrical cases were two in number: first, it was usually night-work, and the physician who worked from 10 A.M. to 10 P.M. should go to bed; second, he was at all times in contact with contagious or communicable diseases, and so might infect the parturient woman. He condemned the hurry and bustle of the present life; it was all wrong. The general practitioner, in his opinion, was not sufficiently paid for the work he did. To counterbalance the loss of fees from obstetrical work the general practitioner would have more time at home and in his family, and more time and ambition to practise minor surgery. He believed that minor surgery belonged to the general practitioner; if he had no surgical training, he was handicapped from the beginning. The knife in conservative hands gave much relief. Rheumatism, typhoid fever, tuberculosis, pneumonia, diabetes, and other so-called medical diseases often presented complications requiring surgical knowledge. Pure surgical cases frequently developed non-surgical complications. A simon-pure prescription writer had no future in practical medicine. Yet he believed that every man should know his limitations in doing surgery. In country practice, he advised that the neighboring doctors should combine and help one another in doing surgical operations. He thought that nurses, especially obstetrical nurses, should be encouraged to go to the country. The rural communities should be educated to the need of such service. All practitioners should become familiar with the clinical microscope. The speaker condemned the drugging habit. Books on materia medica placed a lot of therapeutic ballast in our hands. Every few weeks new drugs were forced upon the physician with the claim that they were a specific, and many physicians were gulled into trying them and were disappointed. Medical literature, he thought, was on a rampage, and he felt happy that many physicians could read but one language. The average practitioner would do well to take one good weekly journal and one or two monthlies devoted to some particular line. How else could the general practitioner keep up with progress and art? He advised country practitioners to take a post-graduate course. He did not believe that the dispensaries and hospitals were utilized as they should be; the best hospitals were teaching hospitals. Must post-graduate work be taken abroad, or could it be gotten better here? He had visited Germany, England, and France, and was familiar with the post-graduate institutions there. In laboratory work he believed that Europe was ahead of us, but not in any practical work in medicine and surgery. "Why fly to a foreign shore, when the best is at your door?"

DR. GEORGE M. EDEBOHLS thought the advice to the general practitioner was timely, as the successful ones occasionally found it difficult to determine just what course to pursue. For the first fourteen years of his professional career he was engaged in general practice; at the end of that time he was in the same dilemma that many practitioners were to-day, and could not decide whether to pursue a general practice or take up some specialty. At that time the specialists were having the best of it; they were better paid for their work; they were able to time their work, and could devote some time to occupations other than that of medicine; they could take vacations. So when the opportunity offered he embraced the career of a specialist. A young man working in the city should from the beginning work every day on some special line. He then cited an instance showing the importance of a knowledge of general medicine in following a specialty. He was called by a general practitioner of excellent reputation, of great accomplishments, who stated the case of a woman, four or five days after delivery, having puerperal fever, with a temperature of 104° F. and rapid pulse, etc. He was asked to curette the uterus, as it was desired to have the uterus emptied. He took the precaution of first examining the patient thoroughly, and he found an acute pericarditis, and nothing at all wrong with the sexual organs. Had the woman been chloroformed death would certainly have followed.

DR. S. ADOLF KNOPF said he was much impressed with what had been stated regarding materia medica as taught in medical schools; there they lacked training in hygiene and diet, especially in telling how food should be prepared. We must look to the general practitioners to combat tuberculosis, because they saw the incipient cases. To them we must turn for detecting early tuberculosis.

Medical Items.

Review of Surgery for the Past Hundred Years.—Mr. H. G. Howse ends his elaborate review of surgery during the last one hundred years, delivered before the Royal College of Surgeons of Great Britain, on December 13th, with these words: "And yet while wondering at and admiring all the great advances of the last one hundred years, while hoping for similar great advances in the future, while urging our pathologists and bacteriologists to pursue these investigations which may have such an important influence upon the treatment of disease in the future, it may be wise to add a word of warning. There is a tendency in making these complicated investigations to conclude too much from a single instance. Very grave errors will arise in the conclusions of the future unless investigators will guard themselves most carefully from this error. In other directions we are all apt to become too dogmatic in our views, which are based on indisputable facts—views, however, which on further examination we find it necessary to modify in accordance with our increasing knowledge and experience. Nowhere is this shown more strikingly than in the rapid changes of antiseptic and aseptic details in the treatment of wounds which have chased each other like cloud-shadows across our surgical stage during the last twenty years. It may reasonably be doubted how far some of these details are really scientific and how far they are mere fads. I would conclude this lecture, then, by quoting an admirable saying attributed to the late master of Trinity College, Cambridge: "We are none of us infallible; no, not even the youngest of us."

Confectionery in Army Rations.—The Germans about ten years ago introduced the use of candy into the diet of their soldiers. The idea was the outcome of experiments undertaken by the German government. It was demonstrated that the addition of candy and chocolate to the regular ration greatly conduced to the improvement of health and endurance of the troops, and at the present time the army authorities in Germany issue cakes of chocolate and a limited amount of other confectionery. The British were the next to follow this example, and the queen, as has been extensively advertised, forwarded five hundred thousand pounds of chocolate in half-pound packages as a Christmas treat for the soldiers in South Africa. Jam has also found great favor with the British War Office, and 1,450,000 pounds have been dispatched to South Africa as a four months' supply to 116,000 troops. The United States is following in the same path, and candy has been added to the regular army ration of the American soldier. It is stated that one New York firm has shipped more than fifty tons of confectionery during the past year for the armies in the Philippines, Cuba, and Porto Rico. The candy supplied is of excellent quality, consisting of mixed chocolate creams, lemon drops, cocoanut maroons, and acidulated fruit drops. These are packed in tins specially designed to fit the pockets of a uniform coat. The question of providing jam with the army ration is also under consideration.

Insects as the Cause of Contagion.—The rôle taken by insects as vehicles of contagion assumes every year a more important position in the estimation of clinical observers. It is exceedingly probable that the common house-fly was the carrier of contagious material from wound to wound in the days when hospital gangrene prevailed in epidemics. The initial case was usually one of syphilitic phagedæna, and the flies did the rest. The same might not improbably be the case in many instances of hospital erysipelas. In purulent ophthalmia as observed in hot climates and in the army, and to less extent occasionally in English practice, flies no doubt were the chief agents in its spreading. In the epidemics of school ophthalmia they are again to be suspected. The spread of the ague germ by means of mosquitos is now an established fact, but here we have an instance of the parasite breeding in the tissues of the insect and not of its mere transference. The suggestion that mosquitos are a means of contagion in leprosy has had its advocates. It is, however, I think, conclusively negatived by the fact that of the European immigrants into leprosy districts scarcely any contract the disease.—JONATHAN HUTCHINSON'S "Archives of Surgery."

Seats for Shop Assistants in Great Britain.—The "Act to provide for seats being supplied for the use of shop assistants," which received the royal assent on August 9th, this year came into force on January 1st. The act is short—it only contains four sections; so "Ignorantia legis neminem excusat" specially applies in this case. As the first two sections, which contain all the necessary information on this new piece of legislation, do not occupy many lines in the statute book, it will not be out of place to set them forth verbatim. The first section describing the scope and effect of the new law provides that "in all rooms of a shop where goods are actually retailed to the public, and where female assistants are employed for the retailing of goods to the public, the employer carrying on business in such premises shall provide seats behind the counter, or in such other position as may be suitable for the purpose, and such seats shall be in proportion of not less than one seat to every three female assistants employed in each room." The second section deals with the penalty for non-compliance with the above provisions. The last section states that the new act is to be construed and read as one with the Shop-hours Act, 1892 to 1895, or, in other words, the provisions of these acts, in so far as they are not inconsistent, are to apply to this act. The Shop-hours Act places a limit on the number of hours during which young persons under eighteen years of age may be employed in a week.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended March 31, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Illinois, Aurora	March 3d to 17th	7	
Chicago	March 17th to 24th	3	
Indiana, Evansville	March 17th to 24th	6	
Kansas, Wichita	March 17th to 24th	8	
Kentucky, Covington	March 17th to 24th		
Louisiana, New Orleans	March 17th to 24th	71	14
Maine, Portland	March 17th to 24th	1	
Michigan, Detroit	March 17th to 24th	2	1
Minnesota, Albert Lee	March 20th	2	
Anoka Co.	March 20th	15	
Butterfield	March 20th	1	
Freeborn Co	March 20th	15	
Lesueur Co	March 20th	1	
Minneapolis	March 20th	42	
Northfield	March 20th	7	
Rice County	March 20th	1	
St. Paul	March 20th	6	
Watonwan Co.	March 20th	2	
Nebraska, Omaha	March 17th to 24th	1	
New York, New York	March 17th to 24th	2	
Ohio, Cincinnati	March 17th to 23d	1	1
Cleveland	March 17th to 24th	10	
Pennsylvania, McKeesport	March 17th to 24th	1	
South Carolina, Greenville	March 17th to 24th	2	
Utah, Salt Lake City	March 17th to 24th	6	
Virginia, Millboro, Bath Co.	March 16th	12	
Portsmouth	March 17th to 24th	1	1
Washington, Spokane	March 17th to 24th	2	
Wisconsin, West Salem	March 21st	5	
SMALLPOX—FOREIGN.			
Austria, Prague	March 3d to 10th	3	
Belgium, Antwerp	March 3d to 10th	3	1
Brazil, Rio de Janeiro	February 2d to 9th	25	22
Canada, Province of Montreal	March 26th	1	
Cuba, Santiago	March 14th	Reported.	
Egypt, Cairo	February 18th to 25th	..	3
England, Birmingham	March 3d to 10th	2	
London	February 24th to March 3d	7	1
France, Lyons	February 24th to March 3d	..	1
Greece, Athens	March 3d to 10th	7	6
India, Bombay	February 13th to 20th	..	228
Calcutta	February 3d to 10th	..	24
Kurrachee	February 11th to 18th	12	6
Mexico, Chihuahua	March 10th to 17th	..	3
City of Mexico	February 25th to March 4th	68	24
Vera Cruz	March 10th to 17th	..	4
Russia, Moscow	February 25th to March 3d	6	4
Odessa	March 3d to 10th	7	1
St. Petersburg	February 17th to March 3d	47	12
Warsaw	February 17th to 24th	..	3
Spain, Corunna	March 3d to 10th	..	1
Madrid	February 24th to March 3d	..	7
Straits Settlements, Singapore	February 3d to 10th	..	1
YELLOW FEVER.			
Brazil, Bahia	February 17th to March 3d	2	1
Rio de Janeiro	February 2d to 9th	..	16
Colombia, Barranquilla	March [illegible] to 10th	2	2
Panama	March 13th to 20th	2	1
Cuba, Havana	March 11th to 17th	..	1
Mexico, Laguna	March 4th	Several.	1
CHOLERA.			
India, Bombay	February 13th to 20th	..	1
Calcutta	February 3d to 10th	..	40
PLAGUE—INSULAR POSSESSIONS UNITED STATES.			
Hawaii, Honolulu	March 22d	1 suspect.	1
Philippine Islands, Manila	To February 13th	100	90
PLAGUE—FOREIGN.			
India, Bombay	February 13th to 20th	..	641
Calcutta	February 3d to 10th	..	106
Kurrachee	February 11th to 18th	4	1

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Original Articles.

DIFFUSE SEPTIC PERITONITIS, WITH SPECIAL REFERENCE TO A NEW METHOD OF TREATMENT, NAMELY, THE ELEVATED HEAD AND TRUNK POSTURE, TO FACILITATE DRAINAGE INTO THE PELVIS. WITH A REPORT OF NINE CONSECUTIVE CASES OF RECOVERY.[1]

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THE peritoneum is virtually an enormous lymph sac, and therefore peritonitis is lymphangitis. The absorbents of the structure of the peritoneum are represented by the lymphatics, and the protection which these afford against infecting agents by exudative material thrown out (thrombo-lymphangitis) to act as a defensive barrier by blocking the lymph channels serves to preserve the life of the subject, on the one hand; while a failure in this respect, either because of the enormous and overwhelmingly rapid increase of septic material and the large size and number of channels necessary to destroy or obstruct, on the other hand, permits the destruction of the organism. Hence rapidly proliferating bacterial invasion means more or less absorption, perhaps sufficient to destroy life, before proper protection has been afforded in the manner mentioned. Or, on the contrary, a slow proliferation permits of the formation of exudative barriers to the extent of arresting further absorption and saving life.

The bacterial fluid present in a case of peritonitis is a transuded fluid, which, in the process of transudation, forces the endothelial cells from the peritoneal lymphatic surfaces; the desquamated cells, together with leucocytes and other cell-forms, floating about in the fluid. In cases of recent origin flakes of lymph are also present in the fluid. Patches of a coagulated albuminous substance, the result of the exudation of an albuminous fluid from the lymph channels and of fibrin from the blood (fibrinous exudate), appear as a soft, reddish-gray substance more or less adherent to the peritoneal surfaces, and here and there bridging over the spaces between adjacent coils of intestine, through the medium of which they adhere together.

The infecting agents also present in the fluid are invaders to be gotten rid of or prevented from proliferating and exerting their baneful effects, through the medium of the larger leucocytes, or macrophages of Metchnikoff, which migrate to the peritoneal cavity for this purpose. In order to effect their purpose these must come in contact with the microbes, either investing the latter to imprison and sterilize them, or checking their movements by simply adhering to them. The presence of a large quantity of fluid in the cavity of the peritoneum must necessarily interfere greatly with this contact between the leucocytes or macrophages and the invading and proliferating bacteria, since the contact, under these circumstances, must be more o less infrequent and of an accidental character. It is now believed that one of the functions of the omentum is to bring about this contact by its movements in the peritoneal cavity causing the bacteria to adhere to its surfaces, where they are readily attacked by the leucocytes. This view is supported by the clinical fact that whenever a focus of infection exists in the peritoneal cavity, there are more than likely to be found omental folds, reaching out, so to speak, for the bacterial intruders and becoming adherent to the peritoneal surfaces adjacent to the focus during the process.

Not all of the regions of the peritoneum possess the physiological power of absorption to the same extent, for the reason that certain anatomical differences preclude this. For instance, the portion possessing this in the highest degree is the region of the diaphragm, where large lymph trunks are present, the open mouths or stomata of which stand ready to take up and transport to the system at large whatever fluid with its contained pus, blood, bacteria, or toxic products of the latter, may present itself. The size of both lymph trunks and stomata in this region is such as to prevent their early or rapid obliteration through thrombo-lymphangitis, and hence the organism may be destroyed through the widespread distribution of septic material before this can occur. This is particularly true of that portion of the region of the diaphragm known as its central or tendinous portion.

The region in which the anatomical conditions favoring rapid absorption exist in the next highest degree is the intestinal. Here there likewise exist large lymph trunks and stomata, but not to the same extent as are found in the region of the diaphragm. These are, however, sufficiently numerous to render this region a dangerous area of absorption.

Turning now to the remaining region, namely, the pelvic, we find that the non-absorptive character of the peritoneum is apparent. Microscopical study of this portion of the peritoneum reveals the fact that, while it is rich in capillary lymphatics, large lymph trunks and stomata are comparatively absent. The smaller lymph vessels of this region become much more rapidly obstructed, and hence absorption from this region proceeds very slowly, and finally ceases altogether, the arrest being coincident with plugging of the capillary lymph vessels with lymph thrombi, the result of infection and consequent inflammation of the lymph vessels themselves, aided by pressure from without, the latter resulting from peri- and paralymphangitis. This cessation persists until the toxic properties of the contents of the pelvic cavity are either destroyed or neutralized, when absorption is resumed through some, but not all, of the vessels. Many of the latter remain permanently closed. The latter circumstances correspond to the clinical fact that in some patients many attacks of pelvic peritonitis result in the formation of chronic exudates, due to the inability on the part of the absorbents to remove the latter, at least for a long time.[1]

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[1] Read before the Brooklyn Surgical Society, March 1, 1900. Enlarged and revised since its first presentation.

[1] See the able presentation of the facts bearing upon this subject by Dr. Byron Robinson, of Chicago, in an article entitled "The Pathology of the Lymphatics of the Peritoneum," in the Annals of Surgery, vol. xxxi., No. 2, p. 214.

It is likewise probably true that a certain immunity is conferred upon the peritoneal structure of the pelvis through previous attacks. And inasmuch as invasion of the pelvic cavity may readily occur through fecal stasis in the adjacent rectum in both sexes, and through the open mouths of the Fallopian tubes in the female, it is fair to assume that a certain degree of immunity or non-susceptibility is possessed by the peritoneum in that region through the permanent closure of its lymphatics, which is not shared by that in the other regions.

Reasoning from the facts above set forth, the practical surgeon should be able, in support thereof, to bring to bear evidence that the pelvic peritoneum is less liable to become the seat of danger in cases of septic invasion of the latter. He should be able to show, first, that the pelvic peritoneum possesses a certain degree of non-susceptibility to bacterial invasion; second, that when this does occur the spread therefrom is sufficiently slow to permit of the formation of exudativ barriers protecting the more susceptible enteronic and diaphragmatic areas; and third, that the occurrence and retention of large quantities of septic fluid in the pelvic cavity do not give rise to the symptoms reterable to the system in general characteristic of the presence of such fluid in the cavity of the peritoneum. In support of this contention that these requirements are successfully met by clinical experience, the following is offered:

It has long been noted by surgeons that septic inflammatory processes when confined to the most dependent portion of the peritoneal cavity remain quiescent and without urgent symptoms for quite a period of time, as compared with a like condition of affairs existing in that portion of the peritoneal cavity situated above the pelvis. The facts that puerperal infection occurs with comparative infrequency in the large number of cases of labor among the poor, attended by those but little if at all acquainted with aseptic methods; that this, when it does occur, extends to the general peritoneum in a relatively small proportion of cases in which the peritoneum of the pelvic region is involved; and, still further, that infective processes in this region do not, as a rule, give rise to the same grave symptoms as an equal area of peritoneum infected in the abdominal cavity—still further suggest the theory that the peritoneum in this region is possessed of qualities which enable it, first, to resist infection; second, to limit the infection within its own area when it does occur, and third, either so to modify the virulence of the infection or to resist the absorption of its toxic products as to prevent, in the great majority of cases, the grave constitutional symptoms characteristic of an equally extensive infection of the peritoneum above the pelvis. These qualities are still further emphasized by the fact that operative procedures involving the pelvic peritoneum performed by the vaginal route, conducted as they must necessarily be in close proximity to a region difficult, if not impossible, of even relative disinfection and isolation, namely, the anal region, seem less liable to be followed by septic peritoneal inflammation than the same procedures conducted by the abdominal route. In the case of suppurative salpingitis, at least, it cannot be urged that this comparative immunity is due to the non-entrance of septic or pyogenic micro-organisms, since, in order to remove the parts involved, it becomes necessary to break down limiting adhesions; in some instances rupture of the walls of abscess cavities occurs as well, thus leading to contamination of the surroundings in spite of a preliminary aspiration of the contents. Yet the patient escapes the peritoneal inflammation which so frequently follows when invasion of the general cavity of the peritoneum by the pus occurs, as it will in spite of every precaution.

The claim that this comparative immunity is due to the fact that the infecting organism largely concerned in pelvic inflammation, namely, the gonococcus of Neisser, is not necessarily pyogenic in character, in the cases of pyosalpinx at least, falls to the ground in the face of the experience of surgeons in those instances in which this micro-organism is sufficiently virulent to produce the metastatic joint conditions known as gonorrhœal rheumatism, which, after all, is but a variety of pyæmia. So pronounced does this joint condition sometimes become that destructive processes following this infection occur, bacterial examination of the fluids of the joint removed by operation showing the undoubted presence of the gonococcus. I am aware that a contrary view is held by many competent and careful observers, Kelly particularly, who states that, in many hundreds of bacteriological examinations made, he has never yet been able to demonstrate this micro-organism as the etiological factor in the production of septic peritonitis. It is nevertheless true that other and well-known organisms capable of producing both local and general septic conditions are destroyed after a time by the growth of other and more vigorously active bacteria, failure to identify these resulting. It cannot therefore be absolutely claimed that the gonococcus is non-infecting to the peritoneum, since the micro-organism frequently attacks the serous lining of joints. On the contrary, experience seems to prove that it has a special affinity for serous membranes, since it rarely invades by metastasis other structures. In common with many others, I at one time believed that the pus from a pyosalpinx ruptured during the removal of a gonorrhœal pus tube by the abdominal route would do but little if any harm, even if it did come in contact with unprotected intestine and thereby found its way into the general peritoneal cavity. But I have long since learned by sad experience the fallacy of this view, and while admitting that the gonococcus infection may do comparatively but little if any harm to the peritoneum of the pelvic cavity, yet I am more than convinced that its contact with that portion of the folds or reflections of the peritoneum constituting the mesentery of the small intestine is fraught with danger. At the present time my plans to prevent this accident are as well laid, and my anxiety lest it should occur as keen, as if I knew for a certainty that I was dealing with a violently infectious micro-organism.

Aside from the virulence of the bacterial contents of abscesses resulting from non-puerperal pelvic inflammation, the latter, as it arises from full-term deliveries and from abortions as well, may be considered. Here the claim cannot be made that the infecting agent is of a less virulent character than those which gain entrance to the cavity of the general peritoneum; certainly it will not suffice to say that all cases of pelvic peritonitis in the female are due to gonococcus infection. Yet how many of this class come under the surgeon's knowledge in which the septic processes are confined to the pelvis, and in which the local infection is out of all proportion to the general symptoms, in precisely the same manner as the cases indubitably due to gonorrhœal infection. And the same may be said of those cases in which the uterus is accidentally punctured during a curettage for septic conditions of the endometrium. That such accidents occur more frequently than is generally supposed, I am convinced, yet I am informed by a well-known obstetrician and gynæcologist who comes in frequent and intimate contact with those who follow especially this kind of surgical work, that these do not regard the occurrence of this class of accidents as of grave importance; not sufficiently so, at least, to warrant opening the peritoneal cavity for purposes of repair, much less for cleansing and drainage.

So too with cases of infection of the pelvic peritoneum occurring in the male—such, for instance, as the production of false passages between the bladder and rectum, and involving the recto-vesical pouch of peritoneum at the hands of careless or unskilful practitioners. In one case of this kind I opened the abdominal cavity and found the pelvis the seat of what was evidently a virulently infective inflammatory process, yet the latter was absolutely confined to the pelvis, although but few limiting adhesions were present, and these of the flimsiest character. Sufficient time had elapsed, and ample opportunity had been afforded for spread of the infection to the peritoneum, yet this had not occurred. Certainly the local symptoms possessed a gravity out of all proportion to the general symptoms present in the case.

I turn now to the cases in which opportunities for the invasion of the pelvic peritoneum by the most indubitably virulent micro-organisms, such as those escaping from the intestinal canal, are afforded. This mode and character of infection are perhaps exemplified more frequently in cases of appendicitis in which the organ points downward into the pelvis, and in which early perforative ulceration or gangrene leads to the escape of the contents of the organ. It not infrequently happens, in tracing the appendix into the pelvis, that the latter is brought up to view either perforated or gangrenous, this being followed by a gush of sero-purulent fluid, or, as sometimes happens, the presence of the latter is discovered only by passing gauze grasped in a long forceps into the depths of the pelvis; and then follows the removal of quantities of this septic fluid by the same means. I have thus removed astonishingly large quantities of this material, and yet the patient's condition, either general or local, gave not the least suggestion beforehand that such a condition would be encountered. And, unfortunately, in some of these cases the manipulations incident to the removal of the fluid has led to infection of the peritoneum above the pelvis in spite of every effort to prevent this, with the result of loss of the patient's life from diffuse septic peritonitis, the infecting material coming into contact with the general peritoneum notwithstanding every precaution of walling off the latter with a large number of gauze compresses.

It was during the after-treatment of a case of diffuse septic peritonitis the result of early perforation of a violently inflamed appendix directly into the peritoneal cavity and between the coils of small intestine, and in which I had placed a glass drain as well as a number of wick drains deep in the pelvis, that the line of thought above expressed occupied my mind. My assistant, Dr. R. S. Fowler, had been in the habit of treating cases of vomiting following etherization by raising the head of the bed as high as possible consistent with comfort, thus bringing the force of gravity to bear in facilitating normal peristalsis. In view of the favorable course which the case then in hand was pursuing, it was determined to adopt this as a routine procedure for the purpose of facilitating the passage of septic fluids from the general peritoneal cavity to that of the pelvis, where, according to the reasoning above outlined, it would do but little harm, comparatively speaking, and from which locality it could be more readily removed by drainage methods. This has been done, and a further experience with the method seems to bear out the favorable opinion first entertained of this measure as of value in aiding to combat the mortality in this much-dreaded condition.

The angle assumed has varied somewhat, but I insist that the elevation of the bed from the horizontal shall be at least from twelve to fifteen inches. In order to prevent the patient from sliding down in the bed a large pillow is placed folded beneath the flexed knees, and upon this the buttocks rest. The pillow is prevented from sliding by a piece of stout bandage passed through at the folded portion and secured to the sides of the bedstead.

The following is a list of the cases consecutively treated by this method to date:

CASE I.—October 17, 1899; Brooklyn Hospital. Diffuse septic peritonitis from a combined appendicular and adnexal lesion, originating, in all probability, in the appendix. The accessible parts of the cavity of the peritoneum were treated with equal parts of peroxide of hydrogen and saturated solution of bicarbonate of sodium, which was finally flushed away with decinormal saline solution, after which the abdominal cavity was dried out as thoroughly as possible. Two glass drains were placed in the pelvis and wicking drains inserted in these. The drainage tubes were dressed separately from the abdominal wound.

After-treatment: The head of the bed was raised and kept so for seventy-two hours. The glass tubes were cleared every two hours by aspirating their accumulated contents by means of a long pipette. Copious saline enemata were given, with the usual stimulating treatment, consisting of sulphate of strychnine and citrate of caffeine. The glass drains were withdrawn on the eighth day, and hemmed gauze strips substituted. Recovery resulted. Bacteriological examination of material taken from the remote upper portion of the peritoneal cavity at operation showed staphylococcus infection.

CASE II.—October 23, 1899; Brooklyn Hospital. The patient presented the typical clinical picture of diffuse septic peritonitis, with a history pointing to perforative appendicitis as the cause. No hope was held out for recovery, and I hesitated about operating at all. The operation revealed a perforated appendix lying free in the peritoneal cavity and a large quantity of foul-smelling sero-pus. The abdominal cavity was flushed with the peroxide of hydrogen and bicarbonate of sodium solutions, finally washed away with decinormal saline solution. The abdominal cavity was dried out, and combined glass and wicking drains were placed in the pelvis.

After-treatment: The head of the bed was raised. The tube was cleared of its contents every hour for the first six hours, then every two hours. Saline enemata, one pint, were given every hour as long as the rectum was tolerant. The ice coil was applied for relief of pain. Sulphate of strychnine in gr. $\frac{1}{10}$ doses was given every three hours. There was no vomiting until the third day, when the head of the bed was lowered; in a short time the passage of flatus, which had occurred at intervals previously, ceased, and vomiting occurred. The latter was at first bile-stained, but with rapid distention it soon became fecal. Through a misunderstanding the head of the bed was not raised again for twelve hours, at the end of which time, following a return to the elevated head and trunk posture, improvement in the symptoms commenced and was steadily progressive, so that at the end of another twelve hours the patient expressed himself as feeling comfortable. Owing to delay in the bacteriological report antistreptococcic serum was employed for the first three days, but this did not seem to exert any influence. The glass and wick drains were removed on the tenth day. Right-sided phlebitis of the saphenous vein developed on the nineteenth day. The head of the bed was kept elevated for three weeks. Staphylococcus growth was identified. The patient recovered.

The phlebitis which occurred in this case may have been due to the increased difficulty experienced by the return circulation owing to the unnecessarily prolonged elevated head and trunk posture. Sonnenburg, who has called attention to the complication of phlebitis of the veins of the lower extremity following abdominal section, advises raising the foot of the bed as a prophylactic measure.

Case III.—October 31, 1899; Brooklyn Hospital. Operation by my assistant, Dr. Russell S. Fowler; recurrent appendicitis, with diffuse septic peritonitis. The abdomen was distended and rigid, and no gas had passed for thirty-two hours. The appendix, gangrenous throughout and perforated at the tip, and containing an enterolith as large in diameter as the thumb nail, was found lying against the cæcal wall, which was likewise gangrenous. The appendix was removed and the gangrenous spot on the bowel wall enclosed in Lembert suture. A large quantity of foul-smelling pus and sero-purulent material was scattered through the peritoneal cavity. Cultures were taken from distant portions of the latter. The cavity was sponged thoroughly with dry gauze, and twenty-one wick drains were disposed throughout the cavity of the peritoneum, including the pelvis, and led out of the operation wound. After-treatment consisted in raising the head of the bed, saline enemas every hour, and large doses of strychnine. The amount of fluid which flowed from the drains during the first twenty-four hours soaked the dressings copiously, the patient's clothing, and the bed. The distention showed marked decrease within twenty-four hours, and gas passed per rectum freely and frequently. The temperature reached normal on the third day and remained so. All drains were removed by the eighth day. Both lower extremities were massaged daily to prevent blood stasis and consequent phlebitis. Bacteriological examination showed both staphylococcus and streptococcus infections, the latter predominating.

Case IV.—December 7, 1899; German Hospital. The patient was admitted with perforative peritonitis of appendicular origin, and presenting the typical picture of diffuse peritoneal inflammation. Upon opening the abdomen free sero-pus was found to be present. The peritoneum was of a dusky cherry-red color as far as could be seen in all directions, and the coils of intestine were greatly distended and covered in places with lymph. The appendix was gangrenous and perforated. The peritoneum of the abdominal and pelvic cavities was sponged clean with simple sterile gauze and all lymph deposits were removed. Gauze-drainage strips were placed in different directions, including a large drain of the same material into the pelvis, and led out of the abdominal wound.

After-treatment: The head of the bed was elevated and kept so for six days. Fluids were given *ad libitum*, as soon as the patient recovered from the anæsthetic, and of these he partook freely. There was no vomiting. Distention rapidly disappeared, gas passed per rectum, and the patient was practically beyond the period of anxiety by the fifth day. The drainage strips were removed in stages, a strip being removed each day, that from the pelvis being the last; they were all out by the eighth day. During the first three days the amount of fluid removed by the drains from the peritoneal cavity, as represented by the soaked dressings and bed, was enormous. Recovery followed. No bacterial examination was made.

Comment: This patient received scarcely any medication, the main reliance being placed upon drainage, posture, and the free ingestion of fluids. The latter was made possible by the absence of vomiting after the operation, although this had been a distressing feature before the abdomen was opened. The removal of large quantities of fluid from the peritoneal cavity through the medium of the drains was a pronounced feature of this case. I have always looked upon this as being exceedingly favorable from the prognostic standpoint. This seems to be borne out by the observation that cells suspended in fluid cannot act so vigorously as when localized in the endothelial surface, and hence cannot, when so suspended, destroy so many bacteria, not only on account of the lessened chance of encountering the bacteria, but because the latter are not so liable to adhere to the cells. With the withdrawal of the fluid the cells reach the endothelial surface, where they assert their aggressiveness upon the bacteria by their own power of movement (*vide supra*).

Case V.—December 13, 1899; German Hospital. The patient was admitted with peritonitic facies, distended and rigid abdomen, with a history of a two-days' illness and symptoms pointing to appendicitis. The onset of the attack had occurred while the patient was on her knees scrubbing the floor. No previous history pointing to the existence of a tumor or of menstrual disturbances was obtained. The operation revealed a diffuse septic peritonitis with evidences of recent rupture of an ovarian cystoma, the chocolate-colored fluid from which had invaded the cavity of the peritoneum above the pelvis. This was carefully wiped away as far as possible with dry sterile gauze, and two glass drains with wicking inserted were placed in the pelvis.

After-treatment: The head of the bed was elevated; strychnine and citrate of caffeine were given in moderate doses, with hourly enemas of saline solution. The tube was cleared by the aspirating pipette every two hours, and from a half ounce to two ounces of dark-colored serum was removed each time. There was no vomiting. Rapid improvement followed. Gas passed within six hours. The tubes were removed and replaced by gauze strips on the fifth day. Recovery was uneventful. No bacteriological examination was made.

Comment: In a case bearing a remarkable resemblance to the one narrated in all respects, which came under my care shortly before I commenced the postural feature of the after-treatment, and in which every detail of the treatment was identically the same with the exception of the elevated head and trunk position, death took place on the fifth day from steady and progressive advance of the disease and general septic infection. In fact, I have always looked with much apprehension upon cases of this character, in which the rather heavy and chocolate-colored contents of an ovarian cystoma have escaped into the general peritoneal cavity. This case will be referred to later in this paper.

Case VI.—December 15, 1899. The patient was admitted to my service at the German Hospital with a perforative peritonitis of appendicular origin. Distention and general rigidity were marked. Operation by my assistant, Dr. R. S. Fowler, revealed a perforated appendix lying free in the peritoneal cavity, and a diffuse septic peritonitis present. The peritoneum, as far as could be determined by the incision, was deeply reddened. The intestinal coils were covered in patches with lymph and greatly distended. There was a large quantity of free sero-purulent material in the cavity of the peritoneum. The abdominal cavity was sponged dry with sterile gauze, and all lymph deposits were removed. Numerous strips of iodoform gauze were placed in different parts of the abdominal cavity and pelvis, and led out of the operation wound.

After-treatment: The head of the bed was raised and left so for three days. Saline enemas were given to the extent of their toleration by the rectum, and fluids were administered freely, with moderate stimulation by means of strychnine and citrate of caffeine. The drains were removed singly and upon separate days; the last was removed on the sixth day. Recovery followed. There was no bacteriological examination.

Case VII.—The patient was admitted to my service January 24, 1900, in the German Hospital, with a history of recurring attacks of appendicitis, the last of which came on six days previously. Upon admission the usual anxious expression was visible, with greatly distended and rigid abdomen. Operation was done by my assistant, Dr. R. S. Fowler. The abdomen was opened by an incision placed at the outer edge of the right rectus muscle. Free pus was present in the peritoneal cavity, with the usual widespread and deeply reddened peritoneum. Three distinct abscess cavities were found in addition: one in the neighborhood of the appendix, one just below and extending behind the liver, and a third, containing about sixteen ounces of sero-purulent material, in the pelvis. The first two contained about four ounces each. The appendix was perforated. After excision of the appendix the abscess cavities were emptied and carefully cleansed with gauze wetted with 1:3,000 bichloride solution. The general peritoneal cavity was carefully dried, and gauze drainage strips led from the remote portions of the latter to the operation wound. The abscess cavities were also drained in the same manner.

After-treatment: Elevation of the head of the bed was kept up for five days. Strychnine and citrate of caffeine were given in moderate doses. There was gradual withdrawal of the drains. No vomiting took place. Fluids were allowed to the extent of the patient's desires in that respect. There was an enormous amount of fluid carried off from the peritoneal cavity by the drains. The patient recovered. No bacteriological examination was made.

Case VIII.—February 27, 1900; Methodist Episcopal Hospital. This was a case of post-operative diffuse septic peritonitis. The patient was operated upon for extensive ventral hernia resulting from an operative attempt to remove a myomatous uterus five years previously. Infection probably resulted from the use of an unusually thick strand of catgut (always difficult of sterilization) in ligating an exceptionally dense adhesion. Symptoms of peritonitis commenced within eight hours of the operation and increased with alarming rapidity until the entire peritoneal cavity was involved. The distribution and tenderness were extreme, the pulse 160 and feeble, and the peritonic facies well marked. The head of the bed was raised twelve inches from the horizontal; stimulants were administered (strychnine and caffeine), calomel was given, followed by salines; enemata of lac asafœtida were employed, and antistreptoccic serum was given. In spite of all these the alarming symptoms continued until the fourth day, when I accidentally learned that whenever the enemata were given the head of the bed had been lowered and the foot raised, to facilitate the retention of the latter. This had occurred quite frequently for the reason that saline enemata were likewise given in the intervals of giving the lac-asafœtida rectal injections. Upon investigation I found that this had been done about every three hours since the commencement of the treatment, the patient remaining in this position on an average of a quarter of an hour each time. The patient's condition at this time was alarming in the extreme. She lay with her eyes half opened and the globes rolled up; the abdomen was barrel-shaped; the pulse was almost imperceptible at the wrist, and the jactitation required the use of morphine. She had complained after each time of raising the foot of the bed of a burning sensation along the œsophagus; finally vomiting set in, and she rejected what was given by the mouth. The rectum had finally become intolerant, and her sufferings were extreme. It was at this time that the error was discovered and rectified. The head of the bed was permanently raised, and from this time improvement commenced. Flatus was expelled in copious quantities, and liquid movements of the bowels were obtained. The morphine was stopped, the ice coil being found to be sufficient to relieve the abdominal distress. By the second day following the persistent use of the elevated head and trunk posture her morale had so improved that she greeted me with a smile· the pulse had gradually fallen to 116 and was greatly improved in strength, and she was beyond the stage of anxiety. She finally recovered completely.

Case IX.—March 2, 1900; German Hospital. The patient, a young man aged sixteen years, was admitted with acute appendicitis of two days' standing. In spite of the fact that the attack was comparatively recent, a diffuse septic peritonitis was already under way. The abdomen was board-like and tympanitic, the peritonitic facies was present, and tenderness was extreme. Upon opening the abdomen sero-purulent fluid was found to be present, in which flakes of lymph were floating; the entire tract of the small intestine was intensely reddened, and fibrinous exudate was present. A long perforated appendix lying in the midst of the unprotected small intestines was brought out of the wound and removed. Eventration was then performed, the intestine being laid on the abdominal wall and well covered with gauze compresses, which were frequently wetted with warm saline solution. The immediate region from which the appendix had been removed was treated with two ounces of equal parts of peroxide of hydrogen and a saturated solution of bicarbonate of sodium. No attempt was made to disseminate this throughout the peritoneal cavity; and as much of this was removed as possible by flushing with saline solution, before proceeding further. The abdominal and pelvic cavities were then repeatedly washed out with large quantities of saline solution poured from a pitcher, at least twelve gallons being thus employed. The abdomen was then dried out, and the intestines were returned; a glass drain carrying a strip of iodoform gauze was placed in the pelvis and dressed separately from the abdominal wound, which was sutured down to the glass drain.

After-treatment: Elevated head and trunk position. Plenty of fluid was allowed, and no medication save small doses of strychnine and caffeine to bridge over the first shock of the operation, which was severe. Aspiration of the glass drainage tube was done every six hours. No vomiting occurred. Small doses of calomel (gr. $\frac{1}{5}$ every half-hour) were given until two grains had been taken. Normal peristalsis commenced within four hours, resulting in the expulsion of flatus, and liquid stools passed on the second day. Recovery followed. Bacteriological examination of cultures taken from remote portions of the peritoneal cavity showed infection.

Thus it will be seen that, of nine consecutive cases of diffuse septic peritonitis treated by the combined methods of elevated posture and drainage, all have resulted in recovery. I have not included among these several cases in which a spreading peritonitis existed about a focus of infection, as shown by decided redness of the coils of intestine in the neighborhood, and which were apparently arrested by the elevated head and trunk position. I may say, however, that in these cases the convalescence has been rapid, and the patient's condition has seemed to be more comfortable than is usual during the first few hours following the operation, mainly through the absence of vomiting. Because of this, however, and with the object of utilizing the elevated head and trunk posture as a prophylactic measure, I would strongly recommend the latter in all cases of abdominal section, even at the risk, if Sonnenburg's view of the mechanism of the production of phlebitis of the veins of the lower extremity following this operation should prove to be correct, of the occurrence of this complication.

For the purpose of comparison I have taken an equal number of cases of diffuse septic peritonitis occurring in my hospital services, the dates of which embrace a period of time corresponding as nearly as possible to that in which the foregoing were observed, and which were subjected to the same measures of treatment with the exception of the elevated head and trunk posture. Of these nine cases four patients recovered and five died. These cases were not taken consecutively, nor yet, on the other hand, were they selected cases. Had they been taken consecutively there would have been made a manifestly unfair record to any method of after-treatment, since the group would have included two cases which resulted fatally within twenty-four hours of the operation, and there would have been seven fatal cases out of nine, instead of five. Further investigation of the records does not increase the proportion of recoveries greatly, and, after making all due allowance for those cases which have ended fatally from conditions which destroyed the patient before any plan of after-treatment could have been effective, say within twenty-four hours of the operation, it has been practically impossible to lower the death rate but slightly below fifty per cent. It may likewise be stated, in passing, that the further back the records are searched the higher the mortality becomes.

The record of nine consecutive cases of diffuse septic peritonitis terminating in recovery is extraordinary, not to say startling, and no reasonable surgeon could expect such uniformly good results, even in groups of cases in which milder forms of infection are alone included, and from which patients living less than twenty-four hours are excluded. For it falls to the unhappy lot of every surgeon occasionally to encounter cases in which the deep brown or mahogany color of the intestine indicates a profoundly septic inflammation present in its muscular structures, which no means yet known is capable of successfully combating, and in which the patients even live beyond twenty-four hours. Yet in three cases in this group the infecting organism was identified, and in at least one of these the much-dreaded streptococcus was present. The following is a *résumé* of the nine cases treated without the addition of the postural feature of the first nine:

Case I.—January 26, 1898; Methodist Episcopal Hospital; acute appendicitis with perforation and diffuse septic peritonitis. Gauze drainage was used. The patient died. No bacteriological examination was made.

Case II.—January 27, 1898; Methodist Episcopal Hospital; acute salpingitis from infection by a uterine sound while under office treatment by the family physician. Diffuse septic peritonitis was present. Gauze drainage was used. Antistreptococcic serum, with saline infusion, was given. The patient recovered. No bacteriological examination was made.

Case III.—May 23, 1898; Methodist Episcopal Hospital; gangrenous appendicitis and diffuse septic peritonitis. Gauze drainage was used. Recovery took place. No bacteriological examination was made.

Case IV.—March 17, 1899; Methodist Episcopal Hospital; acute appendicitis and diffuse septic peritonitis. The abdomen was cleansed with decinormal salt solution. Flakes of lymph were removed with sterile gauze. Gauze strips for drainage were inserted in the general peritoneal cavity. Recovery took place. No bacteriological examination was made.

Case V.—April 8, 1899; Methodist Episcopal Hospital; acute appendicitis with perforation, and diffuse septic peritonitis. The abdominal cavity was flushed with decinormal saline solution. A glass drain was inserted in the pelvis, and iodoform-strip drains were passed from the abdominal peritoneum to the operation wound. The patient died. No bacteriological examination was made.

Case VI.—September 14, 1899; Brooklyn Hospital; ruptured ovarian cystoma with chocolate-colored contents. Diffuse septic peritonitis was present. Glass drains were inserted in the pelvis and gauze strips from the abdominal cavity to the operation wound. Saline infusion and antistreptococcic serum were used. The patient died. No bacteriological examination was made.

Case VI.—October 28, 1899; Methodist Episcopal Hospital; gangrenous appendicitis; diffuse septic peritonitis. The abdomen was dried out with sterile gauze. Glass drains were used in the pelvis. Recovery resulted. No bacteriological examination was made.

Case VIII.—November 2, 1899; Methodist Episcopal Hospital; acute appendicitis; diffuse septic peritonitis. Iodoform gauze drains were used in the abdominal cavity, and a glass drain in the pelvis. The patient died. No bacteriological examination was made.

The remaining case in this series possesses an especial interest in this connection for the reason that a novel and what may prove upon further trial a valuable addition to present methods was employed. I refer to the plan of securing drainage at the site of the root of the mesentery of the small intestine by a transversely placed rubber drainage tube through the latter, and repeated irrigations through this of large quantities of decinormal saline solution.[1]

Case IX.—February 22, 1900; German Hospital; the patient was admitted with diffuse septic peritonitis of appendicular origin. Operation revealed large quantities of sero-purulent material scattered throughout the general peritoneal cavity, with intestines matted together, pus, and with large patches of lymph. The appendix was violently inflamed, but not perforated. After removal of the appendix eventration was done, the intestines being removed loop by loop, and the coils carefully cleansed and the fibrinous patches removed by carefully wiping with sterile gauze. The intestines were then allowed to rest upon the abdominal wall and carefully covered with towels wrung out of warm salt solution. These were reinforced as to their heat from time to time, and shock from the disembowelling process was thus effectually guarded against. The peritoneal cavity was then flushed with several gallons of warm saline solution. A large rubber drainage tube was then passed through the root of the mesentery of the small intestine at about the middle of the abdominal cavity, and the ends were led out of openings made for the purpose in each flank in such a manner that the tube traversed the abdominal cavity in a transverse direction, being held down in the centre by passing through the mesentery. A similar tube was led from behind the liver and spleen, and two from the pelvic cavity, separate openings being made for the passage of these as directly as possible through the abdominal wall. The intestines were then returned to the abdominal cavity, and the operation wound was closed. Saline solution was passed through the upper tubes; this flowed freely from the lower ones.

After-treatment: Strychnine and citrate of caffeine were given for stimulation, with saline solution and whiskey by the rectum. Irrigation of peritoneal cavity through the tubes was done with a gallon of saline solution at 100° F. every six hours. With each irrigation gas passed freely per rectum. The distention subsided, vomiting ceased, and several spontaneous evacuations of fluid fæces took place. At the commencement of each irrigation séance, the fluid came through the lower tubes turbid, but before the gallon of irrigating fluid was exhausted it became clear. The general septic symptoms from which the patient was suffering when admitted, however, steadily progressed; she became delirious, and death took place from septicæmia thirty-six hours after the operation. No bacteriological examination was made.

I am aware that there are several sources of fallacy in estimating the value of conclusions drawn from the study of any method of treating diseases of bacterial

[1] Bode: Centralblatt für Chirurgie. No. 2, 1900.

origin, and the relation which the method bears to the results in any group of cases. Briefly, these fallacies have their origin in the relation which the following factors in the individual case bear to the result: (1) The pyogenic properties of the infecting agent; (2) the number of organisms present; (3) the susceptibility of the individual; (4) the inhibitory influences sometimes exerted by the peritoneal fluids upon micro-organisms. Elimination of the first of these, namely, the pyogenic properties of the infecting agent, is possible to a certain extent by proper bacteriological examination. The second, the number of organisms present, is capable of elimination only within certain limits, such, for instance, as the statement that the fluids were "swarming with bacteria," that the latter were present in "moderate quantities," or that "but few were found." But how shall we estimate the degree of susceptibility of the patients who perished, or the influences exerted by an immunity present in those who survived? To this individual factor of vital resistance are to be ascribed many of the discrepancies in results in groups of cases as they are presented, and which vitiate more than anything else statistics as they relate to different plans of treatment as advocated. This relates not only to the local susceptibility to infection and its spread, but to the general susceptibility as well. Yet the individual may possess an immunity to infection entirely independent of the factor of vital resistance. While it is true as a general proposition that those greatly depressed physically are more liable to perish from suddenly developed infectious processes, whether or not the latter is made possible by an operative procedure, it is likewise true that some individuals possess a decided immunity to infection entirely independent of any apparent high grade of physical condition on the one hand, while others exhibit a susceptibility altogether disproportionate to previously existing active or actually debilitating influences on the other hand.

A word as to the conditions present in the cases that have been denominated "diffuse septic peritonitis." It has been my happy lot to meet occasionally with conditions in which large quantities of opaque milky material, consisting of desquamated endothelial cells, leucocytes, and perhaps other cell forms floating about in a copiously transuded peritoneal fluid, have been found present in the general abdominal cavity, unaccompanied by any signs of peritonitis, the patient's recovery following as if such fluid had not been present. In these instances the fluid has been found as to its infective qualities to be insufficient to produce more than enough irritation to lead to an increased quantity of secretion of the peritoneum and to add some turbidity to the latter as described, the inhibitory or even destructive powers of the peritoneal fluids to the micro-organisms accounting for the sterility and consequent failure of infection. These have not been classed as cases of peritonitis. But when all peritoneal structures, both parietal and visceral, within sight from an ordinary abdominal section are observed to have exchanged their pearly pink color for a decided red or bluish-red, and particularly if this condition extends to the mesenteric folds of the small intestine, and patches of fibrin and pus cling to the surface of the latter, there can be no question as to the propriety of designating such a case as one of diffuse septic peritonitis.

If asked what, in my opinion, is the best general line of treatment for diffuse septic peritonitis as found to exist upon opening the peritoneal cavity, I might hesitate to express myself as being either for or against eventration or disembowelling for purposes of methodical cleansing; as well as the employment of peroxide of hydrogen solution, or the use of large quantities of decinormal saline solution for purposes of flushing out the peritoneal cavity. But there are two points upon which I would not hesitate to speak with confidence, namely, the employment of the elevated head and trunk position, and drainage of the pelvic cavity at least by means of properly placed and protected glass drains. I offer this as a method preferable to Clark's position, which is the exact reverse of this treatment, and I do it with the full knowledge of the alleged anatomical and physiological reasons advanced in support of the last-named method. Clark's position certainly does not empty the pelvic cavity of septic fluid, for the extent to which the patient must be inverted to accomplish this is incompatible with safety, or with his comfort to say the least, since practically he must be placed standing on his head. This was demonstrated by Dr. Eastman, the resident pathologist at the Brooklyn Hospital, in a series of experiments performed upon cadavers at my request. It is fortunate for those patients who have recovered under this treatment (and I might have said, in spite of this treatment) that this is true, for the reason that this would not only lead to the still further spread of septic fluids through the intestinal region of the peritoneal cavity, of itself a sufficiently dangerous area from the infective standpoint, but the septic fluids from the pelvis would finally reach the exceedingly dangerous infective area of the diaphragm, particularly the central tendinous portion of the latter, with its large lymph trunks and numerous stomata, which rapidly absorb blood, pus, and in fact fluid of whatever sort, with its contained bacteria and toxic débris, instead of being allowed to remain in or flow to the pelvic cavity, in the peritoneum of which are found but very few lymph trunks and stomata, and the capillary lymphatics of which soon become obstructed by lymph thrombi which prevent further spread of infectious material. For with the involvement of these lymph vessels the function of the latter is destroyed by the obstruction caused by thrombi, this constituting the method by which further invasion of peritoneum is prevented and the organism itself protected as well. Under these circumstances transference of the septic fluids from the most dangerous areas of the enormous lymph sac constituting the peritoneal cavity to its least dangerous region, namely, the pelvic portion thereof, and in case of operative attacks removing these from the latter by properly placed and protected means of drainage, constitute not only a rational but an imperatively demanded procedure.

OBSERVATIONS AND SUGGESTIONS CONCERNING HYPODERMOCLYSIS.

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THE Ilio-Lumbar Region for Hypodermoclysis: There have been numerous locations advocated for the subcutaneous injection of normal saline solution —such as beneath the breasts in females, in the chest, abdomen, thigh, axillary space, cellular tissue of the neck, back, etc. I would suggest, however, a region that seems especially advantageous—the space between the highest part of the crest of the ilium, and the lower border of the ribs—in effect the loin, but rather the outer margin of the lumbar region, and which for convenience I have denominated ilio-lumbar. It does not interfere with the dorsal posture, nor do movements of the limbs or neck, or thoracic or abdominal respiration, cause discomfort. It would seem, in fact, to be a point of very little motion. The illustration (Fig. 1) which was drawn from life by Mr. Thomas Nast, Jr., clearly demonstrates the method.

I am aware that some inject antitoxin into this region, and also that the lumbar site has been employed for hypodermoclysis, but I believe the puncture to be more dorsal in location. The lateral lumbar region would seem to be more advantageous, and I think it should be more frequently made the point of selection. It is not within the province of this article to describe the methods and indications for hypodermoclysis, but to direct attention to certain features, which I trust may prove to be of some interest. The normal (or, strictly speaking, decinormal) saline solution should be employed; the formula, roughly speaking, being in the proportion of ʒ i. of salt to Oi. of water. The solution should be sterile, also the needle, and the region to be punctured should be sterilized. The fountain syringe or the Davidson's syringe should also be sterilized. The character of the needle, the temperature of the fluid, and the regulation of the flow, together with the rapidity of absorption, I shall speak of later.

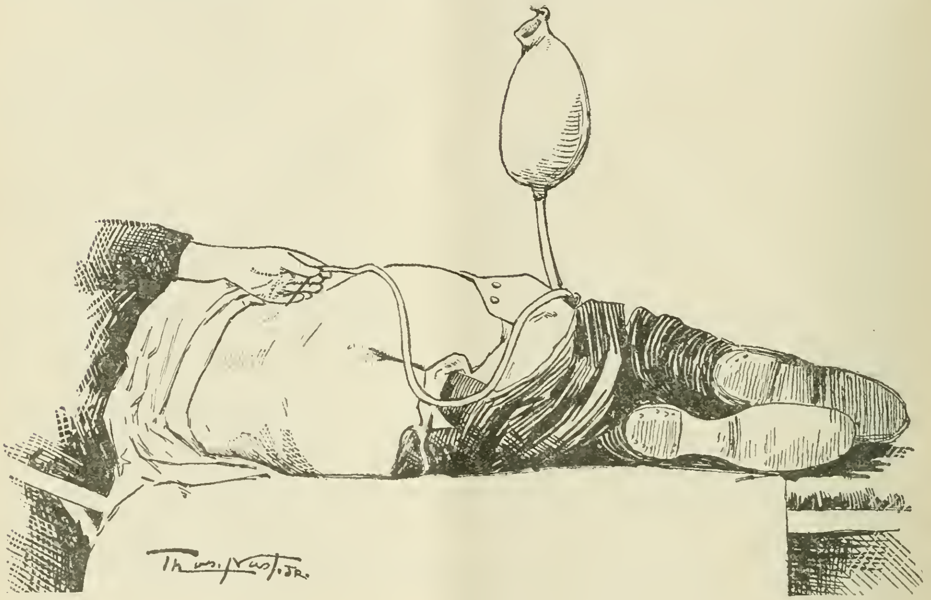

Fig. 1.

The Specific Effect on Renal Secretion Produced by Small Quantities of Normal Saline Solution: That there is a specific effect produced on renal secretion by even small quantities of normal saline solution, I believe it to be impossible to controvert. This holds true whether it is administered by infusion, hypodermoclysis, or enema. Thus Foster has demonstrated an immediate increase in the renal secretion, following an infusion with saline solution, even when an infusion of so small a quantity was given that no change in the general blood pressure occurred, and when in addition there was a complete severance of all the renal nerves, evidently a specific effect on the secreting cells of the kidney. Also in my own article, entitled "Physiological Experiments with Intestinal Irrigation," etc., published in the *New York Medical Journal*, January 29, 1898, experiments were reported regarding the effects of infusion and hypodermoclysis on renal secretion. An infusion of saline solution, to which a small amount of a weak solution of potassium ferrocyanide had been added, the total amount of fluid infused being less than ℥ ss., gave increased renal secretion, and at the same time the Prussian-blue reaction with chloride of iron, in one and one-half to two minutes. The urine drops were counted by means of the registering lever and kymograph to avoid possible error. The quantity infused was so small as to have no appreciable effect on the general circulation, no rise of tension being noted.

As regards hypodermoclysis, a subcutaneous injection of saline solution, to which a weak solution of potassium ferrocyanide had been added, caused increased renal secretion in three and one-half to four minutes, coincident with the Prussian-blue reaction to chloride of iron. This was the average length of time under normal conditions, and even when very small quantities were employed the increased renal secretion was noted as before.

By enema, I have noted clinically, as have others, the enormous increase of renal secretion following even very small enemata of normal saline solution. Thus in response to ℥ ix. of normal saline solution, given at half-hour intervals in divided doses—℥ iii. at each injection—there resulted forty ounces of urine within five hours from the first injection. Only ten ounces of bloody urine had been voided in the previous ten or eleven hours. The urine after the injections also was much less bloody in appearance. This is reported in "Transactions of the Association of American Physicians," vol. xiii., 1898, page 402, as a case of chronic infective endocarditis, a patient of Dr. William H. Thomson. I have noted frequently this enormous response to small enemata of normal saline solution—often three to five times the amount of urine being secreted, as compared with the quantity of saline injected. My own experience seems to show that the smaller quantities frequently repeated give better results than a few single large injections.

With hypodermoclysis, I have observed clinically, in a case of nephritis complicating diphtheria, an injection of ℥ iii.-iv. of normal saline solution caused a secretion of urine nearly five times the quantity, within four hours. The blood and albumin previously existing disappeared and the casts diminished in number. In another case, the patient, having albumin and casts in the urine, was operated on for tuberculous elbow-joint. Nitrous oxide and oxygen were administered for thirty-five minutes. A hypodermoclysis of ℥ vi. of normal saline solution was given before the anæsthetic was removed. The patient passed a third more urine in volume, the first twenty-four hours after operation, than in a corresponding time before it. The albumin disappeared and the casts lessened in number. Other illustrations could readily be given, and I have already called to your attention the physiological demonstration of the diuretic action of small quantities of normal saline solution by subcutaneous injection.

In the *Deutsches Archiv für klinische Medicin*, Lenhartz, in an article entitled "The Therapeutic Value of Saline Infusion in Acute Diseases," advocates frequently repeated injections, preferably subcutaneously and in moderate quantity, as promoting the excretion of injurious substances better than the employment of a very large volume of saline at each injection, given less frequently. My own view coincides with that of Lenhartz. I believe that the specific action of small quantities of normal saline solution on renal secretion has been clearly demonstrated, and advocate ℥ ii.– ℥ vi. injected frequently—every three or four hours—as a better diuretic and causing less strain on the kidneys than Oi. given three or four times daily.

Elimination, as I have demonstrated, begins in three and one-half to four minutes, and the smaller quantities of saline would soon be cast off. Hypodermoclysis is an excellent method to employ. The objection often urged as to a large quantity being necessary and hence painful, thus "falls to the ground," since small amounts are frequently more efficacious.

The Rapidity of Absorption is Modified by Existing Clinical Conditions: I have already briefly described the method by which I demonstrated that elimination of normal saline solution, given subcutaneously, begins in three and one-half to four minutes after the injection has been made. This is under normal conditions of the circulation. In the course of my experiments I noted that when normal saline solution was infused into the veins, elimination through the kidneys commenced in one and one-half to two minutes. If normal saline solution was given by enema or enteroclysis, the weak solution of potassium ferrocyanide again being added to it, the reaction appeared in the urine in twenty minutes. Dr. L. Bolton Bangs clinically has secured the reaction of potassium iodide in the urine in twenty minutes after its administration by enema.

Now though hypodermoclysis under normal conditions is in rapidity of entering the circulation next to infusion itself, yet under certain other clinical conditions the absorption is much delayed, and for practical use it is actually the least rapid in its action of the three methods. For a clearer understanding of the matter I will speak of certain, so to speak, "mixed" or rather "complex" effects of enteroclysis, since this can be employed as an adjunct to hypodermoclysis to hasten the absorption. With hot saline enteroclysis at 110°–120° F., I have the following effects:

First: An instantaneous marked increase in general arterial pressure—in other words, an immediate stimulation of the circulation and of a most marked character. This powerful effect does not occur when lower degrees of temperature are employed, but does so at from 110°–120° F.

Second: At about the end of ten minutes this stimulation seems to attain its highest degree, and the pressure remains stable. This was demonstrated in the experiments on "shock from hemorrhage," in the article to which I have referred.

Third: The increase of renal secretion as a result of saline enteroclysis at a high temperature (110°–120° F.) begins after about ten minutes' irrigation, coincident with this "height," so to speak, of general stimulation of the circulation.

Fourth: The increase of blood and body temperature also begins to manifest itself about this period (ten minutes after enteroclysis is begun).

Fifth: A second, and quite marked, increase of renal secretion is noted at the end of twenty minuets' enteroclysis, and this is coincident with the appearance of the Prussian-blue reaction, or due to absorption from the intestine.

Now, in uræmic conditions with a feeble circulation, or in shock, or any condition of such a character, the absorption of the lymphatics will also be nearly at a standstill; and even a small hypodermoclysis will take a considerable length of time to be absorbed. A subcutaneous injection, besides, has a certain degree of tension to overcome (caused by the pressure of the fluid itself), and also does not possess the advantage of stimulating by its heat, since a high degree of heat might be harmful in circumscribed cellular tissue under high tension, especially with the blood supply already enfeebled. In fact sloughing has occurred in the breasts from a too great (or too rapid) injection of saline solution.

Hot saline solution distributed over a large surface, as the peritoneum, or given by enteroclysis or enema, is an entirely different matter. There is here no resistant tension of high degree to be overcome; the fluid has a wide area of distribution for absorption, and, most important, there is an immediate reflex stimulation of the circulation itself from the heat, and hence in turn rapid lymphatic absorption.

In any clinical condition in which the general circulation is markedly impaired, hypodermoclysis is naturally a slower method than under other conditions; nevertheless it is of great value, for I find that, even so, absorption can be hastened by the addition of enteroclysis (at 110°–120° F.) while performing the hypodermoclysis, or even by a simple hot saline enema. I would advocate enteroclysis (continuous) at 110°–120° F. while giving the subcutaneous saline injection. Gentle peripheral massage during the injection also hastens absorption, and clinically I have noted excellent results secured by this combined method.

On the other hand, I shall mention a certain class of cases in which, though the rapidity of absorption is lessened, yet the results secured by hypodermoclysis would seem exactly to fulfil the indications. I refer to hypodermoclysis in hemorrhage from typhoid or gastric ulcers. This method seems to possess considerable value in these conditions. As I have just demonstrated, if the shock is severe, the method is somewhat slow, and more active measures are also required. In hemorrhage with moderate or even fairly severe collapse it may be of itself efficacious. It replaces the loss of blood, and also on account of entering the circulation indirectly through the lymphatic system is not so likely to start up hemorrhage by a more sudden and marked stimulation, as is infusion. The saline solution is claimed by some also to have certain hæmostatic qualities. I have frequently noted during the past seven summers in the Adirondacks, that some advocate giving small amounts of salt water by the mouth in cases of pulmonary hemorrhage, claiming this effect. Saline solution by the mouth I believe might be liable to cause vomiting and thus aggravate the bleeding, but I mention nevertheless the claims set forth. Overstimulation after pulmonary hemorrhage I have noted, however, with resulting secondary hemorrhage. I mention this danger, therefore, and believe hypodermoclysis to be safe and often efficacious, stimulating, so to speak, to the "safety line." Dr. William H. Thomson recently secured brilliant results in a case of hemorrhage from typhoid ulcer at Roosevelt Hospital, and I obtained an excellent result in a case of gastric ulcer with severe hemorrhage.

Hypodermoclysis in Poisoning: This method would certainly seem of value in cases of poisoning, especially by alkaloids, as it aids elimination through the kidneys and stimulates the heart and respiration. In mushroom poisoning this method has been employed, and with success, it is claimed. Infusion has also been used. In belladonna poisoning I would suggest its value. Since belladonna is markedly eliminated through the kidneys, hypodermoclysis in moderate amount and frequently repeated would be of service. Frequent catheterization of course should be employed. In opium poisoning, or in poisoning from other causes, it is worthy of trial.

Hypodermoclysis in Pleurisy with Effusion: I have found this of value in this condition, especially if insufficient diuresis is an etiological factor. In a case of this character it has been recently employed immediately following aspiration. An excellent result in double pleurisy with effusion due to renal insufficiency was secured on similar principle by hot enteroclysis in a case of Dr. William H. Thomson's. The effusion was absorbed without aspiration, in consequence of the diuresis produced. Renal insufficiency was the cause of the effusion. Hypodermoclysis could be employed in ascites or dropsy, or pulmonary œdema, etc. It should not be given in œdematous tissue.

Hypodermoclysis in entero-colitis in infants and children, etc., is of special value to replace the loss of fluid. The method has long been employed. Dr. R. H. M. Dawbarn in 1892, I believe, was the first so to use it in this country.

Hypodermoclysis as an Eliminative in Diphtheria following Antitoxin Injection: Experimentally we find that if a serum injection is followed later by a normal saline hypodermoclysis, renal congestion is much lessened. Thus in rabbits large doses of normal horse serum or antistreptococcus serum caused considerable renal congestion, as shown by pathological examination. The same doses of these serums if followed by saline hypodermoclysis caused markedly less congestion. Naturally hypodermoclysis should not immediately follow antitoxin injection, as it would probably eliminate the serum rapidly; but if given three or four hours later, it would aid in the elimination of the toxic products of the diphtheria, and also, it would seem to me, in the removal of any toxic products of the serum if such existed, or if the patient should be especially susceptible.

Hypodermoclysis in Nephritis Complicating Diphtheria; Enteroclysis also of Value: In this condition I recently secured a brilliant result in a patient of Dr. William H. Thomson. Renal complications appeared at once before antitoxin was administered—casts, albumin, a small amount of blood, and diminished secretion. Antitoxin (board of health), 4,500 units, was given: 1,500 the first dose, with no improvement; 3,000 five hours later. I believe frankly that a much larger dose should have been given on the first occasion. The renal condition still persisting four hours after the second injection, a hypodermoclysis of ℥ vi. of normal saline solution in the loin was given, followed at once by enteroclysis with normal saline solution at 115° F. for thirty minutes. Four hours later a second enteroclysis was given, and the urine immediately increased in quantity; in twenty-four hours only a few casts were found, and in forty-eight hours there was nothing abnormal. This was certainly most satisfactory.

Hypodermoclysis with Sodium Salicylate as a Diuretic in Uræmia, etc.: Dr. S. J. Meltzer has reported a most interesting case—a patient of Dr. Robert Abbe, of this city. The patient was suffering from uræmic suppression, and Dr. Meltzer, having noted the diuretic effect of sodium salicylate in his experimental researches, employed it clinically and with excellent results.

Hypodermoclysis in Preparation for Operation, or during Anæsthesia; Indications: One frequently sees patients brought to a hospital suffering from traumatism, such as a compound fracture, or even cases requiring minor amputations, in which there has been some loss of blood, and moderate stimulation may be necessary. I do not mean a condition of true shock, or a border-line case even, when infusion would be indicated. The customary procedures of heat, strychnine, whiskey, and hot rectal enema may have been employed. In such a case I advocate a preliminary saline hypodermoclysis of moderate size, ℥ vi.–viii., to replace the loss of blood, and to be given before operation. The somewhat slow absorption under such conditions could not overstimulate the heart and cause increased hemorrhage at operation, an objection that has been made to preliminary infusion in moderate collapse. I believe in just such cases hypodermoclysis to be an ideal method, to be followed on the operating-table by a hot saline infusion for the "prevention of shock," as first suggested by Dawbarn. In other words, a hypodermoclysis given as a "preventive" on the same principle with the "hot saline enema" added, may often render the "preventive infusion" unnecessary. I do not mean to minimize the value of "Dawbarn's method," since I thoroughly advocate it, having frequently seen its good results. I merely follow in his footsteps, believing that more attention should be paid even to slight hemorrhage before operation, and by replacing this loss of blood I aid in eliminating some danger.

In a case in which renal trouble is suspected, or is known to exist, a preliminary hypodermoclysis before operation might prove of value, ℥ iv., ℥ vi., or ℥ viii., and repeated again before the anæsthetic is removed. In the *New York Medical Journal*, December 2, 1899, in the conclusion of an article entitled "Further Experimental Researches on the Effect of Different Anæsthetics on the Kidneys," I cite a patient of Dr. William H. Thomson, upon whom I operated for tuberculous disease of the elbow-joint. Nitrous oxide and oxygen were selected as the anæsthetic, as the patient had a small amount of albumin in the urine and also granular casts. Dr. Bennett administered the anæsthetic for thirty-five minutes. A hypodermoclysis of ℥ vi. of normal saline solution was given in the ilio-lumbar region just before the removal of the anæsthetic. Though albumin was present in the urine the day before and the morning of the operation, even in the urine voided just before anæsthesia was begun, and also a considerable number of casts were found, the albumin was absent after operation; the casts diminished in number, and the urine increased twenty-three ounces, twenty-four hours after operation, over the amount voided twenty-four hours previously. The patient had at no time any difficulty whatever. This case is certainly suggestive at least, and as such is reported. If shock occurs during operation, or if it is feared from any cause, hypodermoclysis should be employed as an adjunct to other methods. As a post-operative procedure, in renal complications, sepsis, or shock, it is unquestionably a valuable adjunct.

A Single Attachment Converting an Aspirating or a Hypodermic Needle into a Needle for Hypodermoclysis.—This attachment consists merely of a small fitting, with a screw thread of a size suitable to screw into the average aspirating or hypodermic-needle. It has an enlargement adapted to fit snugly the rubber tube of a fountain syringe or Davidson's syringe. It is a simple and cheap device to save the trouble of tying into the tube the average needle, which is generally of small calibre even at its base. The attachment being metal can be boiled. An aspirating-needle of convenient size for hypodermoclysis can be purchased with it if so desired.

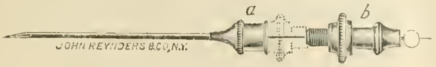

FIG. 2.

Regarding the needle, I may say that I have performed hypodermoclysis with successful results, even with the finest hypodermic needle and a fountain syringe. In such a case the fountain syringe had better be elevated six or seven feet, as the force exerted by the fine stream is slight, and extra back pressure is desirable. The fluid should flow freely from the needle as the puncture is being made. If the flow ceases, on account of the resistance to the small stream, pushing the needle in and then withdrawing it slightly or rotating it will generally start it again. This cessation of the flow is generally due to the small point of exit becoming clogged by the cellular tissue, and these movements will free it.[1]

There is a great loss of heat when the fine needle is employed, and the fluid in the fountain syringe should then be about as hot as the hand can bear comfortably, or about 110° F. It will reach the tissues at about the proper temperature. If the larger aspirating-needle is used, the fluid can be at 105° F., as even here there is considerable loss of heat.

The pain of the puncture can be avoided by freezing with ethyl chloride. Peripheral massage hastens absorption.

Doubtless many of these suggestions may prove to be already well known, yet I believe that merely by calling them to the attention of my professional brethren they may be more frequently employed with benefit than they have been heretofore.

NITROUS OXIDE AND ETHER ANÆSTHESIA.

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NITROUS oxide and ether anæsthesia, the nitrous oxide being used as a preliminary to ether, has been employed in England for a good many years, but until recently has been little used in this country. The method heretofore commonly employed in the United States was to use the gas through the American apparatus to the point of complete surgical narcosis, afterward using a separate inhaler to carry on the ether administration. This method, though a great improvement over the ordinary way of giving ether, is still imperfect, as a great deal of gas is required, and patients frequently partially recover from its effects before ether narcosis is established. The method usually employed in England, that of using a combined gas and ether inhaler, is far preferable, as the two agents are mixed after unconsciousness is produced, and the gas is not discontinued until satisfactory anæsthesia results. Owing to the expense of the English apparatus, however, and to the difficulty of replacing its parts when out of order, it has been little used here. Recently there has been placed upon the market an apparatus of American make which is the equal in every detail of the English (Clover-Hewitt) apparatus, and in some respects is superior. The apparatus was devised by Dr. Thomas L. Bennett of this city, and is manufactured by Messrs. G. Tiemann & Co.

Nitrous oxide is a colorless gas having a faint but pleasant odor and a sweetish taste. Four gallons weigh one ounce. It is liquefied by a pressure of fifty atmospheres at a temperature of 44.6° F. It is now generally sold in liquid form, being put up in strong portable steel cylinders.

When nitrous oxide is inhaled, the patient experiences a pleasant sensation of warmth and numbness, and has an irresistible desire to breathe quicker and more deeply. The pulse under the finger is accelerated and feels full and strong. After a few seconds consciousness is lost, the pupils begin to dilate, and the pulse appears to be lessened in tension. The respirations are somewhat slower, but are still regular and increased both in number and depth over the normal. At this stage the features begin to lose their normal color, and slight twitching of the extremities may be observed. This duskiness of countenance is most pronounced in full-blooded or extremely florid subjects, while anæmic or sallow persons show little change. If the inhalation is continued a few seconds longer without the admission of air, the pupils usually become widely dilated, the pulse is rapid and weak, and the respiration slow, stertorous, or irregular in character. The features grow darker, tonic spasms of the thoracic and abdominal muscles or the muscles of the extremities occur and may be pronounced or slight, and the conjunctival reflex is abolished. Anæsthesia is now complete, and air must be admitted.

In nitrous oxide and ether anæsthesia it is not necessary to push the gas to the point of stertor, jactitation, etc.

In this short paper it is impossible to give a full description of Dr. Bennett's apparatus (*vide* page 524). It consists of a face piece, ether chamber, gas inhaler, and a gas and ether bag. The ether chamber is composed of an inner cylinder which is made to revolve within an outer one. Running through the inner cylinder is a large tube which permits the passage of air or gas through the ether chamber. Around this tube is placed a removable wire cage (for gauze or sponge), leaving abundant space between it and the chamber wall for the free circulation of air or gas. The gas inhaler is much smaller than the ether chamber, and is so constructed that when the inner cylinder is rotated breathing may be made to take place through valves, or valve action may be suspended and to-and-fro breathing employed. The apparatus can be used separately as an ether or gas inhaler, or may be combined.

Before beginning the administration of an anæsthetic it is necessary to observe a few precautions which will bear repeating here. The administration should not be made after a full meal. If it is absolutely necessary to give an anæsthetic within six hours after taking solid food, the stomach should be thoroughly washed out before beginning. The bowels should be thoroughly evacuated the night before operation, and if necessary followed by an enema the next morning. In my experience the salines act best for this purpose, and if the liver is inactive may be preceded by small doses of calomel. The salines, particularly the magnesium sulphate, act quickly, clear out the intestinal tract thoroughly, and leave its secretions in a healthy condition.

The vegetable cathartics cause more or less violent and irregular peristalsis, which keeps the patient awake, and they usually leave the intestinal tract in an irritable condition. I have frequently recognized in the dark vomited material following an afternoon operation the compound licorice powder taken the night before, and have observed that patients who had taken a saline did not vomit to the same extent and suffered very little from intestinal disturbances afterward. Solid food of any kind should not be permitted for twelve hours previous to operation. Some light liquid diet may be given a few hours before the administration, and I have found that patients who have taken such are less liable to suffer from nausea than those whose stomachs are entirely empty for several hours before the operation.

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[1] This attachment can be converted into an improvised antitoxin syringe, by connecting a small glass syringe with a sharp point by means of a short piece of tubing. The antitoxin can be measured with the barrel of the hypodermic syringe, before taking it up with the glass syringe. The improvised syringe can be easily boiled.

The heart, lungs, and arteries should be carefully examined and the urine tested for albumin before and after administration. Inquiry should be made with reference to false teeth, and if present they should be removed. The patient should be warmly clothed in loose garments, and all constricting bands about the waist, or anything that might in any way impede or embarrass respiration, should be removed.

The room in which the operation takes place should be warm and free from draughts to avoid chilling of the body. Weak or emaciated patients or patients having a weak heart should be given gr. $\frac{1}{30}$ of the sulphate of strychnine three times daily for several days previous to operation. The importance of this point cannot be too much emphasized, as it strengthens the heart and circulation, stimulates the respiration and nervous system, and fortifies the patient against shock. When this course has not been pursued gr. $\frac{1}{30}$ should be given hypodermatically half an hour before commencing the administration.

If the patient is in good general condition, I do not think it advisable to use previous stimulation.

In extremely nervous patients, morphine in small doses administered subcutaneously fifteen minutes before beginning the administration of an anæsthetic sometimes proves a very valuable drug, inasmuch as it quiets the nerves, stimulates the heart, relieves the pain after operation, and lessens the dangers of shock. Owing to the fact, however, that some patients have an idiosyncrasy against morphine, it is best to inquire if it has ever been taken or any unpleasant effect from its use experienced. On two or three occasions when I have anæsthetized the same patient more than one time, I have observed that the vomiting after ether was much more persistent when morphine had been administered, and inquiry elicited the information that it had always made the patient sick. On account of the marked similarity between alcohol and ether, whiskey or brandy should not be given immediately before etherization.

When administered in the ordinary way it is not always absorbed in time to produce the desired effect; it sometimes increases the excitement of the patient and oftentimes retards rather than accelerates narcosis. When the stimulating effect of alcohol is desired it is best to administer it subcutaneously. No one should undertake the administration of an anæsthetic without first being prepared to meet any emergency. All instruments and remedies necessary for resuscitation or in case of accident should be within reach. Such remedies as amyl nitrite, spirit of ammonia, and oxygen for immediate inhalation should be at hand, as well as prepared hypodermics of strychnine, digitalis, whiskey, atropine, camphor, etc.

A suitable mouth gag, tongue forceps, and sponge-holder should be within reach. Apparatus for the transfusion or rectal injection of saline solution should be available, and also instruments for tracheotomy. While these extreme measures will rarely be necessary, still if a patient should die on the table the anæsthetist would hardly be excused for not being prepared to meet any emergency. All these things, together with the inhaler, gas cylinder, and ether supply, can be neatly packed into an eighteen-inch dress-suit case.

A careful record should be taken of every case anæsthetized.

The Administration.—The face-piece, cushion, and ether chamber being sterilized and the whole apparatus carefully inspected to see that the valves, etc., are in perfect working order, the wire cage within the ether chamber is packed with sterilized absorbent gauze, and from one-half an ounce to an ounce of ether poured in. The index on the ether chamber is turned to "air," and the cushion moderately inflated to secure perfect adaptation to the face. The gas inhaler is attached to the chimney of the ether chamber. The aperture on the gas inhaler is left open, the air tap on the face-piece closed.

The gas bag, all air being first pressed out, is filled and attached to the gas inhaler.

The cushion is now gently but firmly adapted to the patient's face, the patient being informed that he is breathing nothing but pure air, and instructed to take long and deep breaths. As soon as he has become accustomed to the apparatus and his fears are somewhat allayed, the tap of the gas bag is quietly closed. The patient inhales gas through the inspiratory valve and exhales a part of it mixed with the residual air of the lungs through the expiratory valve. When the bag has become about two-thirds emptied, the aperture of the gas inhaler is closed by turning the thumb-screw, and valve action is suspended. The patient now breathes back and forth into the bag. As soon as unconsciousness takes place, the index on the ether chamber should be immediately turned to a little beyond the mark between "air" and "ether," admitting a small quantity of ether fumes. The patient is allowed to take two or three inspirations, when the index is moved a little farther along, permitting a mixture of gas and ether to be inhaled. The respiration and countenance at this stage should be carefully watched, and if any signs of asphyxia develop, the tap of the gas bag should be opened and a single inspiration of air allowed. The index should be slowly moved forward, pausing long enough between each advance for the larynx to become accustomed to the increased strength of the ether vapor, and admitting air as necessary until the ether is fully on. The patient continues to breathe a mixture of gas, ether vapor, and a small quantity of the residual air of the lungs to and fro into the gas bag, these passing through the gas inhaler and around the wire cage of the ether chamber to the face-piece.

When anæsthesia is completed, which usually takes place in from two to three minutes, the gas inhaler and bag should be detached from the ether chamber, and the ether bag attached.

Ether may now be added through the revolving disc on the side of the ether chamber opposite the thumb-screw or through the face-piece, and the admission of air regulated as desired.

By leaving the tap of the ether bag open, the apparatus can be used practically as an open inhaler, or by closing it to-and-fro breathing can be employed, air being admitted through the tap on the face-piece.

By detaching the bag, the inhaler fulfils every requirement of an open cone.

The administration is now continued in the ordinary way.

The Guides to Proper Anæsthesia.—Of all the guides to the proper depth of anæsthesia, the respiration is the most important, and in the respiration lie the chief dangers of etherization.

I think all will agree with me that the principal troubles with this function arise during the first stage of narcosis, and are due to the strong ether vapor coming in contact with the upper air passages, causing clinching of the teeth, attempts at swallowing, coughing, or vomiting, closure of the glottis, profuse secretion of mucus, and spasm of the chest muscles, which may embarrass or arrest respiration. These symptoms, though usually only troublesome, do sometimes occasion great alarm, and have necessitated the performance of artificial respiration and even tracheotomy. Thanks to nitrous oxide they are now eliminated, and the patient enters directly into the second stage of ether narcosis.

When ether is properly administered, the respiration as a rule is regular and distinctly audible, slightly stertorous in character, and somewhat accelerated, a puffing movement of the lips and cheeks with each expiration being frequently observed. However, each case is a law unto itself, and by studying the effect of more or less ether upon the rate, depth, and audibility of breathing, a fixed standard can soon be obtained. If the breathing becomes inaudible or loses its stertor more ether is required, and this sign will soon be corroborated by a slight cough or a swallowing movement. If the respiration becomes deeply stertorous or embarrassed it is indicative of paralysis of the muscles of the soft palate, and the ether should be diminished.

This condition should not be confounded with the loud snoring noise sometimes made by patients under ether.

While the chief dangers to respiration arise during the first stage, it must not be forgotten that an abundant secretion of mucus at any stage may partially cut off the air supply, causing marked cyanosis, and that too great a restriction of oxygen may cause sudden respiratory failure.

Great care must be taken to keep the mouth and throat clear and the air passages open by frequently using the sponge-holder, lowering and turning the head to one side, and extending the neck well upon the shoulders, at the same time lifting the chin. This manœuvre raises the base of the tongue from over the glottis, causes the mucus to run out, allows free inspiration, and opens the air way.

I have notes of the following case: Mr. H——, aged forty-eight years; general condition poor; very nervous temperament; temperature, 99° F.; pulse, 88; respiration, heart, and blood-vessels normal; urine contains some pus and slight trace of albumin. He had taken gas before. Ten minutes after operation began anæsthesia was progressing favorably, though there was slight cyanosis about the ears. The patient was getting plenty of air and there was little or no secretion of mucus. The respiration was good, the pulse full and strong. The air passages were open, the muscles relaxed. The blood was of good color. Suddenly the respiration ceased; the pulse continued full and strong. The ether was withdrawn, artificial respiration performed, and oxygen administered; at the same time hypodermatic injections of atropine and strychnine were given. The operation was continued. In a few minutes the respiration became fairly satisfactory, but as soon as the ether was resumed it suddenly stopped. Artificial respiration was again resorted to, and the operation finished under chloroform. This was evidently a case of idiosyncrasy for ether, the drug causing paralysis of the respiratory centre, as the patient continued to breathe under small quantities of chloroform. After the operation the patient had no further trouble and made an uneventful recovery.

Soon after the administration of ether is begun the arterial pressure rises and the peripheral blood-vessels dilate, leading to flushing of the face and profuse diaphoresis. As long as the skin remains flushed or heightened in color no danger need be feared on account of the circulation, but should it assume a marked degree of pallor or lividity, there is danger of heart failure, and cardiac stimulants should be administered.

The Reflexes.—By placing the finger on the throat the occurrence of any swallowing is easily recognized. This is often the first indication of returning reflex activity, and is soon followed by coughing or vomiting if the ether is not increased. While the conjunctival reflex is a very valuable one, it is a bad practice to touch the cornea, on account of a possible resulting conjunctivitis. If it becomes sufficiently strong to require an increase of ether, it will usually respond to lifting of the upper lid.

The pupil is of little value as a reflex until anæsthesia is fully established. By noting the effect of more or less ether, the proper size for surgical narcosis is easily learned. If the anæsthetic is used too lightly the pupil will dilate; also if it is used too freely it will dilate. That is, there may be two causes of dilatation, the first of reflex origin, the second of profound etherization. It is sometimes difficult to tell just what a dilated pupil means. In such a case the other guides should be consulted, but if a little more ether is used, the pupil will either contract or dilate still further. If it contracts it shows that the dilatation was of reflex origin; if it dilates still further, that the ether has been pushed too far and should be decreased. It is easily seen that the pupil may dilate reflexly from some operative procedure, and that an increase of ether may at first cause it to contract and a little later to dilate again, but this second dilatation is the dilatation of profound anæsthesia and shows that the increase has been carried too far. As a rule the pupil grows smaller as the administration is continued, and occasionally remains contracted throughout a long operation.

It should be remembered that the restriction of air always tends to make the pupil dilate. No one guide or reflex can always be entirely relied upon, but they are all of value for corroborating one another, and cases sometimes arise in which the corroborative evidence of all must be taken into consideration in determining the exact depth of anæsthesia. In conclusion I will briefly state the advantages of this method, viz., economy, safety, saving of time to the operator, and elimination of the disagreeable features of ether inhalation. As the quantity of ether inhaled is comparatively small, patients recover more promptly, nausea and vomiting are of much shorter duration, and intestinal after-disturbances are reduced to the minimum.

In ordinary ether administration it often takes more ether to induce narcosis than is afterward required for a long operation. The almost absolute safety of gas, its pleasantness and rapidity of action make it a most welcome agent to any patient who is to undergo a surgical operation. Indeed, the small quantity of nitrous oxide actually required is sometimes surprising, one bagful (about two gallons) being sufficient for any case, and I have succeeded in inducing perfect anæsthesia, without the least discomfort to the patient, with only half a bag.

The quantity of ether required in ordinary cases is less than one-half, and oftentimes one-third, of that consumed when the open cone is used, a single 250-gm. tin sometimes sufficing for three lengthy operations.

In kidney or lung affections in which the condition of the heart forbids the use of chloroform this economy of ether is certainly a very great advantage. The following case serves to illustrate this point:

Mr. B——, aged seventy-four years, three weeks previous to operation had marked ascites with œdema of the lungs and general anasarca of the lower extremities, face, etc. At this time he was passing nine ounces of urine in twenty-four hours, which contained about fifteen per cent. of albumin. The heart was slow and very weak, but its sounds were normal. Under treatment these symptoms practically disappeared. At the time of operation the patient was passing forty-five ounces of urine daily, which contained a slight trace of albumin, but on account of the weakness of the heart it was decided to administer ether instead of chloroform. Anæsthesia was induced with gas, and the patient kept under ether one hour and a half. The urine was examined every day for a week after without any increase of albumin being noted, and the patient continued to pass a satisfactory quantity.

Finally, I would advise any one who may use this method to reassure the patient by explaining the pleasant effects of gas, its safety and rapidity of action, and the fact that none of the disagreeable sensations of ether inhalation will be experienced.

It is also very important that the administration should take place in a quiet room, and that nothing, such as loud talking, should occur to distract the patient's attention. If the patient's confidence in the administrator and the agent he employs is thus won, and these precautions are strictly observed, the slightest difficulty with the administration will rarely ever be experienced.

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CHRONIC VERTEBRAL RHEUMATISM (RHEUMATIC SPONDYLITIS) AND ITS PSEUDO-NEURALGIC FORM.[1]

By H. FORESTIER, M.D.,
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The question of chronic spondylitis is just now before the medical profession. Lately two important papers were published on this question in this country: one by Dr. Zenner, of Cincinnati,[2] the other by Dr. Dana, of this city,[3] and at the same time the New York Neurological Society, in November, 1899, had an important discussion of this subject in which Drs. Sachs, Gibney, Dana, Collins, and Peterson took part. The variety of spondylitis which they have spoken of is the one characterized by ankylosis of the spine, presenting two distinct types, one described by Bechterew, the other by Marie and Strümpell.

Cases of chronic spondylitis which I have observed in Aix-les-Bains, and which I am going to describe as a pseudo-neuralgic form of chronic vertebral rheumatism, are somewhat different, having the following clinical characteristics:

1. Temporary rigidity of the vertebral column, without any ankylosis, from muscular contraction, giving the patient a peculiar stiff gait; these symptoms depend upon the pain which the patient feels when he moves the trunk. 2. Predominant pseudo-neuralgic symptoms, nerve-roots symptoms; intercostal girdle pains; pains radiating from the back through the lower limbs, simulating in some instances either tabes or pachymeningitis spinalis externa, or even Pott's disease. 3. Coincidence of arthritis involving some peripheral joint, showing there is a rheumatic process. 4. Curability under such treatment as the Aix-les-Bains douche-massage, the recovery showing that the pathological process may be considered as rheumatic.

As far as I know, but little has been written on such cases. Classical text-books give but a short account of vertebral rheumatism. They describe the usual varieties, torticollis, lumbago, and simply mention the fact that pseudo-neuralgic symptoms may occasionally occur in some cases.

Papers published on the subject of spondylitis or chronic stiffness of the vertebral column (as reported by Dr. Zenner and Dr. Dana) and on the subject of articular lumbago[1] do not record cases presenting the clinical features of those I am about to describe. I must mention that I have published a first account of them at the International Congress of Hydrology at Liège, October, 1899.

Case I.—Mr. M——, priest, aged forty-one years; family history negative. Personal history: He was generally healthy up to the age of thirty-five years. Since then he has become stout through rich food and lack of exercise. Three years ago he had pains in the left lower limb and in the neck. The present illness began in March, 1897. At that time he began to complain of pain in the region of the right hip, called sciatica, and accompanied later on with swelling of the left lower limb, suggesting the possibility of phlebitis. Shortly after pains appeared in the chest (girdle pains) radiating through the lower limbs; and in the mean time there was rigidity of the posture and gait. His physician thought there might be disease of the spinal cord, but after a while, the patient's condition being no worse, he sent him to Aix-les-Bains. Present state, May, 1897: He is a man of medium height and well-built. At first glance the attitude strikes one: the patient walks rather slowly, the trunk keeping rigid. He complains of an almost continuous pain in the back (girdle pain), increased by coughing and sneezing, and radiating through the thighs, with shooting pains. Movements of the trunk, lateral or antero-posterior, as getting into or out of the bed, cause marked pain. He feels more comfortable when seated than when lying down. He cannot straighten the body. Movements of the neck are free from pains. Examination shows that the vertebral column is rather straight, the normal lumbar concavity being absent, and that there is no real impairment of motion, the rigidity being simply muscular in consequence of the pain. There is tenderness on pressure along the spine from the fourth dorsal vertebra to the sacrum, and over the sciatic nerve, but there is no tenderness over the loins. The knee jerk is exaggerated. Signs of articular rheumatism are present; the right foot is swollen and painful, all the joints being involved. There is no sign of a previous phlebitis. The knees are stiff. There is cardiac arrhythmia; the sounds are not very distinct; the heart is fatty. The urine is normal.

Thermal treatment: The patient was put under the general douche-massage, applied by two masseurs especially to the back, the patient being in a reclined posture; the temperature of the water was 85°-90° F.; duration ten to twelve minutes. Twenty douches-massages were taken with an interruption every four days. There was an immediate improvement which three months after the treatment was greater and continued. When I saw the patient in 1898 he was perfectly well.

Case II.—Mr. M——, aged forty-eight years. Family history was negative. Personal history: At the age of thirteen years he had acute articular rheumatism with several relapses. He had thermal treatment in Aix in 1888. Since then he has been healthy for some years. His present illness began in November, 1897; he began to complain of pains in the lower limbs, like sciatica, alternately on the right and left side, with intercostal and girdle pains. These symptoms getting worse, his doctor thought of a disease of the spinal cord, and made several times a Paquelin cauterization along the spine, which gave a pretty satisfactory result. Later on, giving up the idea of a nervous disease, he sent the patient to me in Aix-les-Bains. Present state, June, 1898: He is a tall and well-built man. His general condition is not satisfactory. He is in a state of nervous excitement (confesses he takes brandy pretty often). His posture and gait are stiff; he cannot straighten the body, and walks, keeping the trunk immobile, with his feet far apart. He complains of intercostal and girdle pains. When he has walked any distance he feels weak and has shooting pains in the lower limbs. In the early morning he has a backache. Examination shows in the upper part of the spine a slightly rounded curvature; slight lumbar scoliosis. He has tenderness over the spines of the lumbar region and over the lower intercostal spaces, and over the sciatic nerve also. Pressure upon the head produces pain in the lumbar region. The movements of the trunk are difficult and painful. The patient can hardly lie flat on his stomach and turn in bed. The knee jerks are brisk.

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[1] Read before the Section on Medicine of the New York Academy of Medicine.

[2] Journal of Nervous and Mental Disease, November, 1899.

[3] Medical News, November 25, 1899.

[1] Albert Robin et Loude. Revue de Médecine, 1894.

Thermal treatment: Twenty-five general douches-massages were given. At the end of the treatment the patient felt a very distinct improvement, which remained for two months afterward. In September he came back to Aix to have a second course of treatment. At that time I found the tenderness over the spine had disappeared. The recovery was almost complete. When I saw the patient last summer he was all right.

Case III.—Miss P——, aged twenty-five years, milliner; family history negative. Personal history: She has been generally healthy, although she was not of a strong constitution. In December, 1894, she took a walk of about twenty miles in the snow, after which she was seized with an acute articular rheumatism. She was laid up almost fourteen months, partly in the General Hospital of Lyons. Recovery was tedious in consequence of arthritis of the knees and ankles. She was sent to me in Aix-les-Bains. Present state, September, 1895: The patient is of medium height and thin body. The posture and gait are stiff; she walks rather slowly, keeping the trunk immobile. She complains chiefly, after walking, of pains in the back (girdle pains) irradiating through the lower limbs. She has a limp on the right side. Examination shows wasting and flaccidity of the muscles of the limbs; tenderness along the entire spine with the exception of the upper thoracic region; tenderness over the sciatic nerve. Movements of the trunk are painful and accordingly diminished. At the neck there is tenderness on pressure over the lateral processes, causing radiating pains through the upper limbs. The knee jerks are exaggerated. The general condition is pretty good, but she has chronic catarrhal colitis.

Treatment: The patient took a course of twenty general douches-massages.

September 29th: Improvement was shown. The pains were relieved; no limp was visible.

In the course of the winter of 1895–96 the pains recurred in the limbs and trunk. She was admitted to the General Hospital in Lyons, where for a time Professor Teissier, impressed by the neuralgic symptoms, thought of a possible pachymeningitis spinalis externa. After an accurate observation the case was considered one of rheumatism, and the patient was sent again to Aix-les-Bains. When I saw her in the season of 1896 her condition was the same as the year before, the neuralgic symptoms being more marked. She took a thermal treatment of about twenty general douches-massages and was improved. The improvement has been continuous since then. In 1897 the patient, having recovered, went back to work. When I saw her in 1898 she was perfectly well, except that the catarrhal colitis still existed in a slight degree.

Case IV.—Mr. C——, aged thirty-nine years, commercial traveller. Family history negative. He has been generally healthy, but he has taken little exercise and lived high. In 1886 he had his first attack of regular articular gout, and since then has had further attacks every year. For four years (namely, since 1888) he has suffered from girdle pains and pain in the right lower limb (sciatica), and has become stiff. Being afraid that he was affected with a disease of the spinal cord he consulted Charcot, who sent him to me in Aix-les-Bains, diagnosis being reserved. Present state, May, 1891: He is a tall and well-built man. Posture and gait are stiff. He takes short steps with his feet far apart, keeping the trunk immobilized because of the pain on attempted movement. The patient complains of intercostal and girdle pains, of pain in the right hip region increased by coughing. In the early morning he usually feels a backache. Examination: The normal lumbar concavity is absent; the patient cannot straighten the body; slight dorsal scoliosis is present. There is tenderness on pressure over the second, third, and fourth lumbar vertebræ. Pressure upon the head and shoulders produces girdle pains. Partial mobility of the spine exists, but the movements are painful. The patient suffers when attempting any act which necessitates a movement of the trunk, as picking up something from the floor, or getting in and out of the bed. The knee jerks are rather weak. A gouty swelling remains in both feet.

Thermal treatment: Twenty-two general douches-massages with two masseurs, applied especially to the back in reclined posture.

June 21st: The patient is very much improved; he can pick up things from the floor; he moves the trunk well. When I saw the patient one year after he was much better: he had had no further attack of gout, no pains; the mobility of the spine was greatly restored. Since then the patient has come every year to Aix and is getting on very well.

Case V.—Mr. C——, aged thirty-five years, manufacturer. Family history is negative. Personal history: He has been generally healthy, but has been accustomed to a sedentary life and excesses at table. In March, 1894, he suffered from subacute arthritis in the wrists, shoulders, and knees, which was probably subacute rheumatism. He received thermal treatment at Aachen. In November, 1895, he began to complain of intercostal pains, increased by coughing, together with pain and stiffness in the neck and in the large joints. He was sent to me in Aix. Present state, June, 1896: He is a tall and well-built man. Posture and gait are stiff. When he walks he keeps the trunk and neck immobile, the head being a little pushed forward. He complains of intercostal and girdle pains, increased by coughing. Examination shows the upper half of the spine to be slightly bent and pushed forward. The lower half is rather straight because of the absence of the normal lumbar concavity. There is tenderness on pressure along the entire spine, most marked in the middle dorsal region; there is also tenderness on pressure over the lateral processes of the cervical vertebræ. Mobility of the spine exists, but the movements are painful. The cervical spine is stiff; flexion of the head is diminished. There is a tendency to a more advanced stiffness than in the former cases. Shoulders, elbows, wrists, knees, and ankles all are more or less the seat of a rheumatic process as marked by swelling and pain.

Thermal treatment: A course of twenty-five general douches-massages was taken within thirty days. At the end of the thermal treatment the patient was improved; he had less stiffness in the neck, fewer pains, and the rheumatic arthritis had resolved. Improvement has continued since then. Later on the patient was entirely cured, the neck remaining a little stiff.

Summary of Cases.—All these cases present a peculiar clinical aspect. The posture and gait of the patients strike one. The patient stands up, slightly bent forward, and cannot straighten the body. He walks slowly, with the feet far apart in some cases, keeping the trunk immobile. The neck not being involved, the patient is not so stiff as in the Bechterew type.

The subjective symptoms are very characteristic; there are pseudo-neuralgic symptoms predominant from the onset of the disease. These nerve-roots symptoms are very like the one reported by Drs. Dana and Zenner, in ankylosing spondylitis. Patients complain of various pains irradiating from the back: intercostal pains, girdle pains, radiating pains through the lower limbs, sometimes the upper limbs (Case III.). These radiating pains may have the character of shooting pains (Case IV.). These pains are increased on attempted movements of the trunk when walking, or when coughing and sneezing. A very peculiar feature is the backache occurring in the early morning or when the patient has been lying down for some hours.

I must notice here that there are no more marked sensory troubles, no paræsthesia, no trophic changes, no muscular atrophy as it occurs in cases of the Bechterew type. There may be simply a certain degree of wasting and flaccidity as in Cases I. and III.

The knee jerks are exaggerated, as a rule, with the exception of one case. There may be ankle clonus as in a case recorded here.

Examination shows: (1) No deformity of the spine, but either the absence of the normal lumbar curvature or a slightly rounded posterior curvature of the upper half of the spine (Cases II., IV.). The lower half is rather straight. (2) Mobility of the spine exists when the patient moves the trunk in spite of the pain. Of course there is a certain stiffness because of the immobility. But there is no real ankylosis as in the Bechterew type. The trunk is immobilized because of the pain which even slight movement causes. (3) Tenderness on pressure over the spine and lateral processes (Case III.) sometimes is deep-seated. It is not simply hyperæsthesia of the skin as in spinal irritation. Tenderness exists too along the lower intercostal spaces (Case II.), and over the upper sciatic nerve, as in all cases. As it appears from the topography of tenderness the whole spine as a rule is not involved. The dorso-lumbar column is mostly affected, the neck being rather seldom involved (Case V.). Besides the tenderness over the spine there may be pain in the back when pressure is made upon the head or shoulders (Cases III., IV.). There is no tenderness in the loins in any case, which is not in favor of a primary muscular trouble (myositis).

The etiology of the cases is marked by a rheumatic history in all patients; sometimes gout is in question, as in Case IV. In Case I. there was slight chronic rheumatism in one foot, and sciatica probably. But the other patients have been affected with more or less severe acute or subacute articular rheumatism.

A clinical feature which differentiates the pseudoneuralgic form from the ankylosing one of vertebral rheumatism is that the former is curable. All these patients have been more or less entirely cured; I mean they have recovered for a time at least, a further relapse being possible.

Myxœdema.—Nicola de Dominicis considers this affection to be a complex of lesions of every part and every system of the organism, with multiform manifestations. It may be considered as a special type of diabetes, the primary lesion being in the thyroid gland, with secondary alterations of the nerve centres and of the various tissues of the organism. We may call it thyroid diabetes just as we speak of pancreatic diabetes. The injection of thyroid extract may be of value before incurable lesions of vital organs have been formed. —*Gazzetta Internazionale di Medicina Practica*, February 28, 1900.

TREATMENT OF SUPERFICIAL WOUNDS WITHOUT SUTURES.

By JOHN F. W. WHITBECK, M.D.,
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To close superficial wounds many of us have used hair braiding for the scalp, and compresses, adhesive strips, bandages, collodion, and other available means, but sutures have been so universally employed that most physicians think they are indispensable. The question generally is not why, how, or when to dispense with sutures, but what suture material to use and how to apply it.

A comparison of different materials and methods extended over many years of observation has convinced me that absorbent cotton and collodion combined will secure prompt and good union of superficial incised and lacerated wounds. To obtain good union, however, it is important to observe a few first principles.

We must have an aseptic wound and a clean skin. The skin can be cleansed with soap and hot water, close shaving, and alcohol. Asepsis of wound and skin is then made sure by a careful wiping with dossils of absorbent cotton which have been soaked a few minutes in a 1 : 500 solution of bichloride of mercury. As soon as the parts are dry enough for the collodion to adhere, the edges of the wound are brought together and secured by cotton and collodion alone, or with the help of narrow strips of isinglass plaster moistened with the bichloride solution, or by similar strips of muslin or linen painted over with a thin coat of fresh flexible collodion. The thinnest possible layer (a mere layer of fibres) of dry, aseptic absorbent cotton is to be applied, and it should overlap the angles and edges of the wound far enough to have a firm hold on the skin. It will do no harm, and it will not prevent, but will rather help, the union, if a little blood oozes under the dressing. The discoloration is objectionable in appearance only. The following day a fresh coating of cotton and collodion will whiten the dressing so that it will be less noticeable.

After four or five days the entire covering may be removed; better still after eight days. Or the dressing may be left on from ten to fourteen days, when it may be easily removed by peeling it off dry or by moistening it with a little ether.

The cases to which this dressing is applicable are numerous and various. I have used it with entire satisfaction in extensive and angular lacerations of the scalp, the skin of the nose, the face, the lips, the ears, the hand, the thigh, and the calf of the leg. And the use of this dressing has been very successful after the excision of glands and small growths.

The advantages of a dressing without sutures which will secure the union of wounds of the bald scalp, the face, the ear, need hardly be mentioned. The cosmetic effect alone is desirable, but if we can dispense with the dread, the pain, the anæsthetic, incident to stitching, and have fewer and finer linear scars, we shall the more defer to the wishes and the comforts of our patients. This dressing will not fail in suitable cases, and usually one has the pleasure of seeing so fine a linear cicatrix as to suggest a wrinkle in the skin rather than the tracing of a wound.

259 Park Avenue.

Prostatic Obstruction.—My present feeling is, that prostatectomy offers a distinctly better prospect of relief than orchidectomy, and is especially applicable to the cases in which the obstruction is due to the growth into the bladder of prostatic projections which encroach on the urethral orifice.—A. T. Cabot, *Boston Medical and Surgical Journal*, vol. cxl., No. 17.

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HYGIENE AND STATE MEDICINE IN THE UNITED STATES.

No branch of medicine is more neglected in this country than hygiene and State medicine; in fact, its importance is almost completely ignored. The opportunities provided for special instruction on the subject are so small as to be scarcely worthy of mention. This seems to be a strange oversight on the part of State and municipal authorities, who should for the sake of its citizens afford the medical man every means of obtaining practical and scientific training in sanitary work. In Great Britain and on the European continent generally the value of the physician possessing a competent knowledge of hygiene is well recognized, and in the former country a physician is not eligible as a medical officer of health unless he holds a special diploma in public health. It is to be hoped that progressive States in America may soon discern the advantage of following this example. In "Medical Education of the Future," an essay by President Eliot, quoted in the January *Bulletin of the University of the State of New York*, is the following intelligent appreciation of the important part which the State, in connection with the physician, should play in the preservation of the health of the people at large:

"State medicine has many objects in view. It aims not only to protect the public health, but also to increase it. In State medicine individualism is impracticable, for it is impossible for the individual to protect himself. The social co-operation, which in our days the State alone can enforce, is needed to promote security against disease and progress toward better average health and longer life. To take all possible precautions against the spread of infectious diseases is simply an act of good citizenship. Nothing but medical supervision will accomplish the objects of State medicine, and there are no agents so effective as physicians to spread through all classes of the community an educated sense of sanitary decency. Only the State can guard against dirty milk, corrupted water supplies, impure ice, adulterated drugs, spoilt meat and fruit, and filthy and overcrowded tenements. Only the State can enforce the isolation of cases of contagious disease, the suppression of epidemics, and the exclusion of pestilences, like cholera and yellow fever. In exercising such control the State needs every aid which medical experts in chemistry, bacteriology, and comparative pathology can place at its disposal. The medical profession itself hardly recognizes as yet how great promise there is in the further study of the connections between diseases in animals and in man—connections which smallpox, scarlatina in cows, tuberculosis in men and animals, and diphtheria already illustrate. Not even the State—that is, a single state or nation—can deal effectively with such a problem as the suppression of cholera or yellow fever. That is an international problem. The evils which the social and gregarious instincts of men create, by inducing the modern crowding into cities, must be socially remedied; and the most effective force which society can exert to this end is the influence of the highly trained medical officer. Every physician should be a medical philanthropist and missionary, zealous to disseminate knowledge of public hygiene."

BURIAL ALIVE.

FOR all popular fears there is probably some germ of truth—often infinitesimal, and generally magnified and distorted. Among the most dreaded of these, and not improperly so, is the fear of burial alive. It seems not impossible that under rare and exceptional instances such an occurrence could happen, but the authentic cases on record are exceedingly few in number. An accident of this kind is conceivable only if burial is undertaken within a short time of death, as has sometimes been practised during the prevalence of epidemics of virulently contagious disease, and a sufficient interval is not permitted to establish the certainty of death by the beginning of putrefaction.

Several instances that illustrate the possibility of burial alive, though they cannot be said actually to prove its occurrence are related by the Rome correspondent of *The Lancet* (Febrary 24, 1900, p. 582). It is recorded that shortly after the great cholera visitation in Italy in 1866, Pacini, at the time professor of anatomy in Florence, cited cases in which patients certified as dead had returned to life on the way to the cemetery. In the next epidemic of cholera in 1884 a well-known physician of Turin was attacked by the disease, and, worn out by professional duty, failed to rally. Certified as dead, the body was prepared for the undertaker, but after a time consciousness returned. The man failed, however, to rally, and finally died. Recently, in southern Italy, it is reported, a young woman apparently died as the result of an exceedingly difficult laborn ecessitating much unavoidable intervention, the fœtus also being given up as dead and remaining in utero. In accordance with Italian custom the funeral was fixed for the next day and the body was left in a coffin in the mortuary chapel adjoining the cemetery. Early in the morning a photographer, who was commissioned to secure a likeness of the woman, obtained permission to open the coffin, and he found that the body, which had been placed upon its back, was now on its side, and close to it was a "lovely" child without arms, as these had been detached in the obstetric manipulations. The custodian of the chapel now recalled that during the night, while a storm was raging, he had heard feeble cries, as of some one calling for help, from the mortuary chapel. An official inquiry is to be made. This is certainly a remarkable story, and, before accepting it as an instance of burial alive in the form in which we have quoted it, we would prefer more convincing evidence. In commenting upon this report *The Lancet* points out the unlikelihood of the child being born alive, as the mutilation to which it had necessarily been subjected would seem to preclude the possibility of its survival. Post-mortem expulsion of the fœtus is not unknown as a result of the muscular rigidity that occurs after death. In a later letter the correspondent of *The Lancet* at Rome reports another case in which an old countryman fell ill, failed to recover, was certified as dead, and was laid in his coffin with the despatch characteristic of Italian custom on such occasions. As the lid of the coffin was being screwed down the man was felt to move and heard to speak. Medical aid was at once invoked and consciousness restored, but the patient failed to rally, and real death took place in the course of two days.

There was recently reported in the newspapers, from the city of Rochester, the case of a man, thirty-five years old, who became unconscious in the course of an attack of scarlet fever and was pronounced dead, burial taking place two days later. A short while afterward the father of this man died, and to accommodate his remains it became necessary to disinter those of the son. When this was done the glass front of the coffin was found, according to the report, shattered to pieces, the bottom kicked out, and the sides considerably sprung. On removing the lid the body was found resting on its face, the arms bent at the sides, and handfuls of hair tightly clenched in the fingers. Comment upon this account seems scarcely justified further than to say that its correctness does not appear to be probable.

While we have no wish to deny the possibility of burial alive, and while its impossibility is not susceptible of demonstration, we may safely allay any fears that the condition is other than most exceptional.

THE PREVALENCE OF INFLUENZA.

There is reason to believe that influenza has been unusually virulent during the past winter. The records of the Philadelphia bureau of health show that for the week ending March 31st there occurred in that city 679 deaths, being 42 more than during the preceding week, and 175 more than during the corresponding week of the previous year. Of this number 151 were due to pneumonia, 60 to pulmonary tuberculosis, 56 to disease of the heart, 29 to influenza, 26 to old age, 20 to nephritis, 21 to measles, 20 to inflammation of the stomach and bowels, 17 to convulsions, 15 to bronchitis, 15 to apoplexy, 15 to diphtheria, 14 to marasmus, 14 to uræmia, 13 to typhoid fever, 13 to inanition. These figures show the fatal prevalence especially of diseases attributable to cold—the diseases of the lungs and catarrhal conditions, as well as of influenza and its complications.

For the week ending April 7th there were reported 732 deaths—53 more than for the preceding week, 146 more than for the corresponding week of last year, and 313 more than for the corresponding week of 1898. Pneumonia is credited with 144 deaths, congestion of the lungs with 14, bronchitis with 24, pleurisy with 4, pulmonary tuberculosis with 66, diseases of the heart with 52, influenza with 42.

THE STRUCTURE AND FUNCTION OF THE KIDNEY.

In the presence of certain grave conditions of the kidney, as for instance laceration, suppuration, hemorrhage, the surgeon is at times confronted with the question whether it were better to ligate the afferent or the efferent vessel, or to perform nephrectomy.

As the result of experimental observations undertaken with the object of shedding light upon this important subject, Alessandri (*Revue de Chirurgie*, 1899, Nos. 8 and 9) has found that ligation of the renal vein gives rise at first to marked stasis, which interferes greatly with the nutrition and the function of the renal epithelium, almost completely suppressing the secretion of urine. After a time a certain degree of collateral venous circulation is restored, and this may be sufficient to compensate wholly for the obliteration of the renal vein. The volume and the weight of the kidney, which at first are greatly increased, rapidly diminish; and the signs of stasis disappear. While one portion of the organ, in which the circulatory equilibrium becomes re-established, resumes its vitality and its function, other portions of the kidney are destroyed, sometimes by anæmic necrosis, but more often by hemorrhagic infarction, and the newly formed epithelium accumulates in the greatly altered lacunæ of the tubules. In consequence in many instances, after a time, the structure of the kidney is found preserved and its function almost normal. This restitution may permit the kidney to sustain the eliminative functions of the organism if the activity of its fellow should be abruptly suppressed. For this reason the deduction is made that in case of wound or other lesion of the renal vein ligation should be preferred to nephrectomy.

Ligation of the renal artery is followed by deficient *vis a tergo*, with the phenomena of anæmia due to sudden cessation of the nutritive arterial flow. The manifestations of stasis disappear with the establishment of a collateral arterial circulation, particularly in the cortical structure. The phenomena of anæmic necrosis may progress to necrobiotic infarction when the compensatory arterial circulation fails to take place or is inadequate. These zones may be more or less extensive, and they may occupy the entire renal parenchyma, as they do in the cat. In the dog, on the other hand, the collateral circulation may be so fully established that the integrity of the kidney is almost completely restored, and, although this has never been done, it may be possible to remove the other kidney successfully. In the cat, therefore, nephrectomy is to be preferred to ligation of the artery, while in the dog ligation is the preferable practice. In man, the possibility of a collateral circulation through the adrenal, the diaphragmatic, the lumbar, and the ureteral arteries justifies the conclusion that results similar to those in dogs may be looked for.

Simultaneous ligation of both renal artery and vein is incompatible with the continuance of the vitality and the maintenance of the function of the epithelial elements of the kidney. The collateral vascular anastomoses are sometimes sufficient to prevent rapid necrosis of the organ. On the other hand there may be a gradually progressive cirrhosis, which little by little destroys the remaining canaliculi and glomeruli. In consequence, if, after ligation of both the renal artery and vein, the functional portion of the kidney is not preserved, the organism is not exposed to the danger of rapid necrosis of the renal tissue, which still retains a certain vitality and is capable of fibrous transformation through proliferation of the interstitial connective tissue.

THE RESIGNATION OF DR. McBURNEY.

The resignation of Dr. Charles McBurney from the staff of the Roosevelt Hospital deserves more than a passing mention, for it marks the close not only of a personal hospital career of singular value and brilliancy, but also apparently of an important experiment in hospital management.

Some fifteen or eighteen years ago the managers of the Roosevelt Hospital, under the inspiration of the late Dr. Henry B. Sands, established a continuous surgical service under a single head. In 1888 Dr. Sands gave place to a successor of his own choice, Dr. McBurney, under whom the plan has been continued for twelve years, and who has made it for the greater part of that time the most notable surgical service in the country. It is a duty, as well as a pleasure, to testify to the fidelity, the devotion, and the skill he brought to it, and to the brilliant results he has obtained.

But it must also be recognized that the work has been so heavy that without such faithful and skilful service as he has given it could not have been properly done, and it is not surprising that a new generation of managers should feel that they cannot count upon always commanding an equally good supply for the position and should modify their organization accordingly, as it is reported that they have done.

The service has been divided, and Drs. Bull and Weir, whose eminent positions are known to all, have been appointed to the two divisions.

This reduces each service to about forty beds, a smaller number than that found in some other hospitals, and deprives Roosevelt of the unique character heretofore given to it by the size of the service and by the singleness of its control. The change is probably even more marked than these facts indicate, for it must include also a severance of the close relations that have heretofore existed between the hospital proper and its out-patient department, and a loss of the advantages coming from the control and influence of a single chief extending down through all the departments, and the support and enthusiasm of subordinates closely in touch with him.

The hospital, therefore, ceases to have for the profession the peculiar interest which it has heretofore had, and we have only to note the results of the experiment which has been conducted there for the past decade and a half, distinguishing so far as may be between those due to the system and those due to the character and abilities of individuals.

The service has become most notable. No other hospital in the city can show for the same period so important a list of operative cases and successes, and such noteworthy additions to surgical therapeutics and methods. The fame of the hospital has spread, and its reputation has brought patients to it in constantly increasing numbers.

The effects of organization under a single head appear, so far as they can be separated from those of the personal qualities involved, in the exceptionally high standard of methods and results, and in the training of those who at various times have held the subordinate positions. Halsted, Hartley, and Johnson served there for many years. It is enough to mention their names; and they served not only as substitutes in the absence of the attending surgeon, but also as his assistants in important operations and at the clinics, aiding in and profiting by his experience and methods. In this manner experience was widened beyond a single life, and a greater continuity was given to the ideas developed thereby.

Another striking fact, which appears to be an effect of the weight of the service, is the age at which the two surgeons who held the position resigned from it, Sands at fifty-seven, McBurney at fifty-five, while continuing in private practice.

We extend to Dr. McBurney the expression of our warm appreciation of what he has done in the past, and our best wishes for the future, and we congratulate the community and the profession that they are still to have the benefit of his valuable services. To his worthy successors we commend his example, and offer congratulations accordingly.

News of the Week.

Brinton Professorship of American Archæology and Ethnology.—It is proposed to perpetuate the memory of the late Dr. Daniel G. Brinton by endowing in his name a professorship of American archæology and ethnology in the University of Pennsylvania. Dr. Brinton shortly before his death presented his valuable library to the university, in which from 1886 he occupied the chair of American archæology and linguistics.

Treatment of Fractured Patella.—At a meeting of the Orleans Parish (La.) Medical Society, on March 25th, Dr. E. D. Martin demonstrated a new method for the treatment of fractures of the patella. The method proposed is the fixing of the fragments in apposition and securing them with silver staples driven into the anterior surfaces. At least two staples were to be used, placed at different angles to prevent lateral motion. Several specimens of patellæ united with staples were shown to demonstrate the action of the method. Dr. Martin proposed to apply the same method in ununited fractures of the long bones, and especially those of the inferior maxilla.

Jefferson Medical College.—Dr. Francis X. Dercum has been elected professor of neurology and Dr. J. Chalmers Da Costa professor of the practice of surgery and of clinical surgery.

University of Pennsylvania.—At a recent meeting of the board of trustees of the University of Pennsylvania it was decided to reorganize the department of surgery by the election of a professor of surgery and two professors of clinical surgery.

The Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons of Columbia University for 1900 will be delivered at the New York Academy of Medicine, No. 17 West Forty-third Street, on the evenings of April 18, 24, and 26, 1900, at 8:30 o'clock, by Prof. John G. Curtis, M.D., of Columbia University. Subject: "The Discovery of the Nerves and of their Function."

Membranous Croup a Notifiable Disease.—At a recent meeting of the Philadelphia bureau of health the following preamble and resolution were adopted:

"*Whereas*, Diphtheria and membranous croup are considered by the medical profession as identical diseases; therefore be it

"*Resolved*, That hereafter all cases of membranous croup reported to this office be considered and recorded as diphtheria."

St. Joseph's Hospital Training-School for Nurses, Yonkers, N. Y.—At the commencement exercises for trained nurses, held March 29th, the following young ladies received the highest honors of the training-school: Anna J. Collins, Newport, R. I.; Anna St. George, Wappingers Falls, N. Y.; Anna M. Bissett, Nova Scotia; and Mary E. Duffin, Lockburn Province, Quebec. A history of the training-school was read by Dr. A. C. Benedict, and the address to the graduates was delivered by Dr. Valentine Browne, after which Dr. P. A. Callan presented the diplomas to the graduates.

College of Physicians of Philadelphia.—At a stated meeting held April 4th Drs. W. H. Keen and W. G. Spiller presented a communication entitled "Multiple Neurofibromata of the Ulnar Nerve." Dr. S. Weir Mitchell read a paper on "The Manuscript Letters of Jenner in Possession of the College," which are not known to have been published hitherto. Dr. Laurence F. Flick read a paper entitled "The Registration of Tuberculosis." Dr. John Chalmers Da Costa read a "Report of a Case of Hip-joint Amputation." The patient was a girl, fifteen years old, in whom a new growth rapidly appeared in the upper part of the thigh, and so involved the vessels as to preclude the application of the ordinary methods of hæmostasis. Accordingly, digital compression of the external iliac artery against the psoas muscle was made in accordance with the suggestion of McBurney, and the femur was disarticulated Recurrence, however, took place in the stump. On histological examination the growth was found to be a small spindle-cell sarcoma. Dr. Robert G. Leconte reported the case of a young man, eighteen years old, in which amputation through the acetabulum was performed for a large spindle-cell osteo-sarcoma of the thigh. Dr. Richard H. Harte presented for himself and others a large portrait in oil of Dr. John Ashhurst, Jr.

The American Gastro-Enterological Association.—The third annual meeting of this association will be held in Washington on May 1st, under the presidency of Dr. Max Einhorn, of this city. The sessions, at 10 A.M. and 2:30 P.M., will be held at the Shoreham.

A German Report on the British Sanitary Service in South Africa.—Drs. Krummacher and Schmidt, German army surgeons, who returned recently to Berlin from the British camps in South Africa, are reported to have spoken in commendation of the sanitary arrangements there. They deny that Dum-dum or other expanding bullets are used by the British, and assert that they did not witness a single instance of actual breach of the rules of the Red Cross Society.

The Adirondacks Hospital.—Acting under an emergency message from Governor Roosevelt, both houses of the legislature passed on April 5th the Davis-Hill bill for a State sanatorium in the Adirondacks for the care of persons suffering from incipient pulmonary tuberculosis. The bill was amended to reduce the appropriation from $150,000 to $50,000. In the Assembly a motion to reconsider the bill was lost by a vote of 91 to 14.

Mountain Toothache.—An observation of Mr. Hafner, of Zurich, published in *Die Natur*, forms a curious contribution to medical geography. He finds that all the engineers and workmen on the Jungfrau railway who are obliged to remain a considerable time at altitudes of about 2,600 metres above the sea level are liable to a disagreeable complaint. After eight or ten days they are seized with violent pains in several teeth on one side of the jaw, the gums and cheek on the same side becoming swollen. The teeth are very sensitive to pressure, so that mastication is extremely painful. These symptoms increase in severity for three days, and then gradually and entirely disappear. It seems to be purely a phenomenon of acclimatization, for all new-comers go through the complaint, and it appears never to recur.—*Janus.*

Insanity in the Army.—In reply to a Senate resolution, the secretary of war has prepared a statement in regard to insanity and suicide among the troops in the Philippines. The statement shows a smaller rate of insanity among the troops in the Philippines than in the regular army for ten years. It says that from late in July, 1898, to March 20, 1900, 35 cases of insanity have been reported from the Philippine Islands. During this period the mean strength of the force under General Otis was 32,000 men. Based on this strength the rate of insanity for twelve months was 31.3 cases. The mean strength of the regular army for the ten years ending July, 1898, was 29,000 men with a rate of insanity of 33.1, 7 officers and 22 enlisted men committing suicide in the Philippines between April 11, 1899, and March 27, 1900. The statistics on this subject embrace the period from the ending of the war with Spain, and the mean strength of the Philippine army from that time to March 27, 1900, is given as 47,800. Based on these figures the rate of suicide is reported as 30.7 for the year, or about .64 per thousand. In the regular army for ten years, with a mean strength of 29,000 men, the rate of suicide was 18.4, or about .63 per thousand. Another comparison is shown by the table giving the number of casualties each year in the regular army. In 1891, with 26,000 men, there were 22 suicides; 1892, with 26,000 men, 22 suicides, and in 1893, 22 suicides among 27,000 men. The conclusion drawn from these figures is that the statements regarding the increase of suicide and insanity in the army are entirely unsupported by the facts.

The American Climatological Association will meet in seventeenth annual session at the Arlington, Washington, on May 1st–3d, under the presidency of Dr. A. Jacobi, of this city. The sessions will be from 10 A.M. to 1 P.M. each day. The annual dinner will take place on the evening of May 1st.

The Indian Famine.—Nature holds out no prospect of relief to the famine which has prevailed so long in India, but on the contrary there is every prospect that the conditions will be worse this year than last. In the course of a recent speech on the budget, the viceroy, Lord Curzon, said the loss to the wheat crop, caused by the drought during the present year, was from £8,000,000 to £10,000,000. He added that the loss to the cotton crop was £7,000,000, while the oilseed crop, usually covering eighteen million acres, was non-existent outside of Bengal and the northwest provinces. The loss to cultivators in Bombay alone, in food crops, was £15,000,000 and in cotton £4,000,000. It was impossible, he said, for any government to anticipate the consequences of a visitation of nature on so gigantic and ruinous a scale.

Professor Neisser, of Breslau, has been made the subject of a sharp debate in the Prussian Diet for having performed some unwarranted inoculation experiments. The facts of the case, as stated by the Berlin correspondent of *The Lancet*, are briefly as follows: Professor Neisser injected sterilized blood serum of syphilitic persons into prostitutes and into two children in order to immunize them against the disease. The experiment had no bad sequelæ whatever. Several years afterward some of the prostitutes suffered from syphilis, which first manifested itself on the genitals, so that the attempted immunization had proved a failure. That they had been infected by the injection, as was alleged by Professor Neisser's adversaries, was quite impossible owing to the length of time between the giving of the injections and the appearance of the syphilis, together with the fact that none of the patients other than the prostitutes contracted the disease. These facts were gravely misrepresented by different speakers, Professor Neisser being said to have injected syphilitic virus in order to see whether it was contagious or not. Several members of the Diet asked the minister of public instruction if Professor Neisser had been or would be prosecuted for what he had done. The minister, Dr. Studt, and the chief of the university department, Herr Althoff, stated that Professor Neisser had not performed his experiments for frivolous reasons, but for the eminently humane purpose of combating syphilis. They said that he no doubt erred in making experiments on patients without previously asking them whether they consented to the injections or not. The minister admitted that he might have been prosecuted under the criminal law, but as the acts complained of were committed six years ago there was, under the circumstances, no likelihood of a prosecution. The government had not yet considered whether it would be advisable to make use of its disciplinary power over him as a professor of a State university.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending April 7, 1900. March 31st.—Passed Assistant Surgeon J. C. Rosenbleuth ordered to the *Wilmington* sailing from New York City, April 5th, to join ship at Rio de Janeiro, Brazil. Passed Assistant Surgeon F. C. Cook detached from the *Wilmington* and ordered to proceed home by mail steamer. April 2d.—Surgeon F. Urie commissioned surgeon from October 25, 1899. Passed Assistant Surgeon W. M. Wheeler commissioned passed assistant surgeon from May 27, 1899. Passed Assistant Surgeon D. N. Carpenter commissioned passed assistant surgeon from October 24, 1899. Passed Assistant Surgeon F. L. Pleadwell commissioned passed assistant surgeon from October 25, 1899. April 3d.—Passed Assistant Surgeon W. F. Arnold detached from the naval hospital, Norfolk, Va., and granted leave for three months. Passed Assistant Surgeon G. D. Costigan detached from the naval hospital, Chelsea, Mass., and ordered to the Boston navy yard immediately. Assistant Surgeon D. N. Carpenter detached from the Boston navy yard and ordered to the naval hospital, Chelsea, Mass., immediately.

The Plague.—The epidemic at Honolulu being now at an end, no case having been reported since March 25th, the public is beginning to count the cost. It is estimated that the bill for fighting the disease there will come to at least $2,000,000. A large part of the expense was incurred in finding homes for the persons who were burned out by the fires, particularly the conflagration of January 20th. The building and provisioning of the detention camps have been costly, and the salaries of physicians, at $250 per month, have amounted to a large sum, to say nothing of paid inspectors, fumigators, heads of departments, etc. From December 12th to March 31st there had been seventy cases of plague in Honolulu, of which sixty resulted fatally. Nine patients were cured, and one was still in the hospital at the end of March, but was in a fair way to recovery.—In Manila, we learn from a correspondent of the Associated Press, the disease has prevailed for about three months, but little anxiety is felt by the foreigners. During the first two months of its prevalence there had been over two hundred cases, according to the estimate of the health officials, and about eighty per cent. of these had resulted fatally. The sanitary measures have been simple but effective, consisting in the enforcement of cleanliness, as far as possible, and in a system of inspection by Filipino and Chinese employees. There are now one hundred inspectors at work in Manila, thirty of them Chinamen and the others Filipinos. They are sent out in squads, usually two Filipinos and a Chinaman with a soldier to boss them and see that they do their work and abstain from blackmailing. Whenever a plague victim is discovered he is sent to the Chinese or Filipino hospital if it is possible to move him. The house is thoroughly disinfected, a bonfire is made of everything movable, a yellow placard announcing "bubonic pest" appears on the door, and a sentry stands guard to keep persons away. For four days the house is kept closed and the inmates are isolated. When two or three cases develop in one street, the street is barred against business. Two-thirds of the cases have been among the Chinese coolies, and the rest among the Filipinos, the whites having thus far escaped.

Dr. William Camac died at Philadelphia on April 3d, at the age of seventy-one years. He was graduated from Jefferson Medical College in 1852.

Clinical Department.

A CASE OF IODOFORM POISONING IN AN INFANT TWO WEEKS OLD.

By J. C. JOSEPHSON, M.D.,

BALTIMORE, MD.

Recently I was called to see Hillel B——, two weeks old, with the following history: The child had been circumcised six days previously, and as the wound would not heal well the mohel (circumciser) gave the mother a salve to apply. This again proving unsatisfactory he changed it on the day previous to my visit for a yellow salve. The following day the child was very somnolent, had stridulous breathing, and refused the breast. I found the child comatose, cyanosed, with feeble but stridulous breathing, and retraction of the epigastrium, evidently from laryngeal spasm. The pupils were contracted to the size of a pin point. No paregoric had been used, nor any of the patent nostrums for which the baby cries. There was a strong odor of iodoform about the child. On removing the diaper I found the following condition: The circumcision wound had not yet healed; the whole under surface of the penis, the scrotum, and the inner surface of both thighs were the seat of an eczema, so severe as to bleed on contact. The temperature was 100° F., the heart action feeble. I will not detail the measures adopted—as the hot mustard bath, friction with alcohol and with mustard, a hot enema and stimulation with a few drops of brandy now and then. As I considered the child moribund, I declined to prescribe any internal remedies. An hour later, however, I was called again. The child had regained its color after the bath, but had just had another attack of apnœa with cyanosis. The parents importuned me to "do something for the child." As some of the symptoms resembled opium poisoning, belladonna suggested itself to me, which I prescribed in ♏ i. doses of the tincture to be given every hour till seen again. The following morning, to my great surprise, I found the child in an almost normal condition—with healthy color and breathing, good pulse and normal temperature—except that it was still somewhat somnolent and that the pupils were dilated from the belladonna. The parents told me that it had had another attack of apnœa with cyanosis in the middle of the night, when the mustard bath was repeated. The eczema had wonderfully improved over night. The child has been well since then.

Wood describes a form of iodoform poisoning with contracted pupils and coma, and I am convinced that this was such a case, for the following reasons: No opiate in any form had been used to account for the extremely contracted pupils; there was a strong odor of iodoform about the child when I first saw it; the symptoms set in soon after applying the "yellow salve"; the violent eczema improved so rapidly after washing off the salve in the bath that on the following morning the affected skin was perfectly dry and only of a delicate pink in place of the angry red of the night before.

I am inclined to ascribe here some antidotal or rather antagonistic virtue to the belladonna. The laryngeal spasm is worth noticing as a symptom.

A COMPLICATION OF MISCARRIAGE WITH APPENDICITIS, DUE TO TRAUMATISM.

By CARL D. S. FRÜH, M.D.,

PHILADELPHIA, PA.,

ASSISTANT DEMONSTRATOR OF ANATOMY, JEFFERSON MEDICAL COLLEGE.

Mrs. A——, aged twenty years, pregnant seven months, primipara, was passing from the kitchen of her house to the ground, when she suddenly slipped, and being in danger of falling she grasped a support, severely twisting her body, as she herself describes it. From this moment for eleven days she was in constant pain and discomfort, matters finally getting so bad that the writer was sent for. The patient was in dire distress (temperature, 104.5° F.); she was constantly vomiting matter admixed with bile, suffering intensely with every such attack; there were hiccough, tympanites, tenderness of the entire abdominal region, intense agony when she passed water, the simple action of the muscles involved in this act causing the greatest suffering; movement was almost impossible on account of the pain. Constipation was present for some five days. A slight show was in evidence; after four days the fœtus and placenta were delivered, with relief from the intensity of pain for some twelve hours, when there was a repetition of the above symptoms, with pains passing from the epigastrium to the left inguinal region, then to the right side. There being no flow whatever after the delivery of the fœtus and placenta, one would naturally have supposed that all this severe state of the patient was one due to sepsis, and that the womb must be curetted to remove the offending cause. The symptoms here, however, led the writer to appreciate the condition of a typical traumatic appendicitis, and the final recovery of the patient would seem to prove the diagnosis correct. There was no return of the flow.

The writer has omitted all detail of the medical treatment, wishing merely to call attention to the possible error of judgment which might have tempted one to locate the material fault in the uterus. Every diagnostic point of appendicitis was borne out in this case.

Progress of Medical Science.

Boston Medical and Surgical Journal, April 5, 1900.

Conservative Operation for Uterine Fibroids.— R. A. Kingman reports two illustrative cases, and urges conservatism, especially in young women. Certain cases undoubtedly demand hysterectomy, but whenever possible the endeavor should be toward the preservation of functional integrity of the pelvic organs. Neither size nor number of tumors should be necessarily a bar to this attainment, nor should the fact that at a single sitting we cannot entirely clear the uterus of nodules compel the sacrifice of that organ. The author praises Dr. Burrage's morcellation forceps, which do not wound a flat or concave surface but will cut or strongly seize any projecting mass. The frequent association of ovarian disease with fibroid tumors will make it necessary at times to resect or do other conservative operation upon one or both ovaries, for it must not be forgotten that removals of the new growths will be followed by uterine involution and by greatly improved conditions in the appendages as well.

A Peculiar Case of Adeno-Carcinoma of the Body of the Uterus.—Agnes C. Victor reports the case of a woman, aged sixty-seven years, in whom apparent temporary improvement of an adeno-carcinoma followed the administration of tablets of mammary substance. By abdomino-vagino-rectal examination a hard nodular tumor was found apparently springing from the posterior wall of the body of the uterus, extending up into the fundus and projecting backward into the cul-de-sac. A vaginal hysterectomy was performed, and on attempting to deliver the fundus it suddenly fell to pieces in the operator's hand, and she had only a handful of pieces of soft tissue. The posterior wall of the uterus was found to be perfectly smooth and regular, with no sign of a tumor, this being on the anterior wall and projecting into the uterine cavity. The posterior wall was a mass of soft tissue retained only by a paper-like layer of peritoneum.

A Case of Extra-Uterine Pregnancy.—Frederick W. Johnson describes a case of ruptured extra-uterine pregnancy. Laparotomy was performed, and a greenish-yellow tumor, the size of an orange, found adherent in the pelvis and connected with the left Fallopian tube, while the thickened right tube was adherent to it. This mass was removed, and the sac-like dilatation was found to be filled with clotted blood, which was in layers and considerably decolorized. At one end of the mass was a little thready tissue. On microscopical examination there were found fine branching filaments of a fibrous character terminating in round, enlarged ends, similar to the chorionic villi in the first half of pregnancy. In the ovary was a large cystic cavity filled with blood (corpus hæmorrhagicum). No true corpus luteum was found.

Empyema of the Frontal Sinus.—John D. Paige reports a case of empyema of the antrum of Highmore, bilateral empyema of the ethmoid cells, and empyema of the frontal sinus on the left. The antrums were opened and drained through the alveoli, and the ethmoid cells opened and curetted; the frontal sinus was irrigated through the enlarged natural opening, with great relief to the symptoms and discharge. An *x*-ray picture shows the existing conditions.

On Distortion of the Spine.—J. W. Courtney reports two cases of diplegia brachialis due to distortion of the spine, which he defines as a pause in the act of luxation. The author gives the symptomatology of the affection, and says that the determinate factor in its diagnosis as against fracture or luxation is the absolute failure to discover any change in contour or abnormal mobility of the spine. If the patient has a tuberculous taint, the process may become chronic, otherwise the prognosis is good. Treatment consists of rest in bed with support and immobilization of the neck, with very slight extension of the spine.

The Conservative Operative Treatment of Fibroids.—N. L. Burrage reports three cases. The first consisted of abdominal myomectomy, removal of eleven subperitoneal nodules and the right ovary. The second was a vaginal myomectomy, removal of fibroid nodule of subperitoneal evolution from the front wall of the uterus by anterior colpotomy. The third was morcellation of submucous nodule at fundus, and polyp with pedicle springing from fundus. The author considers it a greater glory to patch up a diseased organ and put it in fair working condition than to remove it because it may cause trouble in the future.

Journal of the Amer. Med. Association, April 7, 1900.

Curious Facts You Find in General Surgery.— The first case reported by Lucien Lofton is that of a negro who had been struck on the head with an axe, with the result that the external temporal and the transverse facial arteries had been entirely severed, besides a number of peripheral arterial twigs; the outer and inner tables of the skull were crushed, while internally the middle meningeal artery was severed, and the meninges suffered greatly. This man was on his feet in forty-eight hours, and in twelve days he had resumed his position as a sawmill hand. The writer dismissed him after the third dressing, and his recovery was uninterrupted. The second case was that of a negro who, in spite of a broken radius, held his position as a sawyer for ten days, working steadily twelve hours a day with little or no inconvenience. The third case was one of cornu cutaneum in a man aged seventy years. It was removed under cocaine anæsthesia and healed by first intention. Three months after the patient returned with another horn springing from the original core. This was removed together with all horny cells, resulting in complete enucleation. The fourth case was a shattered humerus in a boy ten years old, which had been neglected by his family for three weeks. Operation resulted in a perfectly sound arm.

Diagnostic Value of the Deep Reflexes of the Lower Extremities.—D. S. Fairchild says that in a case of motor or sensory paralysis, or both combined, the questions which will occur to the examiner are three in number: (1) Is the paralysis due to an organic change in the anterior or motor side of the spinal cord, or in both anterior and posterior sides, or are the lines of communication impaired or destroyed by injury to, or disease of, the afferent or efferent nerve-fibres, or both? (2) Is the paralysis hysterical in character? (3) Is the paralysis feigned? The author then considers the differential diagnosis of various forms of paralysis and says the real diagnostic value of the deep reflexes can be determined only by a very careful consideration of the facts in the case, and by a careful study of the reflex itself. There is no certain and absolute guide to the intensity of a normal reflex.

Differentiation between the Bullous, Vesicular, and Pustular Eruptions of Early Life. — Charles Warrenne Allen says that although dermatologists cannot invariably distinguish betwen rare forms of bullous affection, or classify them in an acceptable manner, it is usually no hard matter to distinguish the non-specific from the specific. This is a general rule to which there are few exceptions. But the subject, even when thus restricted, remains a very broad one, and in order to cover the ground the writer takes up the various bullous, vesicular, and pustular affections of the skin, showing some of the points of differentiation between them and syphilis. He thus considers pemphigus, pemphigus acutus, pemphigus neonatorum, pemphigus chronicus, pemphigus epidemicus, pemphigus foliaceus, epidermolysis hereditaria bullosa, dermatitis herpetiformis, impetigo, ecthyma, hydroa, and generalized vaccinia.

Uniformity in Definition and Application of the Terms Position and Presentation.—Frank A. Stahl deplores the unfortunate ambiguity of definition and application of terms in descriptive obstetrics. The writer says that although at the meeting of the Ninth International Medical Congress held in Washington, D. C., in 1887, the committee cleared up much that needed simplifying, still many inequalities remain. So far as pertains to uniformity in definition and application of the two terms "position" and "presentation," they are not synonyms and should not be used synonymously. Etymologically considered, position refers to "aggregate of spatial relation of a body or figure to other bodies or figures; the situation; the place of a thing." Presentation refers "to that which is before; in view; appearance."

Uric Acid and the Serious Results when Not Eliminated.—M. S. Marcy speaks of the serious results that follow the taking into the system and retaining an excess of urates. He protests against introducing urates into the system in large quantities by taking into the stomach meat, especially extracts, containing 63 grains of urates to the pound; tea, 174; coffee 70, and cocoa 59 grains to the pound, as well as many other foods and drinks containing a less amount. The author concludes that if we would enjoy the best of health we should leave out of our diet all foods and drinks containing a large amount of urates, and live on a vegetable, cereal, fruit, and milk diet.

Pathological Changes Occurring in the Unobstructed Nostril in Cases of Deviated Septum.—E. Larue Vansant says that these changes in a case of marked deviation of the septum may be divided into three stages: The first stage, that of hyperplasia of the tissues from over-function, is a compensatory hypertrophy; the second is that of atrophy from inflammatory changes; and the third that of atrophy associated with sepsis of the nasal chamber and accessory sinuses. When the deflection is very moderate a slight compensatory hypertrophy of the turbinals of the more open nostril may be the only pathological change noticeable.

A Case of Rhizomelic Spondylosis.—Augustus A. Eshner reports this case. He says that though the disease has been known for a long time, particularly to surgeons, unusual attention has been directed to it of late, and reports of cases have been made from all parts of the world. The writer says of this case that it would appear from the symptoms and physical signs that the disease is one not only of the vertebra and its appendages, but also of the spinal cord. Also the history of rheumatism obtained may be significant from an etiological point of view, as it has been thought to play such a rôle in other cases of the kind.

Dilatation of the Ophthalmic Veins; Cure.—R. Ortega reports the case of a woman, thirty-two years of age, who had exophthalmos and complained of intense pain on one side of the head. An orbital tumor was diagnosed, and operation revealed a dilatation of the ophthalmic veins. The eye was enucleated with relief to the symptoms.

Medical News, April 7, 1900.

Malignancy.—Arthur L. Fuller sums up his remarks on this subject by saying that malignancy is a term which implies some special form of pathological activity, not present in other conditions. Since the cachexia alone seems to depend on forms of cell energy which are absent in other conditions, it alone must be considered the essential feature of malignancy. The relation of cachexia to the embryonic character of the tumor cells is such as to suggest that it is due to the retention of products of embryonic cell metabolism in the system, constituting a form of toxæmia. This suggestion is borne out by the fact that the presence of embryonic cells pouring their metabolic products into the system in the absence of the thymus gland, constitutes a pathological condition similar to those present in myxœdema and Addison's disease. Therefore the administration of thymus in malignant disease might prove useful to sustain the strength, as the administration of thyroid has done in myxœdema, and of suprarenals in some cases of Addison's disease.

Cancer of the Breast.—Robert Abbe says that progress toward the cure of mammary cancer has come from the recognition of the anatomical distribution of the lymphatics; that too much emphasis cannot be laid upon the danger of the operative infection of the wound by cutting infected glands and lymphatic channels, or discharging into the healthy wound infected cells squeezed from the parts being removed. Dr. Abbe remarks the improvements in the statistics that immediately followed the adoption of radical surgical methods, and says that such results as three years' immunity are now within the easy reach of all good operators. He finally concludes that a recurrence after operation need not discourage patient or surgeon. If the recurrent growth be speedily and thoroughly attended to there is a strong probability of its eradication, as the recurrence is not a return of the disease, but a continued growth of invisible metastatic foci left at the time of operation.

Hypnotism.—F. X. Dercum says that hypnotism is interesting to physicians from two points of view: First, the explanation of its principles; and, second, the extent of its practical application. The writer then discusses the theory of hypnotism, and the methods and precautions to be observed in its employment. Coming to the question of its practical value to physicians he thinks it of slight value, having a very subordinate place in therapeutics. It can have no pathological effect, and is practically limited in its scope to hysterical and neurasthenic patients.

A Case of Spontaneous Rupture of the Uterus.—Bradford Woodbridge reports a case of this accident in an apparently healthy young woman, before the advent of labor and without history of trauma or premonitory symptoms. The patient had received two years before a blow in the pregnant uterus severe enough, as she believed, to hasten labor, and the writer suggests that as a result there may have been a weakening of the uterine muscle at the point of injury.

Causes, Diagnosis, and Treatment of Cystitis.—Ramon Guitéras discusses cystitis separately in the acute and chronic forms, touching upon the many subvarieties of each during his consideration of causation and treatment.

New York Medical Journal, April 7, 1900.

Puerperal Septicæmia; Especially its Bacteriology and Treatment by Serum.—L. A. Hering regards the streptococcus as the chief source of mischief, but does not believe that the infection is ever purely streptococcic. The staphylococcus and bacillus coli communis are also at work in many cases. The latter germ probably gains access to the parturient tract by the lymph route. Serum treatment often fails because either the serum is old, or there is a mixed infection to deal with, or treatment may be delayed and too little serum given, or the patient may be over-stimulated. Hering does not hesitate to curette, flush out with warm, weak bichloride, and introduce a drain of iodoform gauze. Pus must be removed whenever present; the bowels kept open at all costs; serum injections should be begun early, and be made into sterile tissue under most rigid antisepsis. Large doses of strychnine, gradually tapering off in conjunction with three-grain doses of caffeine sodio-salicylate, can be administered with profit.

A Critical Test of the Justus Blood Test for Syphilis.—D. H. Jones experimented with thirty-five syphilitics and eighteen control patients. He believes that the test has a value in the recognition of doubtful cases of syphilis, but that it often fails in two classes of cases in which early diagnosis is especially desired, viz., in latent cases and in early chancre, and sometimes at the beginning of the secondary stage. He believes, however, that the limitations of the test have not as yet been fully determined. The test is based on the asserted fact that a single inunction of mercury in all cases of untreated cases of secondary, tertiary, and congenital forms of syphilis causes a reduction in the hæmoglobin due to the sensitiveness of the red blood cells to the action of the drug, while in non-syphilitics no reaction follows.

The Treatment of Gouty Deposits.—E. L. H. McGinnis narrates his experience with the use of the lithia salts administered by cataphoresis. The method is described as follows: The fingers are washed off with chloroform; thin sheets of borated absorbent cotton are wrapped around the affected joints and thoroughly wetted with a solution of iodide of lithium. The fingers are then covered with the metal handles of the ordinary galvanic battery, each being connected with a terminal from a cord leading to the positive pole, the negative being a flat metallic plate upon which the other hand is laid. The current is allowed to flow for ten minutes (15 to 25 milliamperes in the case described). Following this the joints are vigorously massaged for several minutes.

Some Critical and Desultory Remarks on Recent Laryngological and Rhinological Literature (Tenth Paper).—J. Wright discusses some of the more recent contributions to the literature of tuberculosis, having to deal especially with modes of infection. He takes up particularly the statements of Lewin, who claims that five per cent. of all adenoids in the naso-pharynx contain foci of latent tuberculosis. This proportion Wright believes to be overestimated by Lewin, though he admits that the difference in the frequency of tuberculosis in European and American cities may easily explain the discrepancy between the figures of different observers.

Chronic Carbon-Monoxide Poisoning.—T. J. Yarrow gives an outline of the chemistry of this compound and enumerates the tests used for its detection. In one case, that of a man aged fifty-two years, who lived in a house in which there was a leakage of gas, and who suffered from the evidences of constantly inhaling it, Yarrow employed bone marrow and tonics with good effect. He believes that this gas leakage in modern houses is a far more common source of bodily ills than is usually imagined.

Creosote: Some Clinical Observations of its Use in Various Conditions.—F. C. Test gives clinical histories of ten cases in which the use of the remedy was followed by good results. The list includes cases of gastro-enteric auto-intoxication as shown in various nervous symptoms, whooping-cough, bronchitis, and tuberculosis.

Philadelphia Medical Journal, April 7, 1900.

The Soldier in the Tropics. — Charles E. Woodruff discusses the question of the soldier's food, the effect upon him of alcohol, and his acclimatization in the tropics. The American ration, he says, is, contrary to the general opinion, one of the least liberal rations among civilized nations. He thinks, however, that the refusal of Congress to change the ration was the point of wisdom. He declaims against the advice not to eat heartily in the tropics. The writer favors the use of alcohol, saying that "experience has demonstrated that in a hot climate the moderate use of intoxicating drink is essential to continued health and efficiency." He does not believe that the white man can become acclimated, and characterizes such an assertion as nonsense.

Intestinal Fever.—G. W. Richardson describes a fever which prevailed largely among the members of the eighth army corps in the Philippines. It was characterized by anorexia, weakness of the limbs, headache, backache, cramps in the stomach, diarrhœa, and fever. The digestive symptoms were the most prominent, the fever seldom being as high as 102° F. The exciting causes of the condition he classifies as: (1) Excessive heat of the sun with insufficient head protection; (2) indigestible and improperly cooked food; (3) unsuitable clothing; (4) drinking of native liquors. The writer speaks far from favorably of the food supplied to the army in the Philippines. As a preventive of diarrhœal troubles he thinks the abdominal bandage is very valuable.

Notes on the Philippines.—Samuel O. L. Potter describes the people, the water-supply, the sanitary condition, and the health of Manila. The city, he says, is a very healthy one, and with moderation in eating, drinking, and working, one need no more be ill in Manila than in New Orleans, St. Louis, or New York. As to heat, "Washington in summer is an inferno compared with Manila," American women and children do very well so long as they remain well, but recovery in case of illness is difficult.

The Share of the White Man's Burden that Has Fallen to the Medical Departments of the Public Services in Puerto Rico.—John Van Rensselaer Hoff gives an account of the establishment of the superior board of health in Puerto Rico, and of the work it has done. He gives the statistics of the work of vaccinating the entire population of the island, which was inaugurated by him, and which resulted in the stamping out of what threatened to be a serious epidemic of smallpox.

The Sanitary Condition of the Far East as it Affects the United States.—Stuart Eldridge speaks of the danger of the spread of infection across the sea which has resulted from the increased speed of ships, and describes the measures which have been taken by the Marine-Hospital service to prevent, by means of systematic inspection of ships at the port of departure, the introduction of any of the epidemic or endemic diseases of the East into this country.

Amœbic Dysentery.—I. B. Diamond reports four cases of this affection contracted in Texas and in Georgia. The treatment which he recommends consists in rectal injections of solutions of hydrogen dioxide or of potassium permanganate. Relapses are frequent, and the writer says that a patient should not be considered out of danger for at least two months after apparent recovery. During that period the patient should remain on a liquid diet.

Cuban Malaria in the North Atlantic Squadron of the United States Navy in 1898.—W. F. Arnold concludes from a study of the statistics of malaria in the navy off the southern coast of Cuba in the summer of 1898, that the disease is water-borne in some cases, while in others the infection would seem to have been spread by mosquitos.

Histology and Microchemical Reactions of Some Cells to Aniline Dyes; Identity of the Plasma Cell and Osteoblast; Fibrous Tissue a Secretion of the Plasma Cells; Mast Cell Elaborates Mucin of Connective Tissues.—H. F. Harris contributes a paper with this comprehensive title.

Bubonic Plague.—H. F. Harris and W. F. Arnold describe the clinical symptoms, pathology, and bacteriology of the plague. They speak highly of Yersin's antitoxic serum and Haffkine's prophylactic serum, though they have had no personal experience with either.

The Methods of Control of Leprosy in the Hawaiian Islands, with a Description of the Leper Settlement in Molokai.—R. S. Woodson recounts the familiar history of the leper colony at Molokai, and gives pictures of three cases of leprosy.

The History and Etiology of Bubonic Plague.—George M. Sternberg gives in the Tower lectures, delivered at Georgetown University, a brief *résumé* of the history of the plague in the middle ages and modern times.

The Parasites of Æstivo-Autumnal (Remittent) Fever.—Charles F. Craig describes the various stages of the cycle of development of the æstivo-autumnal plasmodium in man.

The Hospitals of Puerto Principe, Cuba.—S. T. Armstrong presents an interesting article, with illustrations, of the three hospitals in this city, which he believes to be typical of those of other Cuban cities.

The Lancet, March 31, 1900.

Note on the Superficial and Deep Reflexes.—J. M. MacCormack finds that in the initial stage of general paralysis of the insane there is generally a weakening of painful sensibility and of the cutaneous reflexes with the exception of the plantar reflex. On the other hand, the deep reflexes are exaggerated. In the second stage the plantar reflex is markedly exaggerated and the other reflexes both deep and superficial are increased. In the third stage all the reflexes become weaker and finally disappear. During an epileptiform attack the superficial reflexes are decreased or abolished, but the tendon reflex is exaggerated, and is often accompanied by fibrillary contractions which may be transmitted from a limb to the trunk and then may pass to the limbs of the opposite side. In epileptic insanity sensibility to pain and the skin reflexes are generally lessened, but the tendon reflexes are normal. After some convulsive attacks the tendon reflexes are increased, while the cutaneous reflexes are considerably weakened, with the exception of the plantar reflex, which is augmented and may be associated with trembling or even with epileptoid movements of the foot. Hypochondriacs and neurasthenics generally present an increase of all reflexes both superficial and deep. In hysteria there is a decrease of painful sensibility and of the cutaneous reflexes. In alcoholic paralysis painful sensibility and tendon reflexes are exaggerated, while the cutaneous reflexes (except the plantar reflex) are weakened. In acute mania the reflexes are normal. In secondary dementia all reflexes are exaggerated. In melancholia painful sensibility and cutaneous reflexes are normal, while the tendon reflexes are exaggerated. In the stage of melancholic stupor painful sensations, which on superficial examination may appear feeble, are in reality normal, the cutaneous reflexes are feeble, and the tendon reflexes are exaggerated.

The Typhoid Bacillus and Typhoid Fever: Second Goulstonian Lecture.—P. Horton Smith considers the abnormal varieties of infection and the relation which the bacillus bears to the chief complications and sequelæ of the disease. He believes that we may have the fever without the intestinal lesions. In these cases the bacillus passes into the blood and becomes generalized in the organs without causing lesions in the bowel even though the latter may be the channel of entrance. He then discusses the various complications, paying special attention to bacteruria. Concerning suppurative conditions, he states that it is very common to find the bacillus in pure culture in the abscesses connected with bone, but in suppurations occurring elsewhere its presence is undoubtedly rare. Attention, too, is called to the persistence of the bacilli in the body after recovery. The patient may be in the mean time in perfect health, but under the influence of some passing stimulus the bacilli may resume their activity and give rise now to periostitis, now to osteomyelitis, or it may be to cholecystitis.

On the Abortive Treatment of Suppuration of the Eyeball.—S. Snell counsels the following procedure: Ether having been administered, the cornea, unless it is already destroyed, is divided across by a cataract or Beer's knife. The next step is to remove the remains of the cornea up to the sclerotic, and this can be well done with scissors. After removal, Mules' scoop may be used to aid further in the cleaning of the interior of the globe, or cotton-wool and forceps can be employed to wipe out the contents. Lastly, sublimate solution is freely syringed into the eye cavity until all the contents have been removed or washed away and only the bared sclerotic remains. Gauze is lightly packed into the eyeball and a bandage is applied. Almost immediate relief from pain follows the operation, with no return, and the swelling of the orbital tissues gradually subsides. The dressings are changed on the night of the operation, and during the next few days the eye is syringed twice a day and the gauze is re-applied. For about the first three days there is some discharge; after that practically none.

On the Treatment of the Rheumatic Diseases of the Heart in the Early Periods of their Manifestation.—A. E. Sansom considers that the distinct advances of recent therapeutics which are established by satisfactory evidence are: (1) the employment of salicin and the salicin compounds; (2) the use of the icebag and cold applications; (3) the employment of physical means for directly influencing the nerve mechanism; and (4) the judicious employment of bathing, hygienic methods, massage, and mechanical exercises. In the swollen and dilated heart of rheumatism failing cardiac power is best combated by ammonia and kindred diffusible stimulants in small doses of camphor water or with musk in doses of gr. iii.; tincture of sumbul ♏ xx., or the hypodermatic use of some strychnine salt in doses of gr. $\frac{1}{40}$ may be used. A somewhat novel recommendation is the employment of the continuous current in the areas of the vagi.

Some Cirrhoses of the Liver.—In this, the first of the Lumleian lectures, W. B. Cheadle discusses the symptoms of the affection and takes up some of the disputed points in its pathology and causation. The atrophic form is caused almost invariably by alcohol. Hypertrophic cirrhosis is not an earlier stage of the atrophic form, though Cheadle believes that in the latter there may be a stage of engorgement and congestive swelling before fibrotic contraction is fairly in progress. In eighteen cases examined the fibrosis was diffuse only once; in all the others it was coarse and multilobular. In hypertrophic cirrhosis, there is now no question that a fine fibrosis, monolobular or intralobular in arrangement, occurs in conjunction with hypertrophy due to alcohol; this diffuse fibrosis appears to be met with also in the cirrhosis attributed to malaria and in pure cardiac cirrhosis.

The Treatment of Rheumatism, its Prophylaxis and Cardiac Complications.—R. Douglas Powell does not believe that any germ thus far isolated has been proven to stand in a causative relation to the disease. Such proof may come later, but we do not have it now. He gives an enthusiastic indorsement of the use of the salicylates. In regard to the criticism sometimes made that under this plan of treatment cardiac complications are more frequent and relapses more to be feared than with the alkalies, Powell believes that Ewart has hit on the fallacy of these statistics when he remarks upon "the indirect risk that arises that we may be misled into overestimating its [salicylic acid] anti-rheumatic powers, and relax too early both treatment and diet."

A Case of Lymphatic Leukæmia.—The case was that of a man aged thirty-eight years, under the care of M. H. Spencer. The main features were the diminution in the number of ordinary leucocytes (fine granulated oxyphils), a great increase in the lymphocytes, and the presence of a number of nucleated red cells. Another feature of the case was the presence of an excessive enlargement of the liver accompanied by moderate ascites.

Death from Carbon-Dioxide Poisoning in a Brewery.—W. S. Thompson reports the case which occurred from a man's attempt to clean out a vat. A candle was taken into the vat, and as the man was found asphyxiated, the exact nature of the accident was unknown. Thompson declares that the candle is not a safe test, and that a watch should always be maintained at such times.

Suprapubic Cystotomy Painlessly Performed after the Hypodermic Injection of Eucaine.—T. V. Jackson did the operation on a man aged fifty years, using ♏ xl. of a seven-and-one-half-per-cent. solution of the muriate of the drug. The operation was absolutely not felt by the patient.

Extraordinary Case of the Loss of Both Eyes, One After the Other, from Similar Accidents.—A. Benthall records the case, the accident being that of "sticking the finger in the eye."

British Medical Journal, March 31, 1900.

Spleno-Myelogenous Leukæmia.—This case is reported by Thomas McCrae on account of the unusual features shown in the course of the disease. The patient came twice under observation with the typical condition of spleno-myelogenous leukæmia. On each occasion, under the use of arsenic, the leukæmic condition disappeared. The spleen became reduced to normal size, and the myelocytes disappeared from the blood. At these periods his health was good, and there was not any intercurrent affection present. The subsequent history of the case was unfortunately not obtained in detail. The patient went to California and died there some months later. His death was sudden, and was considered by his physician to be due to cerebral hemorrhage.

Piece of Amber in a Bronchus for Ten Weeks.—J. Frank Crombie reports this case, in which the patient swallowed a portion of the mouthpiece of his pipe. For the following two months the man continued at his work as coachman, and then had to take to bed. There were diminished expansion and dulness at the left base, and all over the left lung numerous sibilant rhonchi could be heard. Rest in bed was the only treatment that did any good. Finally, more than ten weeks after the accident the patient coughed up the foreign body without any trouble. It measured one and one-eighth inches long, one-half an inch broad, and five-sixteenths of an inch thick. The rhonchi, cough, and other symptoms disappeared at once.

The Condition of the Blood in Two Cases of Pernicious Anæmia.—Alfred C. Coles presents tables of the more important numerical alterations in the corpuscular elements of the blood in these two cases. They show very clearly the temporary improvement which may take place in this disease, and also the relapses and ultimate failure of all treatment. Each chart shows how difficult it would have been at certain stages to make a diagnosis from one examination, and also the impossibility of a definite prognosis for the immediate future, as both patients might at one time have been regarded as cured.

A Case of "Spurious Hermaphroditism."—J. Chalmers Brown reports this case. The conditions are summed up as follows: (1) absence of breasts; (2) absence of fat over trochanters; (3) absence of uterus and appendages unless a body in the right labium majus would be considered an ovary; (4) the presence of a body in the right labium majus, if considered a testicle. On the other hand, there were: (1) Feminine voice, hair arrangements, and "feelings"; (2) the presence of a clitoris, urethra, vagina, with hymen; (3) the pelvis had female dimensions; (4) the presence of a body in the right labium majus—an ovary.

Will-Making in Aphasic Paralysis.—James Edmunds reports the case of a single lady, sixty years of age, who was the subject of partial right-sided hemiplegia, with motor aphasia complete both as to speaking and writing. Instructions for the will were given by the patient by the selection of printed cards containing various directions, the patient selecting those expressing her desires. Death took place twenty-two days later. The will was probated, and the method devised for the ascertaining the wishes of the testatrix was approved by the court.

Anthrax of the Thigh Treated by Operation.—Thomas Sinclair reports this case, in which a healthy laborer, aged twenty-three years, while wheeling a barrow laden with bone manure was accidentally pricked in the inner side of the thigh by a splinter of wood on the barrow handle. Ten days after operation was performed, followed by a good recovery. The case is interesting because of the unusually clear history as to mode of infection and because of the bacteriological proofs.

Amputation without Anæsthesia.—Jasper Cargill reports this case, in which his patient, a black woman in Jamaica, while suffering the removal of a leg under chloroform, showed symptoms of heart failure. When told that the operation could not go on, she said: "Please cut it off, doctor; I can stand it without chloroform." After a brief consultation this was accordingly done, without a sign of resistance or even a groan from the patient.

Wiener klinische Wochenschrift, March 15 and 22, 1900.

Some Results of the Estimation of Blood Pressure in Cases of Mental Disease.—Alexander Pilcz, in reviewing his work in this line, remarks on the scarcity of the literature on the subject. This may be due to the fact that till recently there was no suitable instrument for conducting experiments. We now have Gärtner's tonometer. Pilcz made from nine hundred to nine hundred and fifty estimations among two hundred and forty patients. The forms of disease investigated were: general paralysis, hebephrenia, periodic mania, circular insanity, melancholia, and epilepsy. Normal blood pressure was estimated at from 105 to 130 mm. Hg. In paralytics the blood pressure varied with the age of the patient and the stage of the disease, falling lower with the progress of the latter, till in the terminal stage it reached from 50 to 80 mm. Hg. In hebephrenia the experiments were not very satisfactory. In the cases of periodic mania and circular insanity the blood pressure varied according to the special phase of the disease at the time of examination. During the melancholic stage the pressure was high, during the maniacal low. In patients affected with melancholia the pressure was high. The author was not able to make satisfactory experiments on epileptics during the convulsive attacks, but quotes Féré as saying that at the time of the convulsion blood pressure rises, while it falls in the interval between attacks.

Hæmatocolpos and Hæmatometra Resulting from Congenital Atresia of the Hymen.—E. Topp reports the case of a girl, thirteen years of age, who had never menstruated. On examination the labia majora were somewhat separated and between them there was seen bulging out a dark-red, smooth, fluctuating tumor. The nymphæ were invisible. The tumor was then palpated through the rectum and appeared to be quite extensive. The diagnosis was established. Under cocaine anæsthesia the tumor was incised and about one litre of dark brownish-red, thickish, odorless fluid was evacuated. At the same time the pain, which had been severe before the operation, ceased. The incised membrane was about 6 mm. thick, and was fibrous in consistency. The cavity was irrigated with weak sublimate solution, six stitches were taken, and an iodoform dressing was applied. Menstruation has been normally established since the operation, and is painless. It is interesting to note that an aunt of the patient had suffered from the same anomaly, but after operation married, and bore three children.

A Contribution to the Diagnosis of Diverticula of the Œsophagus.—Victor Blum, in discussing this subject, says that in some cases the etiology is so obscure that all available diagnostic measures must be applied in order to reach satisfactory conclusions. If, however, certain symptoms present themselves, such as the appearance of a swelling in the neck after the ingestion of food, the disappearance of the tumor after the regurgitation of the food, etc., then the diagnosis is very clear. The use of the Roentgen ray is often valuable. Another diagnostic aid is œsophagoscopy. The author reports the case of a man, sixty-six years of age, with characteristic symptoms of an œsophageal diverticulum. Through radiographic investigation it was discovered that there was a diverticulum of the posterior wall of the œsophagus, its position being between the fourth and seventh vertebræ. The shape was oblong. The etiology in this case was traced to traumatism of the pharynx about ten years before. The extirpation of the sac was strongly indicated in this case.

Cirrhosis of the Liver.—Richard Kretz believes that cirrhosis of the liver is a localized, recurrent, chronic degeneration process, with here and there regeneration of the parenchyma. The process begins in small foci of degeneration in the periphery of the acini; this is followed by regeneration which results in the rebuilding of the normal acini with a moderate change of form. The change especially affects the distribution of the capillaries, and consequently the nutrition of different parts of the parenchyma. Then areas of deeper-lying cells die, and the process proceeds to the complete destruction of acini in certain places. Secondarily the function and capacity for reproduction in the islands of parenchyma are destroyed. Finally, after the organ has been repeatedly destroyed and rebuilt in different areas, the destructive process preponderates and progressive atrophy supervenes till death occurs, unless the patient falls victim to a secondary or intercurrent process.

The So-Called Pericardiac Pseudo-Cirrhosis of the Liver (Fr. Pick).—Victor Eisenmenger writes of the disease named pericardiac pseudo-cirrhosis of the liver. Its essential characteristic is that clinically it presents a symptom complex which has a certain resemblance to that of cirrhosis, namely, a high grade of ascites, and either no or very slight œdema of the legs, while as the pathologico-anatomical foundation of the affection there exists a chronic adhesive pericarditis. After reviewing the subject in its different phases, he states that as a result of adhesive pericarditis there develops a comparatively high grade of ascites in the absence of œdema of the legs. If the pericarditis is latent, then the symptom complex has a certain likeness to cirrhosis of the liver. There is no one invariable anatomical cause for this affection, neither are its symptoms absolutely characteristic, and therefore this name should not be accepted.

Berliner klinische Wochenschrift, March 19, 1900.

Antipyresis.—Liebermeister gives an interesting review of the changing opinion regarding the treatment of fever during the past two hundred years. The older physicians believed that it was dangerous to reduce temperature too quickly, and so they most carefully avoided all cooling drinks and even fresh air in fever cases. Here and there through the literature of medicine are scattered references to the advantages to be derived from the generous use internally and externally of cold water, but the modern views of antipyresis really date from the work of Ernst Brand in Stettin, who in 1861 began that series of observations which have revolutionized the treatment of fevers. We now realize that the high temperature itself is dangerous regardless of its exciting cause, and the reaction from earlier enthusiastic views has simply been in the direction of learning how to employ antipyretic measures safely, so as to reduce the temperature without depressing the system in other directions.

Curative Results in Pulmonary Tuberculosis in the Charité Hospital during the Last Ten Years.—Schaper gives a comparative table of results obtained in the above institution in Berlin and those noted in the Institute for Infectious Diseases. In the former the mortality ranged from thirty-four to fifty-four per cent., the mortality curve showing with the exception of one or two years a progressive reduction; in the latter the percentage of deaths ran from thirty-three to twenty-seven, the average being twenty-seven per cent. There was not, however, the progressive lowering of the mortality curve as in the former case. He attributes the good results obtained in the Charité Hospital to various factors. We now have a much broader view of the essential problem of tuberculosis as to dietetic management and general hygiene. Moreover, the public is better educated as to the necessity of early intervention, and the patients come under observation at an earlier stage of the disease.

Tuberculin and the Early Diagnosis of Tuberculosis.—B. Fraenkel regards tuberculin as a definite and sensitive test for the disease, claiming that when local and general reaction appears we can surely predict the presence of the malady. He believes its diagnostic employment to be without danger. Such diagnostic tests should be conducted in a hospital, for it is necessary to take the temperature every three hours and to keep the patient under the closest observation. In pronounced cases in which the test fails, we have either an encapsulated focus which the injected material cannot penetrate, or else an advanced condition in which the process itself has caused the production of so much tuberculin that the little we inject can exert no effect. A few cases are on record in which reaction has ensued without the presence of the disease. The test finds a valuable field for employment in cases of chlorosis with cough and slight physical signs, which of themselves alone do not afford us ground for a positive diagnosis.

French Journals.

Actinomycosis.—A. Poncet and L. Bérard study the prevalence of human actinomycosis during the past two years in France. The cervico-facial region gives twenty-one cases, the pleural one, the cæcal and pericæcal two, the umbilical one, and the vesico-ano-rectal one. The yellow grains are not always to be found in fistulæ, etc., unless they are carefully sought in scrapings, etc. Iodide should always be given, though its curative effect cannot be guaranteed. An early diagnosis is essential, since later the disease may be beyond the resources of therapy. The clinical symptoms should precede and lead to the search for the yellow grain, which is the criterium in diagnosis.—*Le Bulletin Médical*, March 28, 1900.

Extra-Visceral Sarcomatosis.—L. Lapayre and M. Labbé present with illustrations an account of a young man of low physical and mental development, the subject of a congenital, hairy, pigmented mole covering the middle portion of the body like bathing trunks. Besides pigmented moles over the entire body there were numerous painful soft tumors, varying from the size of a pigeon's egg to that of the double fist. Three months after these tumors began to appear the man was dead. All viscera were found free, as well as the nervous and lymphatic systems. The case bears analogy to neurodermatosis in the evidences of race inferiority, but differs in absence of nerve involvement.—*La Presse Médicale*, March 2, 1900.

Note on a Case of Resection of the Stomach.—A. Ricard presented a patient whose stomach, the first portion of the duodenum, and a large portion of the pancreas had been resected for epithelioma. The operation lasted one hour and a quarter. The first day 1,750 gm. of serum were given, 500 in the veins. The patient was shown eleven months after operation, having gained fifty-two pounds, with a fresh, rosy color and signs of perfect health. Eight personal pylorectomies by the writer have recently been published, with seven recoveries. If done early, stomach cancer can be operated on as well as those of the rectum and uterus.—*Gazette des Hôpitaux*, March 22, 1900.

Shall Basiotripsy be Given Up?—Dr. Audebert concludes that an operation with all exposed to view is preferable to a blind procedure, and that the head should be held with tractors so that the borer does not slip at the moment of perforation. While a surgeon, deprived of the basiotribe, may in an urgent case diminish the size of the head piecemeal, the writer is convinced that basiotripsy, thanks to its absolute safety and uniformity of results, as well as to its simplicity, remains for the majority of cases the operation of choice, and that it cannot well be banished from obstetric practice.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, March 25, 1900.

Poisonous Fish.—J. Pellegrin leaves aside the injurious effects produced by inoculation and by wounds made with the attacking apparatus with which some fish are armed. These have recently been studied in the same journal by Coupin. He confines himself to poisonous effects due to the use of fish as nourishment. The poisons are either those inherent in the flesh, or due to substances taken in feeding from poisoned and polluted streams, toxic plants, or to diseases attacking the fish, often of microbic nature. All these factors are studied. — *La Médecine Moderne*, March 28, 1900.

Urinary Secretion in Eclampsia.—Paul Bar presents the results of his researches made with the view of determining the action of the kidneys in puerperal eclampsia, how oliguria appears, and fixing the place to be assigned to it. The most important point determined from the observations is that the functional trouble in the kidneys is secondary, and that good action of the kidneys does not prevent the fatal ending. —*Le Bulletin Médical*, March 28, 1900.

Black Tænias.—Charles Fritz finds a single instance of "negro tænia" in literature. He reports one instance personally observed in a practice of thirty years. He attributes the extremely black color to the patient's long use of bismuth during a chronic diarrhœa. With the expulsion of the worm the diarrhœa ceased.—*Le Bulletin Médical*, March 31, 1900.

American Journal of the Medical Sciences, April, 1900.

A Contribution to the Diagnosis of Diverticula in the Lower Part of the Œsophagus.—Franz A. R. Jung states that the reason why diverticula in the lower part of the œsophagus are usually overlooked is that this part of the tube is not generally examined in an ordinary autopsy. He reports two cases, and draws the following conclusions in relation to the differential diagnosis of diverticula: With dilatation, as well as with diverticula, there occur painful cardio-spasms (Kelly, Jung), as well as painless cases (Reitzenstein). In both vomiting occurs from the œsophagus, occasionally from the stomach. If food eaten one or two days before is vomited, while other food eaten in the mean time remains down, the case seems to be one of diverticulum. The swallowing sounds are abnormal in all cases of dilatation. If after emptying the œsophagus it is easy to enter the stomach, a diverticulum probably exists. The entrance of the diverticulum can easily be overlooked in œsophagoscopy. The value of gastrodiaphany varies with the individual case. X-rays show an enlargement of the œsophagus only.

The Value of Electrolytic Dilatation of the Eustachian Tubes in Chronic Tubal Catarrh and Chronic Catarrhal Otitis Media.—Arthur B. Duel concludes from experience gained in fifty cases that the pathological process in inflammatory conditions of the Eustachian tube and the tympanum is the same, *i.e.*, hyperæmia, followed by the exudation of round cells, which organize into new connective tissue, and subsequently atrophy. Chronic tubal catarrh and chronic catarrhal otitis media are different only in position, not in character. On account of its effect on hearing, obstruction of the Eustachian tube should be removed as rapidly as possible. The best method is electrolysis, for it is more rapid, more efficient, and its results are more permanent. In a word, all narrow tubes should be restored to their normal calibre, and when narrowing is due to an organized inflammatory exudate, electrolysis is the best method.

A Critical Summary of Recent Literature on the Localization, Diagnosis, Prognosis, and Treatment of Gonorrhœa in Women.—John G. Clark, after speaking of the different parts of the genital tract which may become affected, declares that the diagnosis of this affection in women is far more difficult than in men, chiefly because leucorrhœal discharge is more or less normal in the former, whereas in healthy men there is no urethral discharge. The most certain method of diagnosis is the demonstration of the gonococci in the secretions. In women, so far as the question of prognosis is concerned, the localization of the pathological process is the deciding feature. Different authorities vary in their opinions on this point. As to the treatment, absolute rest in the acute stages is one of the most important essentials. Silver salts, ichthyol, and immediate germicidal treatment in acute cases maintain an important place. As to the extent in operative treatment, authorities also differ.

Gumma of the Iris and Ciliary Body; Recovery with Normal Vision.—Charles A. Oliver reports this case of a man thirty-seven years old (a self-proclaimed syphilitic), who had lost the sight of the other eye six years previously. The interesting points in the case are: That the first eye affected probably suffered from a similar type of affection as that under consideration in the present instance; the recovery of the second eye with normal vision after three exacerbations; the endurance and positive value of larger doses of mercury; the comfort obtained by the local use of heat, mydriatics, and cyclopegics; the discharge of the gummous material into the ocular media, with the rapid disappearance of the mass; the temporary change of refraction from far-sightedness and astigmatism to near-sightedness and astigmatism; and the appearance and retention of the most curious ophthalmoscopic picture of chorio-retinal disturbance.

A Remarkable Case of Probable Thoracic Aneurism Presenting Intermittently through the Sternum.—Richard C. Cabot cites this case, of a woman aged forty-two years. The remarkable features are, that the aneurism eroded and perforated the sternum in two places without ever causing pain or any other pressure symptoms; that it presented externally as a tumor, and then disappeared under treatment by iodide of potassium, the skin rupturing without letting out any blood. This series of events was repeated several times in the course of seven years. Death occurred from the sudden bursting of the aneurism as the patient lifted a pitcher of water.

An Experiment in the Transmission of Syphilis to Calves.—Mazyck P. Ravenel used in this work two calves, and states that the results of the experiments, which were conducted with the greatest care, have been entirely confirmatory of the work of those observers who, like Neumann, have failed in all attempts to transmit syphilis to the lower animals, and who hold it to be impossible.

Pediatrics, March 15 and April 1, 1900.

Ophthalmia Neonatorum.—J. A. Day says it is difficult to overestimate the seriousness of this disease, which causes nearly thirty per cent. of all blindness. The eyes should be the parts to receive first attention from the physician who officiates at the birth. After cleansing them, a few drops of some mild antiseptic should be instilled, after which he should see that the eyes are not molested. If gonorrhœa is suspected, a few drops of a two-per-cent. silver solution should be dropped into each eye. Energetic treatment must be instituted in all cases of "inflamed eyes." The most important point is the early detection of beginning inflammation. and daily inspection should be the rule. The cardinal principle is to keep the eyes free from irritating discharges. Lid retractors should be avoided, as apt to cause injury. General rules of management are given.

Five Years' Experience in Private Practice with Diphtheritic Antitoxin Serum.—Frank W. Wright reports upon two hundred and sixty-eight cases, divided into four classes: (A) Environment the best and care most perfect; (B) good family care and sanitary conditions; (C) ordinary care; (D) poorest care and unsanitary surroundings. In class A were 33 cases and 6 deaths; in B, 60 cases and 7 deaths; in C, 95 cases and 17 deaths; in D, 80 cases and 29 deaths. Of those receiving antitoxin on the first day 12 died and 99 recovered; on the second day, 9 died and 58 recovered; on and after the third day, 37 died and 51 recovered. He concludes that the serum usually cures in favorable cases, and often in unfavorable ones. It prolongs life and lessens the severity; tends to prevent stenosis, and when intubation becomes necessary, it lessens the mortality. It prevents complications and sequelæ.

Cretinism.—Cristopher Graham reports a case of the sporadic variety. Thyroid treatment here finds a fruitful field of usefulness. It is commonly agreed that the condition is due to maldevelopment of the thyroid gland, its absence, atrophy, hypertrophy, perverted or abolished secretion; that it manifests itself either in early embryonic life, appears at birth or soon after, or is delayed until late childhood. The views of many writers are discussed. The capabilities of treatment are: (1) Removal of the myxœdematous condition; (2) quickening of physical development; (3) awakening of the intellect. Treatment must be continued through the entire life of the individual, otherwise relapses occur. The dose of thyroid varies for a child from gr. ss. to gr. i., gradually increased to gr. v. or more.

A Case of Mitral Regurgitation and Pulmonary Obstruction.—Augustus A. Eshner relates the history of a girl, aged eight years, who showed "nervousness" of the hands and feet, with shaking and weakness, for three months. At the apex a loud systolic murmur was heard transmitted to the axilla, and at the left base were a rough systolic murmur and an accentuated second sound. Treatment consisted in regulating the mode of life, digitalis, strophanthus, and iron, under which improvement took place. The writer considers the possibility of pressure exerted upon the pulmonary artery by the necessarily enlarged left auricle, though endocarditis of the pulmonary valves could not be wholly excluded.

Night Terrors.—Francis Huber reviews the opinions of Coutts. The term may be applied to a mild form of temporary mental disturbance, or the manifestations may be of central origin. In all instances there is an underlying neurotic or neuropathic state. The causes are very varied. No one remedy answers as a routine measure. The habits and life must be studied. Scolding should be interdicted. Tonics, ventilation, avoidance of stimulants, light evening meals, regulation of bowel function, are necessary. Adenoids or large tonsils should be removed. In neuropathic subjects, bromides, chloral, etc., render good service.

The Hygiene of Children's Sleeping-Apartments.—Joseph Byrne gives the results of daily observation in the habitations of working-people. The deficiency of pure air and light is generally deplorable, causing restlessness. The gas stove in such apartments is considered little short of murderous. Windowless middle rooms should be abolished. The best room should be the bedroom, and should be properly ventilated during the night. Bedrooms should not be swept, but mopped with a moist cloth. Stoves, as well as adenoids and nasal obstructions, are to be taken into account in treating diseases of infancy and childhood. Backward children should be protected by the physician.

Injuries of the Nerves due to Fracture.—Charles G. Cumston speaks of a girl aged seventeen years, who received a fracture just above the condyles of the humerus. After uniting the hand was practically powerless. Symptoms pointed to a lesion of the median nerve, due to callus or cicatrix. The nerve was exposed and a bony projection was chiselled away. No improvement took place for five weeks. After eleven weeks the functions were nearly perfect. An operation should be done as soon as the diagnosis is made, since much may be expected from early operation even in complicated cases.

A Fatal Case of Carbolic-Acid Poisoning in an Infant.—R. Abrahams relates an instance of death due to absorption by the skin in an infant seven days old. Convulsions came on five minutes after the fingers of a nurse, on which were a few drops of pure carbolic acid, came into contact with the skin. Symptoms of dyspnœa, shallow and labored respiration, cyanosis, rapid and feeble pulse continued for ten hours.

The Montreal Medical Journal, February, 1900.

Clinical Notes.—Stanley S. Cornell notes four cases. The first was that of a man aged sixty-five years, who contracted gonorrhœa. This was followed by arthritic and cardiac phenomena, and in about eight months he died. The second case was that of a man aged forty-seven years, the subject of chronic hip disease for forty-three years. He died during chloroform anæsthesia. This third case was that of a woman aged twenty-three years, suffering from tuberculous osteomyelitis of the terminal phalanx of the index finger succeeded by tuberculous invasion of the lungs. The primary cause was given as trauma. The fourth case was that of fatal hæmatemesis in a boy aged fifteen years, probably the result of perforation of a gastric ulcer.

Notes from Practice in the Argentine Republic.—F. G. Corbin reports three cases of mycosis narium—maggots in the nose. They are rare even in the semitropical climate of the Argentine. The first case was treated by a nasal douche of bichloride of mercury 1 : 2,000, followed by insufilations of calomel and iodoform in equal parts. The bichloride was later changed to carbolic acid 1 : 40, while camphorated naphthol was used as the paint. The second case being mild was treated with chloroform and gum camphor. The third case was treated much as was the first one noted. Corbin reports also two cases of diaphragmatic hernia, in both of which operation was refused.

Report upon Eighty-Nine Cases of Appendicitis Treated in the Royal Victoria Hospital, Montreal, during the Year Ending December 31, 1898.—E. L. Archibald states that many of these cases dated their first attack back to the age of ten or twenty years. They rarely came under observation during a first attack. There were fifty-five males and fifteen females in the series of seventy case reports. The "onset pain" is very variable both in character and degree. Chill is a rare event. Painful micturition as a sign of pelvic peritonitis was inconstant.

Medico-Legal Cases.—Georges Villeneuve describes two cases under the following headings: 1. Offense against Morals, Allegations of Irresponsibility on Account of Insanity and Epilepsy Set as a Defence, Disproved by Medical Examination; Condemnation. 2. Mere Mental Weakness Associated with an Entire Absence of Moral Sense; Two Previous Convictions Followed by Imprisonment in the Jail and in the Penitentiary; Another Arrest with Medical Examination and Subsequent Commitment to a Lunatic Asylum.

Two Cases of Auditory Peripheric Hallucinations.—E. P. Chagnon cites these two cases, in which it is necessary for the patient to undergo an impression either upon the sense of hearing or of touch to experience auditory hallucinations; no noises, no voices are heard. If everything is quiet they have no hallucination whatever.

On the Etiology of the Nausea and Vomiting of Pregnancy.—David James Evans advances the theory that the essential exciting cause of the nausea and vomiting of pregnancy is frequently the physiological contraction of the muscular fibres of the gravid uterus.

A Case of Rupture of the Rectum; Operation; Recovery.—Frank R. England notes this case of a girl aged twelve years. The child fell on a broom-handle which penetrated the anus to the extent of from twelve to fifteen inches.

The Journal of Tropical Medicine, March 15, 1900.

A Case of Ainhum.—A. B. Dalgetty reports a case of this peculiar disease, consisting in an encircling band, or furrow, of fibrinous tissue around the fifth toe of each foot. No cause for the condition can be ascertained. The patient is in good health, there is no sign of syphilis or leprosy, and the toes have not been injured in any way. Dr. Manson inclines to the view that the fibrotic change is analogous to keloid, and is started by an injury or irritation of some sort. He thinks it may be related to leprosy. Leprous parts are sometimes strangulated off by a fibrotic constriction without much ulceration, and ainhum ends by the toe being cast off.

The Endemic Centres of the Plague.—Frank G. Clemow says that in a region lying between 23° and 28° north latitude and between 100° and 104° east longitude plague has been endemic at least since 1860, possibly for one or more centuries. In 1894 it appeared for the first time in history in Canton and Hong Kong. In the year preceding this extension, which proved to be the commencement of an almost world-wide extension of the disease, plague was unusually active in its endemo-epidemic home in China. This extension was due to spread of infection, and not to any universal change simultaneously affecting the centres of the disease at distant parts of the earth's surface.

Notes on Beri-Beri in the Australian Pearling Fleet, 1883 to 1887.—T. H. Haynes reports forty-five deaths from this disease among five hundred and six men in voyages lasting altogether fifty-three months, and says that nothing has been reported to alter the opinion (1) that beri-beri is confined to a very great extent to rice-eating races, and with proper care will not develop in less than sixteen months; (2) that the substitution of a mixed diet of wheat flour, beans, potatoes, etc., to the exclusion of rice, mitigates, even if it does not prevent, the disease. Lime juice is not very useful, but beer is very beneficial.

Observations on the Epidemiology of Plague.—Frederick Pearse gives an account of the courses of three successive outbreaks of plague in Bombay, of one in Poona, and of one in Calcutta. Each outbreak in Bombay occupied about the same period of time. The average weekly mortality is between five and six hundred, and on this basis it is assumed that about twenty-two thousand lives have been lost each year from plague alone. The mortality is estimated at one in forty of the population; but in the last outbreak in Poona it was one in ten.

Five Cases of Terminal Dysentery.—W. J. Buchanan says that it appears certain that the occurrence of dysentery as a terminal symptom of many diseases of the tropics is a fact. He thinks, to use Sir William Gull's words, that it is "rather a mode of dying than a cause of death." The germ of dysentery is everywhere present in the tropics, and finds in dying persons a favorable soil to assert its virulence and hasten the end. The author reports five cases which illustrate his point.

Monatsschr. für Geburtsh. und Gynäk., March, 1900.

Contribution to the Etiology and Therapy of Genital Prolapsus.—A. Theilhaber states that the general cause of vaginal prolapse is from atrophy of the underlying fat and connective tissue. If prolapse of the anterior wall of the vagina continues for a long time, there follows prolapse of the uterus. Treatment for vaginal prolapse is plastic operation on the vagina; no operation on the uterus unless for rare primary prolapse of the uterus. For primary anterior vaginal prolapse, operation on the anterior wall; for posterior vaginal prolapse, excision; in complicating perineal ruptures, building up of the perineum.

Contribution to the Colpeurynter Question.—O. Kaufmann declares that in all those cases in which an early emptying of the uterus is indicated, but in which the conditions of the uterine wall do not allow this without danger, the use of the balloon is the safest and best procedure.

Sclerosis of the Uterine Arteries.—S. Cholmogoroff has observed in three cases primary lesions of the uterine arteries; this lesion was arteriosclerosis, not having an inflammatory process as a basis. In the first case the affection was part of a general process; in the other two, local.

A Laparotomy with Unusual Difficulty in Asepsis.—E. Meusel reports this case, in which he performed the second operation. The patient was a woman fifty years old, with a malignant proliferating cystoma, adenocystoma papilliferum.

A Case of Missed Labor with Myoma of the Uterus and Placenta Prævia.—A. Hartz believes the early death of the fœtus in this case was due to compression of the placenta and cord. There was no severe hemorrhage. The myoma was on the left side.

Retroversio-Flexion of the Partially Incarcerated Gravid Uterus; Urachus Fistula.—Unterberger cites a case of this kind, the cause of which he considers was traumatism in the first part of pregnancy.

Archives Provinciales de Chirurgie, March 1, 1900.

The Treatment of Tuberculosis of the Prostate.—H. Sarda considers this an affection which should sometimes be treated surgically, medical treatment by means of acids, silver nitrate, iodoform, etc., having given little satisfaction. The longitudinal prerectal perineal incision may be used in cases of perineal abscess, which, with the prostate, should be curetted. The transverse incision is preferable when there is neither abscess nor fistula. Should there be fistulæ, these should be followed up to reach the prostate. The longitudinal incision, as used by Roux or Delagénière or Guelliot, should be used in cases of prostatectomy. General treatment should not be neglected.

Burns from the X-Ray.—Ch. Février and G. Gross report two cases. To avoid such an accident, they advise the interposition of a sheet of aluminum connected with the ground, or else the ampulla should be placed at least 25 cm. away from the skin. Aluminum is transparent to the *x*-rays and retains all the electricity discharged by the tubes and conducts it to the ground. The discharges in the ampulla should be diminished in frequency, or a static machine may be used in connection with the ampulla. Individual susceptibility must be taken into account. Arthritic patients are especially susceptible.

A Grave Case of Anthrax of the Upper Lip.—By treatment with Marmorek's serum Alfred L. Dupraz obtained a cure in a case in which incision and curetting had been of no use. Albumin in the urine disappeared after use of the serum.

Annales de Médecine et Chirurgie, March 15, 1900.

The Prognostic Value of Lenticular Rose Spots. Exanthematic Form of Infantile Typhoid Fever.—Etienne Boulin concludes that in light forms of infantile typhoid fever the exanthem and enanthem are equally slight. In severe forms the cutaneous eruption and digestive troubles are equally developed. Among the forms of medium intensity there is the exanthematic form (Weill and Lesieur) characterized by (*a*) the importance of the lenticular rose spots; (*b*) the attenuation of intestinal symptoms; (*c*) the good prognosis. The abundance of rose spots is an unfavorable sign only if it coincides with the absence or reduction of digestive disturbances in cases of medium intensity.

The Essential Toxic Symptoms of Diphtheria.—John Biernacki says that the arterial pressure falls gradually; temperature falls equally. The urine gradually diminishes. In the cases he notes the fall of blood pressure has been slight in the beginning, then goes on progressively in this manner to the end. The symptoms that are considered essentially toxic have to a certain degree a constant character, and their development as well as their consecutive intensity is in intimate relation with the fall of blood pressure.

Cold Bathing in the Course of Typhoid Fever in Infants.—E. Ausset believes in the systematic bathing of infants suffering from typhoid fever, but considers the Brand method too severe in many cases. The favorable action on the nervous system and on the circulation is obtained frequently enough by baths at 26° or 28° C. When cases are not benefited at first by these milder baths, the writer gradually cools them down to the Brand temperature. He has never seen ill effects, even from the last method.

Lo Sperimentale, No. 1, 1900.

The Specific Serums.—Gino Galeotti says that Ehrlich's theory is that in order that any substance should be toxic to the organism it must possess the power to fix itself chemically upon the molecules which constitute the living protoplasm of the organism itself. This theory the author finds in complete harmony with the results of experimentation in regard to the action of serums and antitoxins.

Umbilical Tumors.—Teodoro Stori from his researches concludes, (1) that there may be developed upon the umbilical cicatrix an adenopapilloma, possessing the same histological characteristics as those originating from the intestinal tract—that is to say, developed from the remains of the omphalo-mesenteric duct; (2) that the omphalo-mesenteric duct may persist in the umbilicus and in the extra-peritoneal abdominal walls to an extent of about 5 cm. without any apparent connection with the intestines, presenting, however, marked involution extending to its deepest portion.

Morphological Study of the Thyroid Arteries.—Ferdinando Livini bases his work upon the examination of one hundred cadavers. He submits graphic representations of conditions observed, and describes first the types most frequently found.

Correspondence.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

Preparations for a Change in Weather are being made in South Africa by both belligerent parties. The splendid summer is giving way to the rains that usher in the cold, and the cold when it comes is known by experience to be sometimes very severe. Already the hardships of the English army, a large proportion of whom have poor camping accommodations, have become considerably enhanced by the persistent wet, and a prolongation of the campaign will necessitate the supply of more suitable kits. Flannel shirts, warm underclothing, and thick uniforms are being rapidly manufactured in England for the forces, while articles of a similar nature are said to be reaching the Boers via Lourenço Marques. These and other preparations seem to show that, in spite of the sanguine forecasts of journalists, there is no immediate expectancy on either side of a declaration of peace. The Boers are still in possession of the north of Natal; their army is to a great extent intact, and their positions in their own country are strongly fortified, all of which things make it a little difficult to understand why their capitulation is so persistently looked for by a section of the British press. On the other hand, Great Britain is perfectly determined, before discussing the future of the Republics, to obtain an unqualified submission, and Lord Roberts' peaceful stay at Bloemfontein is only the prelude to an organized attack upon the Transvaal territory.

The Condition of Mafeking.—I am still unable to report the relief of the Mafeking garrison, but since my last communication several telegrams have come through from Colonel Baden-Powell to Cape Town showing that he is still able "to keep his end up." Undoubtedly the relief columns have a difficult task before them, as they have to maintain intact lines of communication of immense length. To gallop into Mafeking without bringing stores and without opening and keeping open a way by which stores might be brought, would be to insure the immediate downfall of the town by starvation and disease. The town remains fairly healthy, and the food supply should last some time yet. The number of the garrison is not large. I have seen it given as 10,000. This figure is too high. It is the figure of one of the big contractors who supplied stores in view of a possible siege, and includes both those who have since died and those who made their escape from the town in the last day or two. It will probably be found that Colonel Baden-Powell has under his care rather under 2,000 whites and about double as many blacks—that is, including civilians of both sexes, children, and troops. The contract to supply Colonel Hore's forces specified as soldiers four hundred and forty Europeans and one hundred and ten natives, and specified also four hundred and forty horses and seventy-three mules, and the outside duration of the siege was estimated at three months. The investment has now lasted over five months, but the contractor sent a much greater supply of stores upon his own well-inspired initiative, and if the town is saved his action will have mainly saved it.

The Herbert Hospital, at Woolwich, just outside London, which Queen Victoria has recently visited, was built at the instance of Mr. Sydney Herbert, afterward Lord Herbert of Lea, who was Secretary of State for War during the Crimean war. It was designed by the late Sir Douglas Galton, and within its walls Sir Douglas' famous cousin, Miss Florence Nightingale, carried out the views on hygienic nursing which have made her name famous throughout the world. The Herbert Hospital, like the other big service hospital at Netley, is crowded with sick and wounded who have returned from the war.

Professional Jealousy among the Boer Medical Men.—I have already referred to the very cold welcome extended by the Boers to the medical men and ambulance establishments which, with the kindliest motives, have gone to the Transvaal. This attitude was at first explained by the fact that the Boers, having obtained from the various foreign powers to whom appeal has been made, much verbal sympathy but no substantial help, feel a deep distrust of Europeans; but it seems likely that professional jealousy has played a part. Major F. A. B. Daly, of the Royal Army Medical Corps, who was captured by the Boers after the battle of Dundee, and who has since regained his freedom, says that during his captivity he helped to alleviate the sufferings of the wounded Boers, with the result that he excited so much jealous feeling among the Boer doctors that it was decided to send him back to his own troops. Thus was virtue rewarded.

The Death of General Joubert.—Petrus Joubert—"Slim Piet"—the commander-in-chief of the Boer army, died in Pretoria on March 27th from intestinal obstruction and peritonitis. The diagnosis is conjectural, but it is known that he has been suffering from symptoms of the condition for some time, and it has certainly required the greatest fortitude on his part to remain in the field. In him the Boers have lost a great general, and the British a fine foe. He was a

Frenchman by birth, but had lived forty-five years in Dutch South Africa, and had held high civilian office in the Transvaal before being called to his military position. He is known to have been opposed to going to war with England, although his aspirations for an independent Dutch Republic, free from British trammels, were every whit as real as those of President Kruger. But Joubert, though a good soldier, believed implicitly in diplomacy, and earned his nickname by his skill in conducting negotiations. He was averse to losing all chances of achieving Dutch aims peacefully, a position which he knew would follow if his countrymen made an armed invasion of British territory. But his advice was overruled, and when he found that he had to fight, he fought with great strategic skill. His invasion of Natal was an admirably planned affair, and, in spite of Sir George White's pluck and resource, the Boers might have reached Pietermaritzburg, and even Durban, had it not been for the grand work of the British naval brigade, who were present at Ladysmith more or less by accident.

The Boer Ambulance Wagons, which fell into the hands of Lord Roberts during his march into Bloemfontein, show well that the Republics have made very good preparation for the care of their wounded. I suggested that when we knew more about it we should probably find this to be the case, for there never seemed any grounds for believing that an army so well provided with all military *impedimenta* had no proper arrangements for the succor of the wounded. Over and over again this has been stated, but never upon trustworthy information. As a matter of fact, the Boer ambulance wagons turned out to be very comfortable vehicles. There is no uniformity of pattern about them; on the contrary, covered vehicles of every shape are used, the only external thing in common being the flying of the Red Cross. But all the ambulances are well furnished within with mattresses, and clearly only conveyances with good springs have been selected. Also the wounded are expected to require transport in a lying-down condition, and the ambulances are prepared with this in view. The British ambulance wagons are very neat, clean, and uniform in pattern; but a large proportion of the wounded have to be removed in a sitting posture, and the build of wagon is one that does not run lightly. On the whole it is probable that the Boer wounded suffer less than the British wounded during transport along the abominably rough roads of South Africa.

OUR LONDON LETTER.

(From our Special Correspondent.)

LECTURES AT THE COLLEGES—BROWN INSTITUTION—LETTSOMIAN LECTURES AT THE MEDICAL SOCIETY—SURGERY OF THE SPINE—MIDWIVES BILL.

LONDON, March 30, 1900.

WE are in the lecture season. Those who have so often inveighed against overlecturing students might very well direct some of their criticisms to the provisions made for practitioners. Both the royal colleges give courses of lectures on various subjects. Some of the societies have lectureships, and there are other fixtures each season. Of late, too, the Post-Graduate School has extended the system. If he tried to attend many the practitioner would have little time left to digest all he heard. But he knows better, and most of the courses fail to attract him. I have been at lectures by distinguished men when the audience could be counted on the fingers. Still the older established courses have an imposing history and may usually be heard with profit.

The Arris and Gale lectures at the College of Surgeons were delivered last month by Mr. B. G. A. Moynihan, of Leeds, who devoted them to the anatomy and pathology of the rarer forms of hernia. The Hunterian course was entrusted to Mr. Mayo Robson, who lectured on the surgery of the stomach. He produced statistics gathered from various sources and gave the results of his own operations. He takes a hopeful view of this branch of practice and thinks its success should be as great as in that of the gall bladder. He appeals to the medical side for earlier diagnosis and earlier consultation with the surgeon.

At the College of Physicians the Milroy lectures have been given by Dr. F. J. Waldo, one of our leading medical officers of health. He took for his subject epidemic diarrhœa, and suggested that the dust of towns might be the purveyor of the infecting microbe. Such dust being always polluted with horse-dung, this might be the chief agent of distribution. If the idea only leads people to be more careful to preserve milk and other foods from dust it will be a benefit to many.

The Goulstonian lectures have just been concluded. They were given by Dr. Horton Smith, who discoursed on typhoid and its bacillus. I may name one point he enforced, viz., we cannot regard it as an intestinal disease. It is more like a modified septicæmia, for in all cases the bacilli pass into the blood and thence to the various organs, and the symptoms are referable to the poisons there produced, except those of the intestine. It is modified in that there is in nearly all cases the definite local primary disease whence secondary dissemination of the microbe takes place.

The Lumleian lectures were begun yesterday by Dr. Cheadle. The subject is cirrhosis of the liver.

The Lettsomian lectures of the Medical Society of London have been delivered by Sir William M. Banks. Now he is one of the advanced surgeons and always expresses himself with clearness. His style is easy and forcible, often picturesque, and everything he writes is worth reading. He took as his subject cancer of the breast, and gave a synopsis of what is known about it from his own point of view. His impressions after thirty-three years of surgical work must be of value, although, as he remarked, statisticians hold such evidence in contempt. It is often said figures cannot lie, but, said Sir William, "it has long been painfully manifest that nothing can be more lying and delusive than statistics if not properly used." As a result of improper use of medical statistics he found that "many errors have been long handed down from book to book until some disagreeable doubter has arisen who has exposed them." Further he observed that erroneous conclusions may be drawn from correct figures. "If any one wants to know how statistics may be manipulated and applied, let him consult the literature of the anti-contagious diseases, anti-vivisectionist, and anti-vaccinationist propaganda—all prepared by persons of the most superior virtue." The questions of increased prevalence, local distribution, cause, heredity, and traumatism were then looked at. Diagnosis occupied the whole of one of these interesting lectures. "There are some delusions about cancer of the breast to which almost the entire public still give credit, and, I regret to say, not a few medical men. They are partly the result of text-book statements not properly explained, and partly the result of popular tradition. They are difficult to eradicate, because there is just that small amount of truth in them which makes it possible to argue about them." And with this preface the lecturer proceeded to examine a number of these errors.

Prof. Rose Bradford, physician to University College Hospital, is also superintendent of the Brown Institution, and delivers five lectures a year at the London University, as required by Mr. Brown's will. The work of the institution consists of three departments: First, there is the animal hospital under the care of veterinary officers, by whom many animals are continually treated for the diseases to which they are liable. Then there is the routine investigation of cases of suspected rabies in the laboratory of the institution; and, thirdly, there is the work of research concerning the diseases of man and animals, conducted in the laboratory by the professor and others. This year Dr. Bradford opened his course with two lectures on rabies, the other three being devoted to the tsetse-fly disease of South Africa. In the last five years between three hundred and four hundred cases of suspected rabies have been investigated at the Brown Institution, and some useful statistics accumulated. Dr. Bradford prefers the term rabies for the disease in man as well as in animals, hydrophobia being to a great extent a misnomer. Having noted that the disease was mentioned by Aristotle and described by Celsus, he briefly followed its history down to Pasteur, whose work was of course carefully described. This concluded the first lecture; the second dealt with the diagnosis of rabies in both man and animals.

In these days of daring surgery it is difficult to feel more than slight surprise at desperate attempts at operation. The spine is not a very promising part for interference, but modern surgery has met with some successes in that region. A case was related at the Clinical Society last Friday in which an attempt was made to remove a dermoid tumor growing in the spinal canal and pressing on the cord. The patient was a man aged twenty-six years, suffering from chronic Hodgkin's disease. Symptoms came on indicating a collection of fluid or some growth, irritating the second dorsal nerve and compressing the cord below it. This diagnosis having been arrived at, and there being no evidence of malignancy or of syphilis, laminectomy was performed, the second, third, and fourth dorsal arches being removed, when a gray tumor was exposed on the outer surface of the dura mater, reaching out of sight above and below. Pieces of the growth were snipped away and the patient rallied. Pulse and temperature fell to normal from 120 and 101° F., and great improvement followed, but as the relief was far from complete a second attempt to remove the tumor was made. The first, fifth, and sixth dorsal laminæ were accordingly removed, but no limit could be seen to the growth. The patient died eight hours afterward.

Sir D. Powell, president, remarked that the case was interesting as bearing on the question how far interference was justifiable in such cases.

After this there was some discussion on the reduction of the deformity of Pott's disease by manual rectification. You will remember, perhaps, that I told you at the time of the cases brought before the society in 1897 by Messrs. R. Jones and Tubby. Since then they have had many cases, bringing the total to ninety-nine, of which they now gave their report. They showed some of the cases of the first series, that the fellows might judge of their results. They advise the plan only when the spine is yielding in young, strong children free from abscess or tubercle. They insist on the necessity of unremitting personal care and mention numerous contraindications, and say fresh air is an all-important adjuvant. Altogether they seemed less enthusiastic than before. The speakers who followed gave little encouragement, seeming to consider the correction of the deformity more apparent than real. The estimate of the usual mortality of Pott's disease, placed by the authors at twenty-five per cent., was challenged by Mr. Marsh, who put it at five or six per cent., and said paraplegia was recovered from under other treatment.

Eventually the meeting agreed to appoint a committee to report on the subject, the terms of reference to be drafted by the council.

The advocates of the midwives bill have managed to rush it through the standing committee, to which it was referred without material change. In a couple of sittings that committee finished its work, and the bill will soon come on in the report stage. The difficulty of defeating it is thus necessarily increased, and only the most strenuous efforts will avail to change it. But where are these strenuous efforts to hail from? The corporations and societies have done nothing. Apathy seems to have fallen on all but a few who have pointed out the dangers to the profession and the public, but have failed so far to arouse either. Sir George Pilkington, Mr. T. P. O'Connor, Mr. Lloyd-George, and Dr. Commins deserve credit for the efforts they made to amend several clauses, but the opposition was too strong. Mr. Atherley-Jones, whose name you may recall as having on other occasions made himself ridiculous, objected to midwives being subjected to restrictive rules by the General Medical Council, which he spoke of as "a body of rival practitioners," and he quite let the cat out of the bag as to the wish of the promoters of the bill to set up a distinct class of practitioners—a wish they had up to this period absolutely repudiated. The country practitioner was also sneered at as if his five years' curriculum scarcely entitled him to a position equal to that proposed for the Mrs. Gamps to be registered on account of their present experience, or their successors who are to be trained for three whole months! The society ladies who are working for the bill on behalf of "poor women in their trouble" will probably take care not to engage the new midwives in their own time of trouble.

A meeting of the constituents of the Southeastern divisions of London is called for Monday to impress on their parliamentary representatives the dangers of the threatened legislation.

PUBLIC SERVICE AGAINST PRIVATE WORK.

To the Editor of the Medical Record.

Sir: As indicating how the public mind has been and still is being educated, the incidents in an accident case are interesting.

While walking down Broadway on March 28, 1900, I saw a man start to run with a small boy in his arms, followed by several persons, and just after he passed me I heard him asking of those near him the shortest way to the New York Hospital.

Only a few doors below on the corner is a cigar store—about it was a crowd, some also in the store. Thinking others might have been injured besides the boy, I crowded my way in and offered my services to the policemen (there were two).

They told me no one was hurt there, and said the boy had been run down by a truck. They were trying to induce the woman in charge of the cigar store to make a charge against the truck driver, which she was declining to do. She was rapidly becoming hysterical because of the injury to the boy—how serious she did not know—and because of the crowd. I advised the policemen to disperse the crowd, lest they have another case; assured the woman that the boy seemed much more frightened than hurt, from what little could be learned by mere observation, and went on about my business; which having completed, I walked up Broadway and again met the cigar man with the boy. This time the boy was walking; he looked a trifle pale; he had one arm out of his sleeve and supported in some kind of sling.

The man informed me that at the New York Hospital they had told him the boy was little injured, and then said: "You know he was only knocked over by the truck."

Why should this man's first impulse be to run off to the hospital, six or seven blocks, when he thought his boy injured, and pass, in doing so, several doctors' offices by any possible route? Again, why should the police press upon the boy's mother—if mother she was—in the cigar store the necessity of her making a charge against the driver of the truck, when she stoutly refused to do so? Was it because they were afraid of having some irresponsible persons attack them for not doing their duty? They urge a woman after she has said: "I want nothing of this driver or his people."

Surely there is no hope of financial reward in this case, and to my mind is only another evidence of the direction in which we are drifting, *i.e.*, toward having everything done by public officials or public institutions.

Is it not wise to pause and ask ourselves the question: Is there no way to check this tendency? Would not the people who give so much time to worrying officials do well to institute measures, if possible, by which people should do more for themselves, and ask less of the officials and of institutions?

Put every one on his honor, officials, citizens, and all, leaving paternalism on the part of the government as much as possible in the rear. At our present pace it will not be long before there is none left besides the official and the dependent classes.

WICKES WASHBURN, M.D.

March 31, 1900.

LEPROSY LEGISLATION.

To the Editor of the Medical Record.

SIR: Shortly after the appearance of my article on leprosy in your journal of January 27th last, Dr. A. S. Ashmead, of New York, who appears to be a bibliographical leprologist (a gatherer of facts in regard to the subject of leprosy), sent to some eastern newspapers an article making substantially the same recommendations in regard to national legislation that I made in my contribution to the MEDICAL RECORD. Since the appearance of this article, it has been extensively copied east and west, in literary, medical, and daily publications, in several instances misquoted and misrepresented, especially by political papers that have tried to arouse partisan prejudice. I have been forced (much as I dislike discussing medical matters in the newspapers) to deny some of these statements attributed to me. For one thing, it shows where the MEDICAL RECORD goes, and, by the way, *Current Literature* for March credits my article to another medical journal.

My contribution was written not to alarm the general public, but to call the attention of the profession, and, through it, the attention of our legislators, to the fact that we have no protection in this country against a spreading disease. I wished to emphasize the need of national and State legislation upon the matter; of wise, comprehensive, prompt measures that shall prevent any considerable spread of leprosy on the mainland. We want such legislation now, not because we have annexed Hawaii, Puerto Rico, and the Philippines, and are in closer relations with the West Indies and the Orient, or because there is a sudden, emergent need to act, but for the reason that the obligation rests urgently upon us, because the obligation is long past due. In a legislative way, we have left undone the things we ought to have done, and therefore should now do the things that ought to be done.

I am glad to see that Dr. Prince A. Morrow, in his article on leprosy in the eighteenth volume of the "Twentieth Century Practice," just out, has seen fit to express his belief that leprosy may become a current disease, and to recommend national legislation in order to control the disorder. A year ago I made the same recommendations, and, with the permission of the MEDICAL RECORD and of some other medical journals, I shortly shall have reproduced in book form these same suggestions. Referring again to Dr. Ashmead's article, I think that his figures are misleading, if they are not entirely incorrect. He places the number of lepers in Hawaii at four thousand, which is an overestimate by twenty-nine hundred. As for our eastern islands, with eight thousand lepers on one island, I may say that no one at present has any means of knowing how many lepers there are either in the Philippines or in Cuba. Had annexation changed the physical status of the islands, these uncertainties might alarm us; but the truth is, we are as far away from our annexed territory as we were before the war. However, if the annexation of these islands does not materially increase the danger here, it may serve the purpose of rousing our government to action that should have been taken years ago; even before we had lepers of our own.

That we need not be hysterical about the matter is shown by the fact that New Brunswick has had its lazarettos many years without any alarming spread of leprosy in the locality. The danger lies in our not having any efficient provision against the spread of leprosy in our midst from existing, permanent foci in several of our States, and from the fact that isolated cases are going here and there among us with more personal liberty than the healthy negro is enjoying in the South to-day. Our general quarantine laws are not specific enough to affect this disease, and any of us are liable at any moment to be exposed to leprosy in its worst forms.

Besides, without going to lands across the sea, we are exposed to the lepers of Mexico and Central America—contiguous States. I would recommend that a commission be appointed to inquire into leprosy in this country; that this commission be empowered to visit Hawaii and other leper-infected countries, for the purpose of studying their laws of segregation, and their methods of dealing legally and therapeutically with the disease; that the report and recommendations of this commission be acted upon without delay. Such a course would stamp out a disease that may yet spread to all parts of the United States, and become as general as it was in Europe at one time.

The national medical officers we have at the present time are particularly well qualified to handle this matter, and our learned surgeon-general would no doubt gladly use his abilities with the special powers granted him, to provide some safeguard against the spread of leprosy.

E. S. GOODHUE, M.D.

LOS ANGELES, CAL., March 23, 1900.

Decapitation with the Karl Braun Key-Hook.—Karl A. Herzfeld gives a detailed account of the method of using the Karl Braun key-hook, and states that it may be used to perform embryotomy as well as decapitation, eventration, thoracotomy, etc. Its application is indicated in the wedged shoulder position, if the child is dead and version is impossible or contraindicated, as well on account of the wedging of the child as the stretching of the lower uterine segment. The key-hook is formed like the small upper end of Smillie's instrument, only it has a somewhat more parabolic curve, and at its lower end a knob—a knobbed hook—while the lower end of the metal rod is inscribed in a cross handle. In the three Vienna clinics (Gustav Braun, Chrobak, Schauta) the Karl Braun hook has been used for decapitation, always with the best results.—*Centralblatt für Gynäkologie*, March 17, 1900.

Reviews and Notices.

A Compend on Diseases of the Eye and Refraction, including Treatment and Surgery. By George M. Gould, A.M., M.D., formerly Ophthalmologist to the Philadelphia Hospital, and Walter L. Pyle, A.M., M.D., Assistant Surgeon to Wills Eye Hospital. Philadelphia: P. Blakiston's Son & Co. 1899.

This is one of a series of quiz-compends, and is as good as most books of the kind.

The Trained Nurses' Directory. Compend of Names Carefully Selected by Prominent Physicians and Surgeons of New York and Vicinity from their Private Lists. Compiled and Edited by M. Louise Longeway, Graduate of the New York Training-School, Bellevue Hospital. Sixth edition, New York. 1899.

This is a new edition of this useful publication. The work is designed for the use of physicians and families who may need the services of graduate nurses, who have been specially selected and recommended by leading physicians and surgeons as having had requisite hospital training and subsequent practice in private duty. The names are alphabetically arranged, giving address, telephone number, school, year of graduation, and the special cases taken by the graduates doing private duty in New York, Brooklyn, Albany, Orange, N. J.; Pittsfield, Mass.; Hartford, and New Haven, Conn., and the towns adjoining those cities.

Materia Medica and Therapeutics. An Introduction to the Rational Treatment of Disease. By T. Mitchell Bruce, M.A., M.D., Fellow of the Royal College of Physicians of London; Physician and Lecturer on Medicine, Charing Cross Hospital; Consulting Physician to the Hospital for Consumption, Brompton; Examiner in Medicine in the University of Cambridge; formerly Examiner in Materia Medica in the University of London and the Victoria University, and Examiner in Medicine on an Examining-Board in England. Philadelphia: Lea Brothers & Co.

This is a handy duodecimo volume containing all the essentials of materia medica in compact form. The author attaches importance to the plan which he has adopted in the description of special therapeutics, of tracing the physiological actions and uses of the different drugs in their passage through the body, from their first contact with it locally until they are eliminated in the secretions. The work is divided into three parts, dealing respectively with the inorganic materia medica, the organic materia medica, and general therapeutics. The third section is particularly to be commended, though those on the materia medica will be found very useful for reference.

Bacteriology in Medicine and Surgery. A Practical Manual for Physicians, Health Officers, and Students. By William H. Park, M.D., Associate Professor of Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, New York. In one 12mo volume of 688 pages, with 87 illustrations in black and colors, and two full-page colored plates. 1899.

Dr. Park's well-known studies in the laboratories of the New York City board of health especially fit him to write with authority upon the subject of bacteriology and hygiene. In this volume we have not only a practical exposition of all laboratory methods such as health departments should employ, but also the simpler methods such as the active practitioner can use at home. The value of the laboratory diagnosis is also discussed in full. The subject of hygiene has been particularly well treated in so far as relates to the methods of disinfection and purification of water supply, and the book can be recommended as one which meets every requirement of the health officer as well as of the practising physician. An appendix describing the more common micro-organisms not bacteria, such as the streptothrix group, plasmodium malariæ, amœba coli, etc., is of additional interest, while an index of infectious diseases with the bacteria found in each affords a ready reference which is helpful to a busy man. The language throughout is exceptionally clear and crisp, the details of laboratory technique are wonderfully complete, and the illustrations are excellent.

Children, Acid and Alkaline. Health, the Golden Mean; the Law of Diet Selection, Contraria; the Therapeutic Law, Similia. By Thomas C. Duncan, M.D., formerly Professor of Diseases of Children, Hahnemann Medical College and Chicago Homœopathic Medical College. Philadelphia: Boericke & Tafel. 1900.

The author of these one hundred and forty-eight pages divides children into normal, acid, and alkaline. Hahnemann had already discovered the chemical tendency. Contraria is assigned a permanent place in diet selection. Other writers are freely quoted, and the aim of the little work is to aid in developing healthier, happier humanity.

Christian Science: An Exposition of Mrs. Eddy's Wonderful Discovery, including its Legal Aspects. A Plea for Children and Other Helpless Sick. By William A. Purrington, Lecturer in the University and Bellevue Hospital Medical College upon Law in relation to Medical Practice; one of the authors of "A System of Legal Medicine." New York: E. B. Treat Company. 1900.

This is a collection of the author's writings upon the subject of Christian science as originally published in the *North American Review*, the Medical Record, and the New York *Sun*. Taken together they form a strong arraignment of the Eddy cult and the crimes perpetrated in the doubly sacred name which it has adopted.

Herman Ludwig Ferdinand von Helmholtz. By John Gray McKendrick, Professor of Physiology in the University of Glasgow. New York: Longmans, Green & Co. 1899.

Undoubtedly Helmholtz possessed one of the most brilliant minds of the present century, and the study of such a man's qualities, and the powers which secured for him such a high place among the investigators of the world, must be a pleasure and a profit to all lovers of nature and of nature's noblest works. The biographer has had a delicate and indeed in many particulars difficult task to perform in looking into the working of so creative a mind, and following up the inquiries pursued by this scientist. Little has been known and less published about the private life and personality of Helmholtz, and the present work, though small, gives an excellent and most entertaining account of the philosopher from the earliest to the closing years of his life.

The Nervous System of the Child, its Growth and Health in Education. By Francis Warner, Physician to and Lecturer at the London Hospital, etc. New York: The Macmillan Company. 1900.

This is a work addressed to all those who work for the welfare and education of children and to those seeking knowledge as to the workings of the youthful mind and body. Scientific methods of work in accomplishing the ends desired are pointed out. The study of the nervous system has much to do with questions of training as with those of health, and the whole question of management is discussed from the school rather than from the family standpoint. The needs of teachers have been kept in the foreground, and still questions of hygiene as it concerns boarding-schools have not been overlooked. The feature of the work would appear to be an indication, by a medical man, of the aids which medical science may render those who have to do with the bringing up of children.

Cheloid of the Lobule of the Ear.—Marcel Natier reports an interesting case of this nature occurring in a woman, aged forty-one years, and belonging to the better class. The exact cause of the mass could not be determined, as it dated back to the early childhood of the patient. Both ears were affected, and there were similar lesions in different parts of the body. Attention is called to the rarity of these formations at this site in the white race, though they are more common in the black races. Reference is made to the literature of other cases, and a résumé is given of the different modes of treatment. None of the latter seems to be very satisfactory so far as concerns the permanent removal of the growths.—*La Parole*, February, 1900.

Society Reports.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 14, 1900.

EUGENE HODENPYL, M.D., PRESIDENT.

A Case of Malaria following Wound Infection.—DR. F. M. JEFFRIES reported this case. A surgeon of this city who had never had malaria, and who had been in the city up to July 15, 1899, had then gone to Seabright, and had remained there from July 15th to 20th. While there he had driven around during the daytime, but had remained indoors at night. This neighborhood was not considered a particularly malarious one. From July 25th to September 15th he had been in the northern part of New Hampshire, where malaria is entirely unknown. He had returned to this city on September 15th, and on September 18th had performed a vaginal hysterectomy on a patient who, the next day, had had a distinct and marked malarial chill. This patient was from North Carolina, and had previously had frequent attacks of malaria. The next two days she had had chills, and as she had been given quinine on the second day there had been no further chills. At the time of the chill examination had shown no evidence of infection. During the operation referred to the surgeon had pricked his finger several times. On October 4th, or sixteen days after the operation, the surgeon had had his first chill. This had been followed by several others, each attack lasting for four or five days. On November 24th, or just prior to one of the paroxysms, the speaker had examined his blood and had found the plasmodium malariæ in great abundance. It was of the variety known as the æstivo-autumnal—a variety not commonly met with in this locality except in those who have had it previous to coming here. The evidence presented by this history certainly led one at least to suspect very strongly that the surgeon had become infected with malaria by wound infection. Specimens of the blood were exhibited under the microscope.

A Case of Advanced Tuberculous Coxitis.—Dr. Jeffries showed an extreme case of tuberculosis of the hip. The specimen had been removed from a girl aged ten years. The acetabulum was almost wanting, and the head and neck of the femur were entirely gone. Pus had burrowed as far back as the sacrum. The right hip was normal. In the left knee joint was found a nail such as is used in holding together the bones after excision of this joint, but there was no history of such an operation having been done in the hospital in which she had died. At the autopsy the upper right apex of the lung contained a small tuberculous nodule. The liver and spleen were enlarged and amyloid. The bladder showed a few tuberculous ulcers. The left kidney was fatty and tuberculous in its upper half. The uterus presented a tuberculous endometritis, and there was also a tuberculous salpingitis. The mesenteric glands were enlarged throughout.

DR. CARLIN PHILIPS asked whether the woman upon whom the operation of vaginal hysterectomy had been done had originally had the æstivo-autumnal variety of malaria.

DR. JEFFRIES replied that this patient had come from a region in which this variety was common, but there had been no opportunity of determining this point positively.

Two Cases of Perforation of Tuberculous Bronchial Lymph Nodes into the Trachea.—DR. F. S. MATHEWS presented the first of these cases. The specimens had been taken from a child, aged four years, who had been in the St. Mary's Hospital for Children for several months under treatment for tuberculous disease of the knee. On the night of January 19th the child, while apparently in his usual health, had suddenly begun to cough, and had soon choked to death. At the autopsy, made the next day, there had been found on the right side an opening from which pus was oozing. This connected with the abscess cavity. The trachea and right bronchus contained a considerable quantity of pus. Tubercle bacilli were found in this pus, and also in the mediastinal glands. No other tuberculous lesions had been found in the thoracic or abdominal cavities.

DR. M. NICOLL, JR., presented the history of a second case. The specimens had been taken from a child one year and a half old, who had been in the out-patient department of the New York Foundling Hospital under treatment for bronchitis for about one week. The child had then been taken into the hospital because of the urgent dyspnœa and cyanosis present. Expiration was more difficul tthan inspiration. The child had been immediately intubated, but without relief, and death had taken place in a few minutes. When the thorax was opened the left lung had been found over-inflated, and in a condition of very acute emphysema. On cutting through the left primary bronchus a large plug of mucus had forcibly escaped, and the lungs had then immediately collapsed. In the trachea, near the origin of the right primary bronchus, was an oval opening communicating with a cavity formed by the breaking down of a large tuberculous gland. The bronchus leading to the right lower lobe ended in a mass of tuberculous consolidation. The over-distention of the left lung was apparently due to the valve-like action of the inspired mucus plug; the power of expiration was not sufficiently strong to expel the air taken in at each inspiration.

A Case of Membranous Laryngitis Complicating Typhoid Fever.—DR. ALEXANDER LAMBERT presented the larynx from a person who had died of gangrenous laryngitis. The man was an alcoholic subject who had entered the hospital with a temperature of 105° F., marked dyspnœa, severe cough, and laryngitis. The leucocytes had been reported as being only five thousand, and on that basis a diagnosis of typhoid fever had been made. The next day the spleen had become palpable, and a profuse typhoid eruption had appeared. Toward the end of the third week the temperature had fallen very decidedly, and the man had shown every evidence of improvement. About this time the laryngitis had become much more severe. The fauces were red, and in the back of the pharynx was a slight grayish deposit. In the course of three days aphonia had become complete. Preparations had been made for a rapid tracheotomy should suffocation seem imminent. A tracheotomy had finally been demanded for an acute attack of suffocation, and this had given great relief. At midnight, however, the man had died suddenly of heart failure. At the autopsy a thick membrane was found extending from the epiglottis down into the larynx, and in the sulcus on the left side was an abscess cavity. There was also a peribronchitic inflammation which would probably have resulted in time in a septic broncho-pneumonia. There were some ulcers in the cæcum, which were practically healed. On searching the literature he had found that Keen had reported most of the cases, and that most of them had developed well on in the period of convalescence. Often the first symptom had been aphonia, or evidence of suffocation, and death had often occurred almost instantly. In two of the reported cases the patients had recovered without tracheotomy, and two with it. The gangrenous area extended from the epiglottis down two and a half inches into the trachea itself.

DR. E. K. DUNHAM said that he had examined microscopically the specimens from this case. The most interesting of these had been the one taken from the pharyngeal surface of the aryteno-epiglottic fold. In this there had been a diphtheritic inflammation, and a line of demarcation had formed, causing a loosening of the necrotic tissue. A little beneath this line of demarcation there was an acute exudative inflammation with interstitial hemorrhage. Apparently, therefore, there had been two infections; an earlier one causing necrosis of the surface, and a later one causing an interstitial hemorrhage at the base of the granulation tissue. On the inner or laryngeal aspect of the aryteno-epiglottic fold there was a fibrinous exudate on the surface with granulations beneath, and a rather excessive diapedesis of red corpuscles. This exudate was probably due to the second infection. Over the cricoid the condition was very much the same as on the inner surface of the aryteno-epiglottic fold. Nearly all the micro-organisms found were diplococci or streptococci.

Dr. George P. Biggs asked why this case was described as a gangrenous laryngitis.

Dr. Lambert replied that the tissue in the upper and back part of the pharynx had been perfectly black and gangrenous.

A Case of Aneurism of the Aorta.—Dr. Alexander Lambert reported this case. The subject was a man, alcoholic, forty years of age. Syphilis had been suspected but not definitely made out. He had had an attack of pain in the shoulder with dyspnœa some years before. Five years before that attack the man had walked into the Vanderbilt Clinic with typhoid fever, and at that time the aneurism had been discovered. During 1898 and 1899 the man had worked laboriously and drunk excessively. When seen last summer, there had been a large mass projecting out under the chin. This mass measured vertically five and a half inches. Physical examination had revealed evidence of compression of the left lung. The man had left the hospital in August. When seen again, on November 14th, the tumor had extended from the deltoid muscle on the left side across to within three inches of the opposite deltoid. It measured eleven and a half inches transversely and projected three and a half inches. Its circumference was twenty-four inches. At that time the skin had been exceedingly thin over the tumor. About a month later the tumor had measured thirteen inches transversely. Five days after this the man had coughed up a rather large clot of blood. One or two nights afterward the aneurism had ruptured. The autopsy showed that the anterior wall of the aneurism was made up of the skin, and that there was no true sac. The entire thoracic wall had been eroded by the tumor. The blood clot weighed 1,500 gm. The cartilages on the left side had been completely absorbed, and the ends of the ribs had been eaten away. The lungs, trachea, and larger bronchi were normal. There was hypertrophy of the left ventricle of the heart, but the valves were normal. The lateral portion of the arch opened into the aneurism by a large aperture. The interesting feature about the aneurism was that a hole had been made in the aorta by the giving way of an atheromatous patch. The blood had then been diffused into the areolar tissue of the mediastinum, and had become organized there. This mixture of connective tissue and coagulated blood had formed the aneurismal sac.

Dr. Biggs took issue with Dr. Lambert as to the explanation of the formation of the aneurism. He thought there had probably been the usual gradual development due to local weakening of the vessel rather than to a rupture of the vessel.

Dr. Lambert replied that it was probable that the aneurism had started originally like other aneurisms, but there was, at the time of the examination, no longer any evidence of the first formation.

Two Cases of Acute Intestinal Obstruction from Intussusception.—Dr. H. J. Boldt presented specimens from two cases of acute intestinal obstruction due to intussusception. In the first case the intussusception had been caused by a polypus. The second specimen was from an intussusception occurring in a child as a result of a diverticulum in the bowel. He said that he had never met with a case of this kind in which cathartics had not been administered, and he wished to direct attention to the great importance of avoiding the administration of such drugs. If an acute intestinal obstruction could not be relieved in a few hours by the use of high enemata with inversion of the patient, and massage of the intestines, an abdominal section should be performed ere serious symptoms became manifest.

Gangrenous Dermoid from Twisting of the Pedicle.—Dr. Boldt also exhibited a gangrenous dermoid tumor of the left ovary. The condition had been produced by a complete twist of the pedicle from left to right. Apparently the condition had lasted for three or four days.

A Case of Suppurative Metritis.—Dr. George P. Biggs presented specimens taken from a woman, thirty years of age, who gave birth to a full-term child sixty-three days before death. On the seventh day after confinement she had a chill, followed by fever and pelvic pain. Curettage was done two days later and the symptoms gradually abated so that three weeks later she was able to sit up. After two days she was obliged to return to bed for three weeks, but was up again for two weeks before coming to the hospital. She entered the New York Hospital sixty-one days after parturition, and at that time was very anæmic and markedly septic. On examination considerable bloody fluid escaped from the uterus, and a sound passed directly into the peritoneal cavity. Her condition was so bad that a radical operation could not be attempted, but free drainage was established through the uterus and posterior cul-de-sac. At the autopsy marked pelvic peritonitis with extensive adhesions was found. The uterus was but little larger than normal and showed an area of advanced softening 2 cm. in diameter in the anterior portion of the fundus. It was through this area that the sound had passed into the peritoneal cavity. The right cornu of the uterus was 3 cm. in diameter and contained a series of communicating abscesses. In the left broad ligament there was an abscess 3 cm. in diameter. Smears and cultures from these abscesses showed an abundance of streptococci. The Fallopian tubes and ovaries on each side appeared normal except for surface inflammation. Interesting points in the case were the distinct suppurative metritis which the speaker had not seen before, and the long duration for such a process of necrotic softening. The cæcum from this case was much contracted, and its wall was thickened and ulcerated. The process was evidently one of long standing. Partly from a few old tuberculous lesions in the lungs, and partly from the presence of a few miliary tubercles in the peritoneum over the site of a similar ulcer in the ileum, he inferred that this was a tuberculous process.

Dr. Boldt commented upon the small size of the uterus, in view of the amount of sepsis present. Furthermore the uterus was much firmer in consistence than in a case of puerperal sepsis. The suppurative metritis present in this case was exceedingly interesting. He had seen only one other case somewhat resembling this.

Typhoid Infection of the Uterus; Report of Two Cases.—Dr. A. J. Lartigau read this paper. He stated that there were only a few recorded cases of typhoid infection of the uterus. The first case reported was that of a married woman, thirty-one years of age, who had entered the Albany Hospital in 1899. In

November, 1898, she had been sick for three weeks with what had been supposed to be typhoid fever. Her present illness had begun with severe pain in the lumbar and left iliac regions. A diagnosis had been made of ectopic pregnancy, and this had been removed by abdominal section. She had died three days after the operation. The autopsy revealed typhoid fever without intestinal lesions, and acute splenic tumor and an acute hemorrhagic endometritis. The uterus measured 5.5 by 4 by 3 cm., and was of normal consistence. The cavity was patent, and the endometrium soft, red, and congested, especially in the fundus. The mucosa was covered with a quantity of viscid mucus. The microscope showed considerable multinuclear infiltration of the mucous and submucous tissues. The uterus contained the typhoid bacillus and the streptococcus pyogenes. The second case was that of a woman, aged twenty years, who had entered the hospital with a history of having suffered from severe headache and muscular pains for ten days previously. Her history was that of typhoid fever until the end of the second week, when she had become delirious and comatose, and had died quite suddenly, with symptoms of pneumonia. At the autopsy the uterus had been found not to be enlarged; its peritoneal surface was smooth, as was also the endometrium. A number of pin-point-sized hemorrhages were seen in the mucosa. Cultures from the heart's blood, liver, spleen, gall bladder, mesenteric glands, bone marrow, kidney, and urine showed pure growths of the typhoid bacillus. From the uterus the typhoid bacillus had been isolated in pure culture.

Dr. W. P. Northrup asked if the method of differentiating between the typhoid bacillus and the colon bacillus was sufficiently exact as to enable one to make a positive differential diagnosis.

Dr. Lartigau replied that he thought with proper care there should be no longer any question as to the identity of the two organisms, especially when the serum of typhoid patients was used for an additional test.

The Death of the Neuron.—Dr. Ira Van Gieson presented a preliminary communication under this title. He said that perhaps no other cell in the body so readily responded to trifling stimuli as the neuron. The crude pabulum of this cell was built up into the unstable and explosive material which made it possible for the nerve cell to do its work. There was excellent evidence that every part of the long neuraxon derived its nourishment from the nerve cell itself. Whatever material surrounded the slender filament, it was capable of storing a considerable supply of nervous energy. When the catabolic process gained the ascendancy the tip of the neuraxon no longer received its proper nourishment, and the death of the neuraxon proceeded very gradually from the tip toward the centre. When this process was confined to the tip of the axon, its vitality might be alternately restored and destroyed. Even when the axon had been destroyed up to the cell body the latter was still able to generate energy. When this process was going on the nerve cell excreted what he had termed "metaplasm particles." This hypothesis, the speaker thought, thoroughly explained the whole process of fibre death in the nervous system. To summarize: (1) In all chronic fibre death the necrosis proceeded from the distal to the central portion; (2) the rate or intensity of death in the neuraxon was directly proportionate to the preponderance of catabolic over the anabolic process: (3) the presence and excretion of metaplasm particles in the cell body were indications of the death or impending death of the peripheral ends of the nerve fibres.

Dr. P. A. Levene said that the theory of biotonus was first advanced by Max Verworn. According to this theory, the anabolic and catabolic always coexisted in cells or tissues, and the condition of the tissues depended on the relation between the two processes. There were conditions when the process of anabolism was prevailing (growth), or conditions when catabolism was stronger (degeneration), and also when the two processes were in a state of equilibrium. The theory of Max Verworn was corroborated by the speaker in his researches on the developing egg. Although these facts were well known as applied to cells in general, he did not know that an application of it to cells of the nervous system had been made previously. He thought that there was not sufficient proof to consider the "metaplasm granules" anabolic elements of the cell; they could just as well be regarded as catabolic products. The latter view would be in accord with the speaker's studies regarding mucin.

Dr. Van Gieson replied that there were several kinds of metaplasm granules, so far as they could be identified morphologically. He had identified three of these. He had at first been inclined to think that all of the metaplasm granules were anabolic, but he now took the view that they might be both of the ascending and descending kind. The theory just propounded had thus far received most extensive confirmation. Around each metaplasm particle was found a zone of clear material, and this he took to be indicative of the fact that the protoplasm was endeavoring to isolate them. The straw-colored metaplasm granules existed in the living cell, and were not precipitated bodies or artefacts. The pigment bodies he looked upon as metaplasm particles which, for some reason, had been retained within the cell for a long time and had been transformed in their chemical properties.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 5, 1900.

William H. Thomson, M.D., President.

Prevention, Management, and Early Diagnosis of Scarlet Fever.—Dr. Floyd M. Crandall read a paper with this title. His object was to call attention to certain details in prophylaxis of scarlet fever. Children known to have been exposed to scarlet fever, he said, should be kept under close observation, if not isolated. Evidence had been recently presented to show that children who had been in close contact with scarlet-fever cases for several hours after the initial vomiting had escaped the contagion. In scarlet fever there was a distinct advantage over measles because in the latter disease the period of contagion began several days before the appearance of the eruption, whereas the contagion of scarlet fever was present chiefly after the eruption had become fully developed. In ninety per cent. of the cases the period of incubation was between two and six days. The important question of whether or not other children in the family should be sent away must be decided largely upon whether or not these children had been exposed before the appearance of the eruption.

Diagnosis.—Four symptoms occurring together were exceedingly suggestive of scarlet fever, viz.: vomiting, fever, a rapid pulse, and sore throat. The vomiting, as a rule, occurred suddenly with little or no nausea, and was often projectile in character. In his own experience it had been the most constant symptom. Usually the temperature rose quite rapidly. An abnormally rapid pulse was exceedingly suggestive of scarlet fever, to say the least. A pulse of 150 at the outset was not unusual. At the first visit there might be nothing but redness of the fauces, in mild cases, the throat symptoms being very slight at an early stage.

Probably many practitioners in New York City had seen recently a considerable number of cases of grippe associated with eruption, sore throat, and symptoms suggesting scarlatina. A white tongue with red spots was not in the least characteristic of scarlatina, and was seen in many other diseases. The true "strawberry tongue," on the other hand, was exceedingly characteristic, but was a decidedly late symptom. Moreover, it should be remembered that such a tongue did not present red spots upon the whitish ground, but like the strawberry reddened spots on a roughened red ground. The general statement that the disease terminated within forty days should be taken with allowance; the duration was apt to be longer rather than shorter than this period. The fingers should be subjected to special scrutiny before raising quarantine. Desquamation was not the only factor to be taken into consideration in determining the period of quarantine. It had been conclusively demonstrated that there was danger of contagion so long as there was any purulent discharge present, such as a suppurative otitis, a pharyngitis, or suppurating glands. Holt had reported a case in which the opening of a post-scarlatinal empyema in a surgical ward had ben followed by an outbreak of scarlet fever. In some of the mild cases desquamation was very slight, and there was no purulent discharge. In these cases it was well to remember that the desquamation was apt to linger longer than one would expect. Every doubtful case should be isolated until the occurrence or absence of desquamation settled the matter. The disease was often disseminated by the error of diagnosticating as roseola, German measles, or "stomach rash" mild cases of scarlet fever. The question of the advisability of closing the schools during an epidemic of scarlet fever must be settled by a consideration of the particular conditions found in each community. For example, in a rural district where the children would probably be separated if the schools were closed, and where the families knew one another, the close of the schools would probably check the disease. In a large city like New York, on the other hand, the closing of the schools would probably have a directly opposite effect. The speaker urged that physicians attending scarlet-fever cases should provide themselves with a cotton gown reaching from the neck to the feet, and wear it while in the sickroom. The garment should be kept in this or an adjoining room. There was great danger of the physician carrying the disease to others unless such a precaution was taken. Moreover, it was a measure which protected not only the patient but the physician, for the family were usually impressed with the notion that a physician taking so much pains was a careful man, and if a case of scarlet fever should happen to appear in an unexplained way in one of the families attended by the physician, it was not probable that he would be blamed for its occurrence.

Inunctions.—During the stage of eruption a simple bland oil was the most desirable substance with which to anoint the skin. Antiseptics, used in this way, were of little avail, and it was advisable to avoid irritants. Vaseline was commonly employed, but when a more elegant application was desired, lanolin or a mixture of lanolin and cold cream might be substituted. Some cheap forms of yellow vaseline would be found to be decidedly irritating in some cases, and care should be taken not to apply carbolized vaseline over too large an area, for, although it was true that absorption did not take place through the sound and healthy skin, it must be remembered that the skin was not healthy in scarlet fever. When there was much itching, a five-per-cent. boric-acid ointment sometimes gave relief. Resorcin soap was advocated oy some practitioners. Lard was prone to become rancid and hence was best avoided, as irritation resulting from the use of a rancid ointment or oil was apt to prolong the period of desquamation.

Treatment of Scarlatinal Nephritis.—Dr. Robert Coleman Kemp read this paper. He said that the occurrence of anasarca, the general course of the disease, and the favorable prognosis in the majority of cases of scarlatinal nephritis, all afforded reasonable ground for the belief that scarlatinal nephritis was an affection *sui generis*. It developed, as a rule, in the second to the fourth week of the disease. Acute suppression of urine and death might occur before inflammation had had time to take place. Holt stated that albuminuria occurred in almost all cases of scarlatinal nephritis; albumin, casts, and even blood being found in the urine. Post-scarlatinal nephritis was a diffuse nephritis which ordinarily developed in the third week of the disease, and was accompanied by general dropsy. The urine contained a large quantity of albumin and numerous casts of all varieties. Febrile albuminuria, due to acute degeneration of the kidney, often occurred from the second to the fifth day, according to Delafield, and might last four or five days. In febrile albuminuria the urine rarely contained epithelial, hyaline, or blood casts.

Symptoms.—The first symptom often noted in the urine was a fall of specific gravity. Dr. Kemp said that his attention had been first called to this sign by Dr. William H. Thomson. The specific gravity of the urine should be taken twice daily at least, and the daily quantity of urine noted. The next symptom observed was a sudden rise in the specific gravity, associated with a diminution in the quantity of the renal excretion, and with an abnormally high color. At this time there was engorgement of the renal vessels. As a rule, there were no anasarca, no albuminuria, and no pyrexia at this stage. Active treatment should be at once instituted. During this preliminary stage a marked increase of urates occurred, frequently before the appearance of albumin. Anasarca was a typical symptom of the disease, and pain in the back was common. The hemorrhagic form was often fatal in the first twenty-four hours.

Uræmia.—There were usually prodromic symptoms of uræmia, such as vomiting and diarrhœa. With these there might be headache, followed by convulsive twitchings of certain muscles, and later by convulsions. There was often enlargement of the heart. Rapid enlargement of the liver should be looked upon as an extremely unfavorable sign, and one usually pointing to a speedily fatal termination.

Oxygen in Scarlatinal Nephritis.—In the pulmonary complications due to nephritis oxygen should be employed from the very beginning. As oxygen was a good cardiac stimulant, and aided in the elimination of the toxins, there was good ground for using it. It should, for the same reasons, prove of value in cases in which no pulmonary complications existed. The early use of oxygen he believed to be the keynote of success. Whenever there was toxæmia dependent upon the kidneys oxygen was indicated. He only asked that this treatment be given a fair test clinically, instead of being condemned on purely theoretical grounds.

Saline Solution in Scarlatinal Nephritis.—He had employed enteroclysis at 110°–120° F. for periods of from fifteen minutes to one hour, and as often as three or four times a day. As a rule, from three to five times as much urine would be secreted as the quantity of saline solution employed. Hypodermoclysis and saline infusion were also useful.

Carbonated Baths.—These were recommended in uræmic conditions, given at a tempearture of 98°–100° F. Such a bath at a temperature of 100° F. felt almost as hot as an ordinary bath at a temperature of 105° F. These baths were useful also for reduction of temperature, and had the advantage of being more stimulating. In this connection, a very convenient portable rubber bath-tub was exhibited—a device which was likely to be found especially useful in rural districts.

Sources of Contagion.—Dr. H. D. Chapin expressed the opinion that the type of scarlatina had changed in recent years, having become milder. He had experienced considerable difficulty in differentiating between a very mild type of scarlatina and a severe grade of rötheln. On the second or third day of scarlet fever the tip and edges of the tongue were apt to assume a peculiar red, beefy appearance, and the papillæ became prominent. He looked upon this sign as of some diagnostic importance. In many cases it was impossible for the family to have a separate attendant for the child sick with scarlet fever, and here the mother or other attendant should be directed to keep a special gown for wearing in the sick-room only. He believed that the most potent factors in spreading scarlet fever in New York City were the dispensaries. The public schools were almost equally responsible for the dissemination of this and similar diseases, largely because of the unsanitary custom of having the outer clothing of the pupils crowded into ill-ventilated wardrobes. Regarding the occurrence of albuminuria, the speaker said that diarrhœa and very many other ailments of early childhood were apt to be associated with albuminuria. For this reason it did not seem to him practicable for the average physician in the average family to carry out the elaborate study of the urine advocated by Dr. Kemp. His experience had been that the first clinical sign was usually a puffiness about the eyes.

Period of Incubation.—Dr. C. G. Kerley said that at one time he had had an opportunity of observing and studying carefully, in an institution, an epidemic of one hundred and nine cases of scarlet fever. The majority of these had developed the usual manifestations of scarlet fever within five days, but in one the period had been seven, in another twelve, and in another fourteen days. He heartily agreed with the reader of the first paper, that the "strawberry tongue" was of no diagnostic value whatever. The rash was also very uncertain; he had seen it disappear in a very few hours. The lower part of the abdomen and the lower part of the thighs were the favorite locations for the eruption. Sometimes the temperature was very moderate. If scarlet fever was present, there would always be a marked congestion of the throat. In his experience the period of quarantine had been from four to six weeks. The desquamation was prone to continue on the hands and fingers in spite of the most assiduous inunction. He wished to insist upon the fact that the mildest cases of scarlet fever were capable of communicating to others the severest types of the disease. The sick-room should be large and the temperature not allowed to go over 70° F. The inunctions not only prevented the spread of the disease, but allayed the irritation and reduced the fever. His most successful treatment for cases of scarlatinal nephritis and acute suppression of urine had been the use of colonic washings at a temperature of 110° F.

Varying Type of the Disease.—Dr. J. E. Winters said that at times scarlet fever was so severe that almost every case terminated fatally, whereas at other times the disease was exceedingly mild. While the truth of this was generally admitted, there might come under observation a series of mild cases, and, at the same time, a few very severe ones.

Isolation Most Effective.—Regarding the control of the infection the speaker said that there was no other disease so easily controlled by isolation as scarlet fever, although the contagium of the disease was exceedingly tenacious of life.

Nature and Treatment of Scarlatinal Nephritis.—He thought very few physicians had seen scarlatinal nephritis terminate fatally. There was good authority for the statement that scarlatinal nephritis did not occur in the early stages of the disease, and he would assert positively that albuminuria was no more frequent in the early stages of this disease than in measles; but that, if albuminuria did occur in the early stages, it never developed into the scarlatinal or post-scarlatinal nephritis without an interval in which there was no evidence of renal disease. He did not believe that the scarlatinal poison was the cause of scarlatinal nephritis—indeed, such teaching seemed to him most dangerous because it was likely to lead to carelessness. It was a fact that it occurred chiefly in epidemics of a mild type, and in the mild season of the year, and, for the most part, in dispensary or tenement-house practice. His own opinion was that scarlatinal nephritis was the result of a neglect to attend properly to the condition of the skin. A statement that had been made many years ago, and that was as true now as then, was that scarlatinal nephritis occurred almost invariably on the twenty-second day. Again, it occurred most commonly in those children who were allowed out of bed and around the room too soon. Scarlatinal nephritis was in every instance a glomerular nephritis, and was always announced by a rise of temperature, from twelve to twenty-four hours before any other symptom or even before the urine gave warning. The Malpighian tuft might become so engorged that the two capsules about it would fill up the space naturally existing between them, and the result would be acute suppression of urine. The plain indication for treatment was to diminish the quantity of blood in the Malpighian tuft, and for this purpose he would certainly not resort to the use of saline solution; but, on the contrary, would administer aconite up to its physiological effect. Such medication would be quickly followed by a return of the urinary secretion. While this was being done another indication was met. Free perspiration was at the same time induced, and hence the kidneys were relieved and elimination greatly aided. This should be encouraged by the use of hot wraps, and the bowels should also be effectually emptied. He believed there were other types of nephritis in which the only treatment which would prove effectual was that recommended this evening for scarlatinal nephritis, but he would most emphatically dissent from adopting such a plan of treatment in the latter disease.

New Instruments.

A NEW GYNÆCOLOGICAL PAD.

By W. J. GREANELLÉ, M.D.,

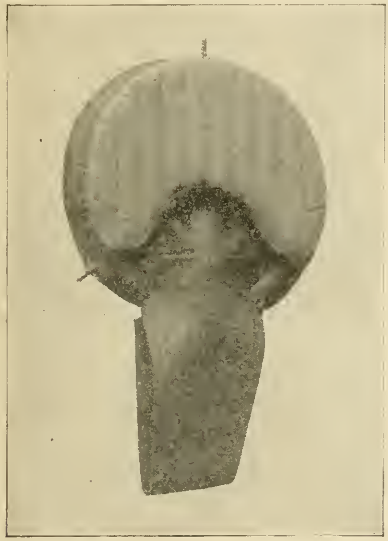
NEW YORK.

Serviceable as it is, the Kelly pad has been more or less disappointing in this: that, even with the utmost care, one is apt to find some back drainage has occurred, and that there is more or less wetting and soiling of linen under the small of the patient's back. This is particularly the case in house practice, where the weight of the patient on the usual woven-wire spring-bed cannot always be prevented from causing sagging by the expedient of putting a board (I usually ask for a "cutting board") under the mattress.

I have worried and labored over this, using all manner of contrivances to prevent it, and have in but few cases succeeded, on removing things, in finding a dry bed, until I adopted the plan of folding a blanket in a suitable manner to permit its use as a support to the top of the pad, favoring drainage toward the sleeve only.

Finally I hit upon the elaboration of this idea, which has been well worked out for me by the Davidson Rubber Company. From my drawings and description they have made the pad shown in the accompanying cut. It consists in the simple addition, on the under side of the Kelly pad, of a crescentic air-cushion, so applied as to provide a firm support to the top of the pad when inflated and in use. In this way the floor of the pad under a patient's back and buttocks is maintained on a level higher than that of the entrance to the sleeve, even in a fairly soft bed. The cushion can be inflated partly or completely, as any one case may require. In addition, the floor of the pad lying in the helix of the crescent, and leading into the sleeve, is made a little broader than the actual measurement across the space, in such wise that it sags somewhat, causing a depression to appear, leading all drainage directly into the sleeve.

I find this arrangement very serviceable and practical, preventing, as it does, the wetting of clothing and linen. When not inflated, the new pad may be folded so as to take up but little more space than the Kelly pad, fitting readily into one's obstetric-bag or ordinary satchel.



I am indebted to Prof. G. C. Mason, of New York University, for the plate.

University Heights.

A NEW MODIFIED URETHROTOME.

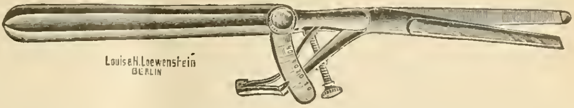
By FREDERIC BIERHOFF, M.D.,

BERLIN, GERMANY.

In the performance of the simple operation of meatotomy, the use of the ordinary meatotomes often results unsatisfactorily to the operator, this result being due usually to the lack of any gauge as to the desired size of the cut. Especially is this the case with the beginner. In order to remove this difficulty I have had the accompanying meatotome constructed. It is a modification of the Collin-Oberländer meatotome, and is furnished with a scale and indicator, by means of which the exact sized cut desired may be obtained.

By setting the larger screw, the indicator may be set at any desired point upon the scale, which is marked in divisions of tens and subdivisions of fives, from 10 to 40 of the Charrière scale. This screw also checks the extent of the excursion of the short arm, and, in consequence, of the cutting blade.

In using the instrument, the larger screw is set so that, when the blades are opened to the fullest extent, the indicator marks the desired size upon the scale. It is then inserted, closed, into the urethra, and the blades being again fully separated, is withdrawn open, an even cut, through all the tissues traversed, resulting.



The little instrument, which was made for me by Louis and H. Loewenstein, of Berlin, has given very satisfactory results in actual use. Repetitions of the operation, in order to attain the requisite size, are avoided, as are also the unsightly effects of too extensive an incision.

Medical Items.

Boys Gasoline Drunkards.—According to the Philadelphia *Ledger*, the police of a small Pennsylvania city were much mystified by finding boys fast asleep and in a semi-conscious condition, stowed in vacant houses, sheds, and brickyards; it was finally discovered that the boys had gotten into this condition by inhaling the fumes of gasoline, and some of them have really become gasoline drunkards.—*Scientific American*.

Suitable Food.—The adaptation of a great variety of suitable foods to meet the different conditions of the imperative requirements of man is influenced by climate, the food of a cold climate differing from that of a warm one; by occupation, the laborer requiring coarser food than the brain worker; by bodily health, the sick cannot be fed like the well; by idiosyncrasies, through which are precluded the use of certain articles of food which are poisonous to the system and which after eating exhibit their effects in cutaneous eruptions, as urticaria, erythema, and other like symptoms.—Dr. De M. Blocker, Chattahoochee, Fla.

Sensational Sanitation.—The aim of sanitary teaching should be to encourage better environment of the individual, of healthful living, comfort, happiness, and peaceful repose; not of excitement, fear, and superstitious awe. Therefore when those who are charged with the responsible duty of caring for the public health, seemingly for personal notoriety and sensational effect unnecessarily parade to the public slight errors of sanitation or magnify the existence of contagious disease, a crime is committed in the name of sanitation because of the injurious influence upon the timid and nervous, who are thus given the opportunity to exaggerate fears and not only to invent but to circulate all kinds of sensational rumors.—Dr. Joseph Y. Porter, Key West, Fla.

A Wonderful Triumph in Surgery.—According to *Lloyd's Weekly Journal*, London, a remarkable feat in surgery has just been achieved by Dr. Hermann von Schrötter in the clinical department of the University of Vienna. A boy, aged twelve years, had swallowed a piece of lead of the size of half a sovereign, which, passing through the trachea, descended into a bronchus of the second order. Dr. Schrötter extracted this piece of lead without tracheotomy and even without using anæsthetics; the operation was, nevertheless, quite painless. This, it appears, is the first time that a bronchus of the second order has been penetrated and a foreign body extracted from it without a surgical operation. The extraction was effected under the guidance of Dr. Schrötter's eyes. First, by means of the Roentgen rays the piece of lead was located at the height of the fourth rib; then Kilian's (Berlin) bronchoscope was in the ordinary way introduced into the trachea and electrically lighted up, and the piece of lead was at last extracted by a pincette expressly constructed for the purpose. Professor Kilian has suceeded only once in introducing his bronchoscope into a bronchus of the first order, and then only by performing tracheotomy.

Tincture of South African Karoo for Dysentery.—In tropical dysentery an extract and tincture of the South African karoo, collected and introduced by Mr. John Maberley, have proved of great value, not only in dysentery, of which one hundred consecutive cases treated with the drug are reported by Mr. Maberley with only one death, but also in hemorrhagic ulceration of the stomach and intestine. The drug has a long-standing reputation among the natives and Boers, but has only recently been identified and used in Europe in cases of acute and chronic ulceration of the stomach and intestines.—*Lancet.*

Housing the London Poor.—The housing-of-the-working-classes committee of the London County Council intends, says *Lloyd's Weekly Journal*, shortly after the Christmas recess, to ask the sanction of the council to a large scheme for housing the poor in the neighborhood of Tooting. The site of the proposed new buildings is known as the Totterdown-fields site, and consists of about thirty-eight and one-half acres. The purchase price is agreed at the rate of £1.150 ($5,750) an acre, so that the total amount will be about £44,500 ($222,500). The cottages which it is proposed to erect on the site will be constructed so as to provide for two families each. They will each consist of two self-contained tenements, one of two and one of three rooms. Separate gardens will be provided, and on an average not less than thirty cottages will be built to the acre. The rent of the tenements should average about 7*s.* 6*d.* ($1.90) per week. The committee are unable at present to state precisely the cost per cottage, but it is probable that the total cost of land, road and buildings will be about £500,000 ($2,500,000).

What Becomes of the Wounded?—A British weekly journal says: "An army loses far more of its strength through its wounded than through its killed. In the first place, there are four or five wounded to one killed, and in the second place the dead men give no trouble, while the wounded require an immense number of noncombatants to attend to them. A great many of the wounded return again to their duty. But, as a rule, more than half of them take no further part in the war. Probably the same thing is occurring out in Africa now as occurred in previous wars, for the effects of the new weapons do not seem to differ greatly from those of the old. In that case it is easy to calculate what our generals lose by having so many men wounded. If they fight a battle, for instance, in which one hundred are killed and wounded, the probabilities are that twenty would die on the field, twelve of the wounded would die later on, twenty-one would be invalided home, while forty-seven would return cured to duty. These are the averages for big battles in which there are several thousand casualties."

Soldiers on British Transports.—"The treatment of our soldiers," says an influential English journal, "on board the transports calls for a searching inquiry. Letters which we have seen from men who sailed in the *Kildonan Castle* and the *Nubia* reveal disgraceful mismanagement, if nothing worse. The supply of eatables was insufficient, the quality most inferior. When the men complained, they were treated with indifference, though food had to be thrown overboard by reason of its absolute rottenness. Need it be said that after three weeks of such treatment the men on their arrival were utterly unfit to sustain the fatigue of a long railway journey and heavy marches? If these complaints came from one or two troop-ships they might be passed over, but the same scandal attaches itself to all. Those who are the cause of our troops being treated like cattle deserve the severest punishment that can be given them."

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended April 7, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Alabama, Mobile	March 24th to 31st	1	
Florida, Jacksonville	March 24th to 31st	2	
Indiana, Evansville	March 24th to 31st	5	
Kansas, Wichita	March 24th to 31st	8	
Kentucky, Covington	March 24th to 31st	12	1
Lexington	March 24th to 31st	1	
Louisiana, New Orleans	March 24th to 31st	64	21
Massachusetts, Boston	March 24th to 31st	1	
Michigan, Detroit	March 24th to 31st	4	
Nebraska, Omaha	March 24th to 31st	1	
New Mexico, Catskill	March 21st	2	
Folsom	March 21st	5	
New York, New York	March 24th to 1st	1	
Ohio, Cleveland	March 24th to 31st	17	
Utah, Salt Lake City	March 24th to 31st	1	
Washington, Spokane	March 24th to 31st	1	
SMALLPOX—FOREIGN.			
England, Liverpool	March 10th to 17th	1	
London	March 3d to 17th	12	
Franee, Lyons	March 3d to 10th	..	2
Rheims	March 3d to 10th	..	8
Gibraltar	Mareh 4th to 18th	14	
India, Bombay	February 20th to March 6th	..	532
Calcutta	February 10th to 24th	..	26
Kurrachee	February 18th to March 4th	32	15
Japan, Yokohama	February 24th to March 3d	1	
Korea, Seoul	January 20th to 27th	2	1
Spain, Madrid	March 3d to 17th	..	22
YELLOW FEVER			
Colombia, Panama	March 7th to 14th	7	
Cuba, Havana	March 17th to 24th	2	1
CHOLERA.			
India, Bombay	February 20th to March 6th	..	19
Calcutta	February 10th to 24th	..	130
PLAGUE—INSULAR POSSESSIONS UNITED STATES.			
Hawaii, Honolulu	March 10th to 17th	2	1
PLAGUE—FOREIGN.			
Arabia, Aden	February 22d to Mareh 10th	22	13
India, Bombay	February 22d to March 6th	..	1,468
Calcutta	February 10th to 24th	..	460
Kurrachee	February 18th to March 4th	92	73
Japan, Formosa	January 1st to February 28th	97	78

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

HOME NURSING. By Eveleen Harrison. 12mo, 235 pages. The Macmillan Company, New York.

VICE AND INSANITY. By George R. Wilson, M.D. 8vo, 234 pages. The Macmillan Company, New York.

THE INTERNATIONAL TEXT-BOOK OF SURGERY. Edited by J. Collins Warren, M.D., and A. Pearce Gould, M.D. Vol. II., Regional Surgery. Illustrated. 8vo, 1,072 pages. W. B. Saunders, Philadelphia.

SURGICAL PATHOLOGY AND THERAPEUTICS. Second edition. By John Collins Warren, M.D. Illustrated. 8vo, 873 pages. W. B. Saunders, Philadelphia.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY; Eleventh Session, held at Deer Park, June 27, 28, and 29, 1899, with the Constitution. Edited by Floyd M. Crandall, M.D.

NORDRACH AT HOME; or, Hygienic Treatment of Consumption. By Joseph J. S. Lucas. 12mo, 60 pages J. W. Arrowsmith, Bristol, England

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Original Articles.

ON THE FORMATION OF AN ARTIFICIAL ANUS.[1]

By ROBERT F. WEIR, M.D.,

PRESIDENT OF THE MEDICAL ASSOCIATION OF GREATER NEW YORK, AND OF THE AMERICAN SURGICAL ASSOCIATION, ETC.

AN artificial anus is fortunately required in but comparatively few conditions. It is demanded, for example, in the rather rare instances of total or dangerous obstruction of the large bowel; in which cases the opening may be made just above the stricture, if the seat of this is recognized, or at a place of election, if the site of the obstruction remains undiscoverable. It is also resorted to when extensive and often painful intractable ulcerations of the rectum exist, whether they be of syphilitic, tuberculous, or cancerous origin. When so employed, the principle of rest of a damaged part, with withdrawal of the irritation of the fæces, generally benefits the local conditions, and even in malignancy ameliorates many of its distressing symptoms. It is further and rightly employed in certain rare conditions of amœbic or follicular ulcerations which are usually confined to the colon. Here, besides the rest that is afforded to the damaged mucous membrane, the new opening, which is usually in these troubles placed high up, allows medication to be applied in either direction throughout the whole extent of the large intestine. It is also performed for the relief of an imperforate rectum. Of increasing importance, however, is the creation of a false anus as a preliminary step in various surgical operations on the rectum which look finally to its removal, total or in part, for neoplasms, or possibly for extensive and more benign ulcerations. Here, as in nearly all the preceding cases, the part to be played by the artificial anus is intended to be but a temporary one, the deviation of infecting fæces; the enforced rest of the bowel, with the greater ease of treatment through the two openings, one the natural anus, and the other the artificial one, aids and often secures a cure, after which the need of the adjunct anus passes away. Then the additional and now no longer required opening in the bowel has only to be closed, and the function of the cured intestine is fully restored.

This side-tracking of the fæces through an artificial anus in the iliac region (for lumbar colostomy may be regarded as an extinct operation) was first suggested by Pollosson in 1884, and was later rendered popular by Schede in 1887. It is now in frequent use as the first step in severe rectal operations, that is to say, in those that bring about much exposure of the parasacral tissues. Its use diminishes the risk of sepsis, and when suture of the preserved anal end of the rectum to the drawn-down sigmoid end is carried out, after the removal of a cancerous section of the bowel, it promotes favorable union. Hence, for these reasons it is well worthy of consideration.

There is evidence which becomes weightier with gathered experience, that an artificial anus should be employed as a permanent factor in certain troubles to which it has hitherto been applied only as a temporary help. I refer now not only to those well-known cases of inoperable cancer of the rectum in which the relief by a colostomy is all that surgery can do, but to those instances in which either the ulceration or stenosis, though not malign, is so great, so rebellious, and so distressing, that colostomy only is to be thought of. To these should be added not only the more common form of severe rectal trouble, the low-down cancers, where after their extirpation an incontinent artificial anus is usually left, but also those cancerous involvements that demand extensive removal of the gut. In all these conditions it is felt with augmenting conviction that the temporary nature of the artificial anus should be changed to the formation of a permanent opening.

This brings me to the presentation of the differences of intent and technique that exist between a permanent and a temporary artificial anus.

In the temporary false anus, as has been alluded to, the surgeon has to keep in mind that in the near future he must close up the opening he has just effected in the intestine, and hence he finds that the diversion of the fæces from the bowel situated below the artificial anus is not the easy job that he has anticipated, because his future reparative operation demands that the distal leg of the loop of intestine that has been opened should be near to the upper or proximal leg so that they can be readily joined together when the proper time arrives. With the establishment of a permanent artificial anus no such difficulty arises. The surgeon then may deliberately cut the bowel in two primarily, or after waiting a day or two (if time is afforded); or, better still, he may close up, by inverting Lembert sutures, the distal opening and leave it thus in the wound, or even do more than this—he may, after closing the rectal end, drop it back into the abdominal cavity, as Schinzinger, in 1881, and Madelung, in 1884, have advised, and thus obtain the surest way of keeping the fæces from slipping by the artificial opening, and accumulating in or disturbing the bowel below.

The attempts that have been resorted to to render effective, as a fecal outlet, an artificial anus as ordinarily established in the left iliac region, have been many, and few have any positive value. It may be interesting, I think, to run over some of these trials.

The classical and older way of performing a colostomy was by an incision two and one-half to three inches long, the centre of which was on a line running from the anterior superior spine of the ilium to the umbilicus and one and one-half inches inward from the iliac spine. The skin, muscles, and peritoneum were cut through, the finger was introduced and the large bowel hooked up and drawn to the surface, and duly recognized by its band or by its epiploic fringes. If any difficulty was felt in finding the bowel, the surest way was to pass the finger inward along the hollow of the ilium until the bowel or its mesocolon was felt. Formerly on being exposed it was customary to suture it by many stitches to the incised skin, in the centre or at one end of the wound. Some surgeons would, before doing this, carefully draw forward and sew the peritoneum to the skin, in order, as it was said, that a broader surface of plastic union with the peritoneum of the bowel might be offered. This extra care, I may here state, is a wasted effort, for while perhaps a wider adhesion is so effected, yet when the stitches are removed or melt away, the adherent bowel sinks often quite deeply in the wound, because, although adhesion between the serous surfaces goes on quickly, it progresses much more slowly between the exterior of the peritoneum and the muscles which have been brought face to face by this circumferential suturing of the peritoneum. Two improvements which have come into the above technique, and that have risen into general esteem, are appropriately to be mentioned here. First, by the teaching of Maydl in 1888, and Reclus in 1889, surgeons have learned that it is entirely unnecessary to use any sutures whatever to hold the bowel in its protruded position. Maydl simply drew the bowel out through the opening far enough to show the attachment of the mesocolon, and then through this, just below the intestine, was thrust a rubber or glass rod, or sometimes a rather thick and long mesh of iodoform gauze (see Fig. 1), on which the loop of the bowel was slung for seven to ten days, sometimes longer, by which time adhesions strong enough to safely hold in position will have formed. Sutures were seldom used to fasten the bowel to the skin unless an immediate opening for the escape of fæces was urgently required. The second improvement is not so satisfactory a one, though it is in the right direction. Its consideration, however, will lead me into somewhat of a digression which I trust you will excuse. The great advance that has been made in the treatment of appendicitis by the use of McBurney's plan of separating rather than dividing the muscular layers of the abdominal wall is well known to all here present. This was published by its justly distinguished author in 1894, but the endeavor to utilize the musculature of the abdominal and pelvic wall to control the surgically created outlets of the stomach and intestines dates back many years anterior to this. Howse,[1] an English surgeon, was in 1879 the first, I believe, to apply this idea of splitting or pulling apart the muscles to obtain a sphincter-like grasp of the rectus abdominis muscle for gastrostomy. Von Hacker, in 1890, popularized this method by using the same muscle in a similar operation. Gersuny made a figure-of-eight twist of the same muscular fibres about the stomach opening. Without, however, going through all the improvements that have been evolved for this purpose in gastric surgery, I will only ask your attention to two of the later efforts in this direction, since they appertain, as will be shortly seen, to the present mode of formation of an artificial anus. Sabaneef and Frank as well as Hartmann have suggested that, in a gastrostomy, in order to render the opening retentive, the protruded stomach should be drawn, not vertically, as in the preceding method, but through a laterally split left rectus muscle, and sometimes be further made to open on the skin surface by a second incision some little distance from the emergence of the viscus through the peritoneum which had been divided through the first incision. Without more words at this time, I can now go back, after calling your attention to Figs. 2 and 3 to illustrate more clearly the foregoing remarks, to the question of the artificial anus. For since 1892, when I began to employ von Hacker's plan of gastrostomy, I have applied the same idea to my colostomies,

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[1] Read at a meeting of the Medical Association of Greater New York, held February 12, 1900.

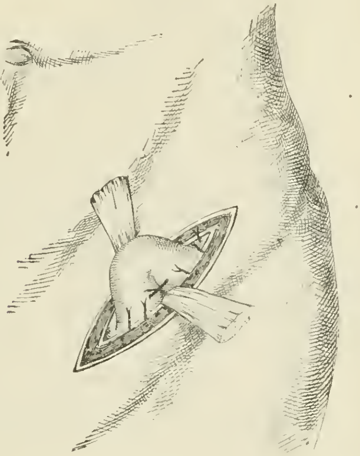

Fig. 1.

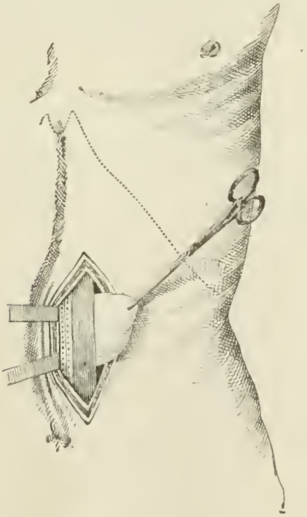

Fig. 2.

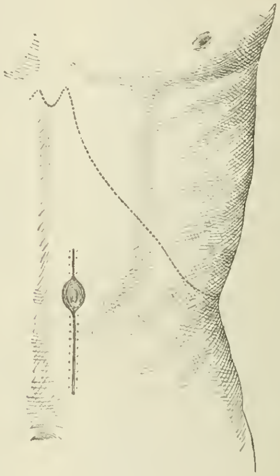

Fig. 3.

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[1] Holmes: "System of Surgery," 1883, vol. i., p. 801.

and in 1894 made a vertical incision through the left edge of the rectus muscle, separating the muscular fibres, and drew the bowel out there and fastened it after Maydl's plan. It worked better than by incising the abdominal wall, but it required for anything like an improved control that the intestinal opening should be subsequently much narrowed by several clippings-away of the mucous membrane. Von Hacker has lately[1] advised the use of the rectus muscle in colostomy by splitting it both vertically and laterally as Hartmann has likewise done, and Roux,[2] of Lausanne, has further suggested that the emergence at the bowel should be made through the rectus muscle at the symphysis, hoping by muscular action and by conjoining this with a decided gouging out of the top of the pubic bone to secure a more perfect fecal outlet. Maydl,[3] to obtain this sphincter action, as early as 1888 (thus antedating McBurney six years), suggested separating the muscular fibres of the abdominal wall rather than cutting through them, and since 1892 my colostomies have been done in this fashion.

With the increased rapidity of operation as secured by Maydl's scheme, and by the use of the sphincter grasp of the separated muscles, an improvement was certainly made in the operation, but it was not yet perfect, although Maydl had further enhanced the value of his method by sewing together for a short distance the two legs of the loop beneath the rod or iodoform-gauze support. He endeavored by this to increase the spur that would be formed in this way by the strongly kinked inferior wall of the bowel. This formation of a spur was an idea of importance. It originated with Verneuil, and has been carried out more systematically by Bodine in 1897 (see Fig. 5). This latter surgeon sewed together in a very thorough manner the afferent and efferent legs of the intestine for a distance of nearly six inches, if such a length could be drawn out at the wound. The bent-up bowel was then replaced within the abdomen, leaving its end projecting, which was duly secured by several sutures. If delay can be had, and in nearly all cases save for acute obstruction such can be obtained, the opening of the bowel should be postponed for at least twelve hours, by which time, and often in less, sufficient adhesion will have taken place to prevent peritoneal infection, particularly if the opening of the bowel then made be conducted with gentleness. This secondary opening can often be postponed until the colicky attacks of pain warn one of the accumulation of gas above the surgical obstruction. Then a small opening is made with a knife or with a thermo-cautery above the supporting rod or mesh, tolerably close to the skin. If the artificial anus is to be of a temporary nature, the opening should be a longitudinal one; if likely to be a permanent one, it is better to be a transverse opening; but in either case it should at first be a small one. I lay some stress on this point, for I have found that patients with small openings, even if the ones first made have subsequently to be enlarged, do better and soil themselves less than when such are large. On the other hand, a large opening with a good spur and with a decided crowding on the distal leg to narrow it[1] (see Fig. 6), often gives the best security against the slipping by of fæces into the lower bowel. Hence my endeavor is to enlarge the opening little by little, making it at first only large enough to allow gas to escape

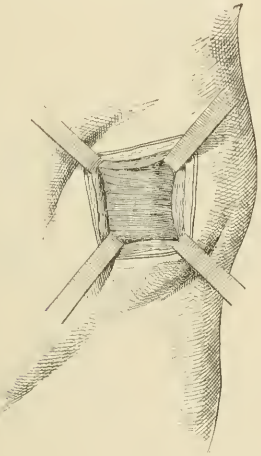
FIG. 4.—Maydl's Intermuscular Separation. First layer only shown.

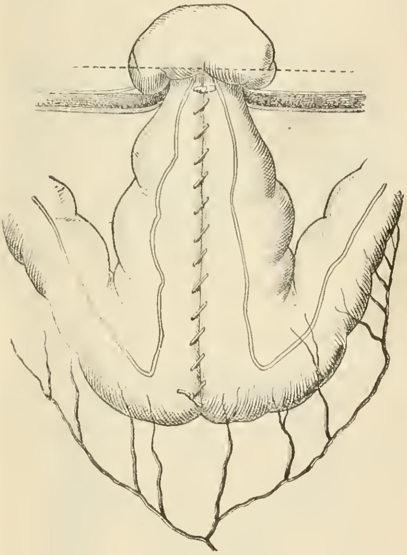
FIG. 5.

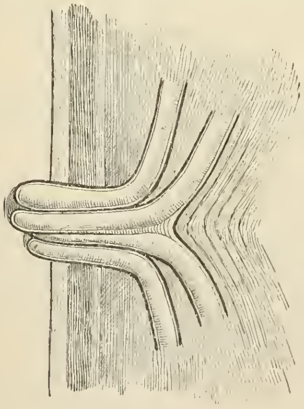
FIG. 6.

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[1] Beiträge z. klin. Chirurg., vol. xxiii., p. 628, 1899.

[2] Revue méd. de la Suisse, 1898.

[3] "Zur Technik der Kolotomie." Centralbl. f. Chir., No. 24, 1888.

[1] Greig Smith: Lancet, July 23, 1898.

and to relieve the patient from immediate distress, and subsequently by additional enlargements to secure the end desired. After a time there may come eversion or pouting of the mucous membrane. This may attain an annoying and even a painful size, and often becomes difficult to manage. A little of it is considered a good feature, as it makes a more cleanly discharge of fæces and allows the surrounding skin to be more easily protected. Lauenstein even advises leaving several inches of the bowel to protrude beyond the skin for this purpose, and also for better retentive compression; but no one has followed his example, and he himself has abandoned the plan. This protrusion frequently abates as the inflammatory thickening of the part subsides, but it often persists. This mishap can better be avoided at the time of operation than remedied afterward. Then this expedient can be resorted to: after the loop of intestine is hooked out of the wound by the crooked finger of the surgeon, the upper end of the bowel should be pulled down until it becomes taut, and by keeping the upper leg of the loop as short as possible the subsequent tendency to prolapse is much diminished.

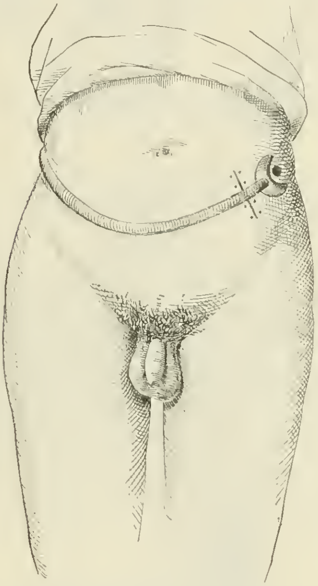

Fig. 7.—Paul's Artificial-Anus Truss.

In spite of all this care, and of even the more radical treatment of cutting away all the bowel projecting beyond the Maydl supporting bar or mesh, and thus creating what has happily been described as the double-barrelled shotgun anus, fæces from the upper opening will from time to time escape directly into the lower bowel, or indirectly from the upper bowel into the retaining dressings, and thence into the lower opening of the intestine. Hence it is not unusual to hear of additional devices being presented to meet this imperfection in the operation. Of the many that I have tried, I will only mention two. One of them is to insert at the time of the operation several large Lembert sutures transverse to the axis of the bowel below the supporting bar, so that the lumen of the intestine is more or less completely shut off by deep wrinklings of its wall. The other is, when the test of time has shown that the anus is not satisfactory, to cut away deliberately, under a cocaine swabbing, the mucous membrane for a space of half an inch all around the lower opening, so as to induce a contraction sufficient to prevent or diminish the flow of fæces toward the rectum, and yet not render too difficult the subsequent closure of the artificial anus when its purpose shall have been fulfilled.

The spur formation, before alluded to, is not always satisfactorily made in the left iliac region. It is more easily accomplished in the transverse colon, of which kind I now show you a living example, where it was applied through the rectus muscle for multiple follicular ulcerations extending from the anus to the middle of the large bowel. This situation for an artificial anus has received lately the strong indorsement of Koenig, as a preliminary step in a Kraske's extirpation of the rectum, because, among other advantages, it is beyond the line of traction and the interference that can possibly be made by the later sacral step in the operation. In this particular case there was a short spur made by suturing the legs of the loop together, and now, though nearly cured of the ulcerations under medicated applications, forced in through the colonic opening, she has had but little annoyance from incontinence, and has never had any escape of fæces into the bowel below. In the cæcal region the use of Maydl's sling has not worked well in my hands, though Maydl says it is applicable even in this portion of the bowel. I have preferred, when such a high opening was required for an acute obstruction in the middle or uncertain part of the large intestine, to open the cæcum or adjacent ileum after a careful continued or multiple interrupted suturing, with a large trocar and cannula, hoping that after the discharge of a quantity of the fluid fæces, usually found above an obstruction, had taken place, enough relaxation of the distended intestine would occur to permit the introduction of a long rubber tube of good size, which in turn was secured by a purse-string suture in the intestine wall. This device, with some impermeable dressing, as collodion or gutta-percha tissue, conducts the fæces away from the wound sufficiently well to insure, with packing of the wound area with iodoform gauze and a large dressing which it perforates, enough cleanliness to permit rapid serous adhesions. In two instances, as preliminary to an operation for resection of the transverse and high descending colon, I have made an artificial anus in the ileum just above the ileo-cæcal valve. Such openings are objectionable, not on the score of nutrition, but principally on account of the skin irritation produced by the fluid fæces of the small intestine. A marked contrast is seen to this when the cæcum, only a few inches farther down, is opened; when but little damage to the skin is afterward produced.

It can easily be inferred, from noting these various expedients, that the difficulties of fecal control, when once an artificial anus has been formed, are, in spite of all that can be done, very great and very distressing; for there is nothing more disgusting and more depressing to the patient and to his caretakers than a leaking false anus. The surgeon justly considers that he has done well if the outlet permits one or two well-formed movements per diem, which, perhaps, may be regulated as to time by an ordinary enema. Such favorable conditions I have more frequently found when the openings have been kept of small size—of such a small size, I may repeat, that from time to time a little enlargement becomes necessary, or, in lieu of this, the daily softening of an enema is demanded. When, however, a diarrhœa comes on, no ordinary dressing or apparatus will prevent the patient from fouling. Numerous mechanical contrivances have been presented to obviate such mishaps and to plug up the opening. I will not detail them, but will call attention to two that have proved of service, in my experience. One advocated by Paul is fairly well shown in Fig. 7, where a horseshoe truss compresses the track of the bowel, first running beneath the skin a short distance before opening on the surface. A truss with a cup of hard rubber I have sometimes found of service in ordinary direct openings, but my best plug consists of a double inflatable bulb, connected by a hollow hard-rubber tube for ease of introduction (Fig. 8), and furnished with a stop-cock for inflation and deflation. The lower bulb is passed into the upper opening of the artificial anus, and inflation is begun. That this may not make too great traction on the lower bulb and pull it out, the upper bulb is covered by a perforated hard-rubber disc that allows the little apparatus to be held *in situ* by adhesive straps or a well-fitting bandage. An extra tube is sometimes added, provided with a stopcock to permit the escape of gas at will. This was originally derived from Scheimpflug's apparatus for a gastric fistula, but is now merely an improvement on Jacobson's intestinal plug. A belt with an inflatable bag is also employed (see Fig. 9) to arrest the flow of fæces. Sometimes a rubber bag with an inflated edge will, when secured tightly to the body, prevent soiling. When these contrivances fail, large dressings are necessary. Gauze should not be applied directly to the protruding gut, since it adheres, and is painful when detached. It is better first to cover the bowel with one or two broad overlapping pieces of gutta-percha tissue prior to putting on the absorbent dressings.

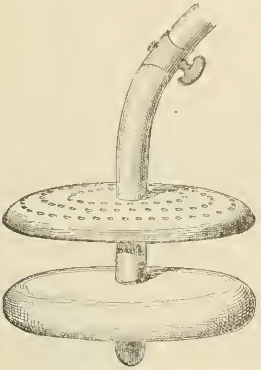

Fig. 8.

Before proceeding to the consideration of the establishment of a permanent opening, a few moments may properly be occupied in speaking of the final closure of such openings when they have fulfilled their mission, as for instance in the case just presented to your inspection the ulceration has healed, or as in other cases the intractable rectal ulcers and stenoses have been overcome, etc. To effect this closure, it is in my judgment better, after having previously well washed out and disinfected both ends of the bowel, to make an incision surrounding the artificial anus, and then to invert the skin and close the intestine thoroughly by suturing. This is merely to protect other parts, now to be opened, from infection. The old skin scar is now to be cut through, or a new incision made alongside, down to the peritoneum, for muscle separation is rarely practicable here a second time on account of inflammatory thickening often present. The abdominal cavity is carefully opened, not too close to the adherent anus, and with the finger as a guide, and cutting a little wide of the intestine, the anal opening is circumscribed and freed. It is then lifted out beyond the skin and the abdominal opening protected by iodoform gauze. The sewn-together opening is left undisturbed, and, after trimming away with scissors any superabundant attached tissue, one or two rows of Lembert sutures are applied, the parts washed off with a sterile salt solution, and dropped back into the abdominal cavity. The gap in the abdominal wound is finally closed by layer sutures.

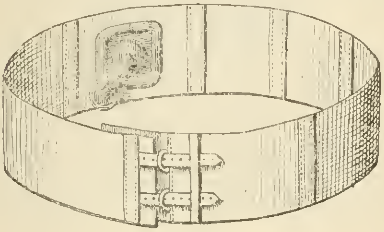

Fig. 9.

Another method has been suggested by Greig Smith and others which is extra-peritoneal. Usually such essays as these fail or are too complicated, but Smith separates the parietal peritoneum for an inch or two, so that not only can the bowel be well lifted up, but the edges of the opening can be inverted and sutured without invading the peritoneal cavity (see Figs. 10 and 11; the dotted lines show the required incision).

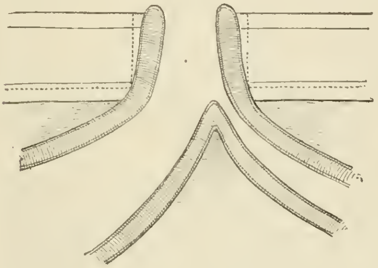

Fig. 10.

Such extra-peritoneal closures have in my own work occasionally succeeded in small intestinal fistulas, but in these days of generally successful asepsis I prefer the intra-peritoneal method. In the seven closures that I have notes of I had no need especially to treat or consider the spur that had previously been formed.

Let me pass on now to the management of the bowel, when, for inoperable lesions in the rectum, or for a total extirpation of the affected bowel, or in those cases in which the rectum has been removed high up by a Kraske operation, a permanent artificial anus has been determined upon. This requires a somewhat different disposition of the bowel. It may be drawn out by the

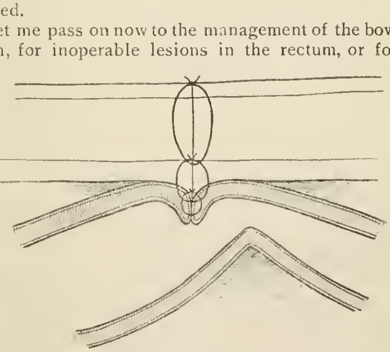

Fig. 11.

usual incision with its muscle separation, etc., and its legs may be sutured together, as Bodine has suggested, and after twenty-four hours the mushroom-like projecting end of the loop can be cut squarely across. This works fairly well with the subsequent contraction of the lower orifice, as has been previously described, and the method and its imitations have a merit that attracts attention. It is that while fæces can or may be kept out, the opening going to the rectum, even if small, will allow the discharge from the possibly tight stricture below to escape upward, or it will aid in washing out or medicating the parts by irrigations from above downward, and *vice versa.* I do not lay very much stress on this, for in the tests I have made on this point I have not found so far any trouble to come from the closure of the upper end of the loop going to the rectum. In those cases in which I practised the double-barrelled artificial anus—in two of them, to be sure of preventing fæces reaching the anus—I inverted and stitched together the peritoneal edges of the lower opening, and effectually shut it up, retaining it, however, in the wound. No unpleasant reaction followed the treatment, and only rarely was an irrigation from the normal anus required.

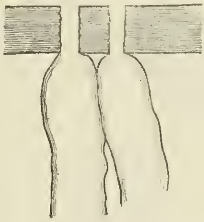

Fig. 12.

But this method of two openings in the groin (and some have placed one opening at one end of the wound and the other at the opposite end [see Fig. 12], and again others have placed the lower bowel above the upper one, or, like Gersuny, have applied here the twist to the upper bowel of one-half to a total turn on its axis, hoping vainly to secure even the moderate success that has been obtained when used in the lower part of the rectum) nevertheless retains the objection of more or less incontinence, and I now call to your notice a plan of operation that, in three instances in which I have lately employed it, has secured a continent anus without the help of any mechanical contrivances, and has effectually disposed of the question of fecal overflow into the rectum below. It is the result of a combination of the suggestion of Schinzinger with that of Witzel. Schinzinger, as has been stated, advised cutting the colon in two at the time of operation and closing the bowel end by inversion and suturing. Then the closed-off rectal end is dropped back into the abdominal cavity, and the other open end of the upper bowel is duly fastened in the abdominal wound. This portion of the bowel could be rendered free from infecting qualities by also being inverted and sutured —as a temporary matter—the sutures being taken out after adhesions had fully formed.

While this procedure is in itself the most effectual in guarding against fecal irritation in the lower bowel, the continence we wish for is not obtained in this way; a further variation is needed, and I have obtained the best success by adding to this closure and dropping in again of the rectal end of the bowel by placing the artificial anus outside the brim of the pelvis as proposed by Witzel. In other words, the upper end of the bowel is transplanted under the skin, to open some two inches below the crest of the ilium (Fig. 13). The intestine is made to come out through the usual opening inside the crest of the ilium; the lower end is cut off, inverted, sewed together, and dropped back into the abdominal cavity (and this was done in the three cases I have operated upon by this method), or it may be retained in the original wound. The upper end, duly contracted by a ligature and disinfected or sutured together, is then drawn through a canal formed for it by separating one layer of the abdominal muscle from the other up to the outer edge of the ilium, where it may be necessary to divide the limiting fascia, so that the intestine can be brought out at a skin incision an inch long, previously made outside the pelvis. This opening was in my cases situated one to two inches below and one inch behind the anterior superior spine. The first, or abdominal, incision is now sutured, and a row of stitches secures the bowel to the iliac skin opening. I preferred to keep the bowel closed for twenty-four hours to prevent soiling of the wound. Witzel, who suggested this idea in 1889, says that his patient then, six years after this operation, always congratulated himself on the excellent function that his artificial anus possessed. Lenkinheld and Borchardt, who also tried it, said that not only was a bandage or compress unnecessary, but that the new anus was absolutely continent for gas as well as for fæces. I was compelled to depart from Witzel's directions to draw the whole loop under the skin and over the iliac crest, for it was too bulky to effect this easily, and hence I cut the bowel in two and dropped the rectal end duly prepared back into the abdominal cavity. This gave more room, and a moderate division of the mesocolon permitted the intestine to be easily drawn out to the required distance. An experience in my third case, however, showed that this division of the mesocolon should be cautiously conducted. In that instance the artificial anus was placed gluteally, as Witzel calls it, for a cancer of the rectum, for which I intended at a subsequent period to remove the anus and rectum and not to attempt to establish a sacral anus. Two weeks after the creation of the artificial anus, as described, I operated for the rectal extirpation, but the patient succumbed from sepsis. At the autopsy the upper end of the rectum, which had been inverted and sutured, was found to be gangrenous in several large spots. This was evidently due to its

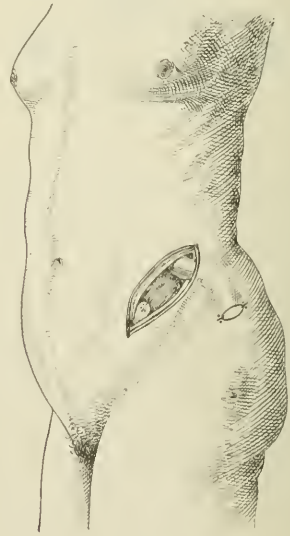

Fig. 13.

vascular supply being interfered with by a too long transverse cut in the mesocolon.

A glance at this diagram (Fig. 14), taken from an article by Kümmel,[1] detailing some successful implantations of the descending and transverse colon in the anal region, will show the anatomical reasons for carrying, in this or any operation to free or lengthen the colon, the liberating incisions in the mesentery at about one and one-half inches parallel to and from the bowel, as this damages least the arterial supply.

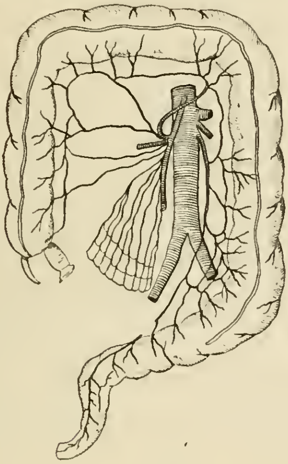

FIG. 14.

In my other cases, both operated upon for intractable and extensive chronic ulceration and stenosis of the rectum, no mishap whatever occurred, and in each there has been complete continence. No bandage or mechanism is used. Only a piece of gauze is applied over the opening, and the weight of the clothing, in addition to the natural advantage of the operative method, seems to afford pressure sufficient to close the intestine effectually as it passes over the bony brim of the pelvis.

One of these patients I have the opportunity of showing you. In her case the escape of gas occurs but seldom, and the finger passed in through the opening appreciates very distinctly the compression of the bowel as it comes over the edge of the ilium. In the other case, living at a distance from the city, the report is a similar one.

In conclusion I may state that the foregoing imperfect review shows: (1) That an artificial anus of a temporary character can be best established by Maydl's operation or by Bodine's modification.

(2) That overslipping of fæces may be prevented by proper spur formation, by narrowing the rectal opening, or by occluding the rectal end of the bowel, which may be fastened in the wound or dropped into the abdominal cavity.

(3) That continence of the abnormal outlet is aided by muscle separation (Maydl) or by muscle bridging (von Hacker and Hartmann), or by the use of inflatable or moulded plugs or other apparatus.

(4) It is only, however, to be satisfactorily effected (though larger experience in this is desirable) by an extra-abdominal iliac outlet (Witzel's iliac colostomy) to be made by opening the bowel outside and behind the iliac spine. In this procedure the bowel is compressed between the edge of the bony pelvis and the skin.

Many other methods have been proposed. Some, like Witzel, have made the outlet externally, but by gouging a hole through the iliac bone. Other schemes have been tried and have failed. A few are so unsurgical that they have fallen still-born. Perhaps some have yet promise, and may in time, their value not now being recognized, develop into methods of note.

I find from my notes that in all I have resorted to the formation of an artificial anus thirty times, with nine deaths, of which there were two from cancer, three ulcerations, and four obstructions. Of these sixteen were for malignant disease, either inoperable or preliminary to operation, nine were for chronic ulceration, and five were for intestinal obstruction.

Among the eighteen cases in which a colostomy was a preliminary to operation or was a curative agent, were seven instances in which the opening was subsequently closed, five by the intra-peritoneal method and two by the extra-peritoneal suture.

INDICATIONS FOR CONSTITUTIONAL TREATMENT OF CATARRHAL AFFECTIONS OF THE UPPER AIR PASSAGES.

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THE literature teems with reports of cases which illustrate the effects upon other organs and consequence to the general health of nasal, pharyngeal, and laryngeal diseases. Anæmia, malnutrition, deformities of the chest, neurasthenia, migraine, epilepsy, asthma, goitre, functional heart affections, catarrh of the stomach, bronchitis, laryngismus stridulus, urticaria, and melancholia are among the affections which have been attributed to this cause; sometimes reflex, sometimes produced by mechanical causes, sometimes by direct extension of the diseased process, sometimes by transmission through the veins and lymphatics, and sometimes by other, it may be complex and obscure means. How to determine whether or not a supposed effect is in reality due to the nose or throat trouble, as well as how to differentiate the various effects, as to whether of reflex nature or not, has been sufficiently dwelt upon in treatises upon the subject.

Let us now turn our attention to the other side of the picture, viz., wherein the catarrhal trouble figures not as cause but as an effect of the other pathological conditions coexisting, and let us consider in what manner we shall know that the relationship exists.

We will suppose then that we have a case before us of catarrhal inflammation of the upper passages, associated with a more or less grave disease either of some particular organ or of the whole system. How shall we know that the former is not the cause or primary disease, or not a local or idiopathic state (the other trouble being merely coincident), but is in truth symptomatic of the coexisting disease? The latter conclusion, that is, that catarrh is secondary to the other, is justified when it conforms for the most part to the following criteria: (1) No adequate local cause is apparent. (2) Direct local treatment has ultimately failed. (3) The catarrhal inflammation has manifested itself subsequent to the coexistent trouble. (4) Its pathology presents features peculiar to one of the symptomatic catarrhs. (5) Catarrhal inflammations are present in other parts of the body. (6) The supposed cause is sufficient to produce these local effects. (7) Treatment of the associated condition improves in like manner the catarrhal trouble.

It is unnecessary to apply these criteria to such conditions as lues, tuberculosis, lupus, rhinoscleroma, or any of those chronic constitutional maladies which may attack the nose and throat or any other part of the body, and whose diagnosis is given chiefly in the specific nature of the lesion itself. Nor will we need to hesitate long over a number of acute infectious disorders, such as scarlatina and diphtheria, in which in addition to the specific characteristics the sudden and contemporaneous occurrence of both local and general affections is entirely sufficient for diagnostic purposes. Greater difficulty of diagnosis, however, is presented by the concomitant affection of the cutaneous system and of the mucous membrane of nose and throat, between which, as I endeavored to point out a couple of years ago,[1] a very interesting sympathy may be found in their pathological manifestations. Reasons were here given for holding that cutaneous eruptions, more often than ordinarily assumed, could appear as true reflex neuroses of nasal origin, especially erythema of the nose and face, erysipelatous eruptions, urticaria and, perhaps, herpes and pemphigus, and affections of the angioneurotic type. How often inversely the cutaneous eruptions are the primary affections, can be estimated only by careful investigation and application of all diagnostic criteria at our command to each individual case. When such relationship has been for a certainty established, we shall have naturally to put our faith in those remedies indicated in the particular skin affection present.

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[1] Arch. f. klin. Chir., vol. lix., p. 555, 1899.

Without doubt, the responsibility for much the greater number of secondary catarrhal affections of the upper respiratory organs belongs to the gastro-intestinal system. That diseases of this system exert a direct and decided influence upon the nose and throat is a matter of daily observation. Singers generally recognize that fact, and take advantage of it in avoiding the overloading of the stomach just previous to an engagement to sing. It is well illustrated, too, in the experience of a number of persons in whom every attack of indigestion induces a cold in the head or congestion of the pharynx.

As with the acute, so with the chronic catarrhal affections, which, if not essentially dependent upon disorders of the stomach, at least will suffer exacerbation from such causes. In every case of post-nasal catarrh the condition of the stomach should receive scrupulous attention. It will be found very often that when the application of astringents is futile good results will be obtained by the use of correctives of the gastric disorder, such as pepsin, bicarbonate of sodium, or tincture of nux vomica. These may be given well in combination, in a glassful of hot water just before meals. Or one may find more effective pepsin and hydrochloric acid, with perhaps nux vomica, given after meals.

A form of throat inflammation frequently associated with dyspeptic disorders is that of the lingual tonsil. Amygdalitis lingualis occurs most frequently in middle-aged women, who complain of burning or sticking in the throat, or not infrequently of the sensation of a foreign body, and constant desire to swallow. It is nearly always accompanied with more or less laryngitis, and the voice, even if not hoarse, is generally easily fatigued. The tongue will be heavily coated and more or less dyspeptic symptoms will be found. While local treatment should not be neglected in such patients, the stomach also will generally need attention.

It may seem hardly necessary to refer to the influence of intestinal obstipation upon catarrhal diseases of the throat, since this will be immediately admitted by all who have had any occasion to make observation in this particular, and readily understood by others upon theoretical grounds. Nevertheless, as with many other things which we know, we fail to bear it always in mind. Whether the fault be with the secretions or with the muscular activity of the intestines, their sluggishness must be overcome by properly chosen laxatives, if we are to have the desired success in treating the affections under consideration. Often quite a high degree of anæmia from this cause may be present and show itself in the mucous membranes, especially in young girls. Sulphur is the remedy *par excellence* in such cases, according to some authors.

Moritz Schmidt lays much stress upon intestinal flatulence as a factor in the production of catarrhal diseases of the upper air passages. The abdominal distention, according to him, obstructs the circulation and produces nervous hyperæmia of the mucous membrane. His treatment consists in the complete separation of solid and liquid diet, taking as little as possible of the latter, and only between meals. I believe that regulation of the diet, joined to massage and more or less systematic exercise, are far more efficacious in these cases than drugs or artificial digestives. The most essential thing is sufficient mastication, which may be lacking, either from the individual's carelessness in eating too hastily (the bane of American civilization), or because of faulty or deficient masticating apparatus. If the former is the case, we should explain the danger and emphatically enjoin better habits; if the latter, the cure must rest in the hands of the dentists.

When medicine must be given, I can think of no better prescription for intestinal dyspepsia with flatulence than the following:

℞ Pepsini pur.,
Pancreatin. ext..........................āā 2 gm.
Pulv. carb. lig.,
Bism. subgal.............................āā 4 gm.
M. ft. chart. xii. S. One before meals.

Valvular heart lesions will, in case of failure of compensation, constitute a serious cause of catarrhal inflammation; for the mucous membrane must share in the general nervous engorgement, as indicated by a more or less purplish coloration and increased secretion. It is therefore advisable, in every case which does not readily yield to local treatment, to institute an examination of the heart; more especially if symptoms (such as dyspnœa, palpitation, œdema) should be elicited pointing to cardiac trouble. The treatment will of course resolve itself into that proper for the particular form of heart disease present; and according as the special conditions indicate or the physician's preferences dictate, rest, avoidance of stimulants, and heart tonics will be prescribed, or perhaps the Oertel or Schott treatment or the Nauheim baths.

Among the more unexpected pathological conditions which are sometimes factors in causing and maintaining throat inflammations may be mentioned the floating kidney, which is now known to be present in a very considerable proportion of adult female patients.

Schmalz, Bresgen, and Peyer, and in this country McKenzie, have written upon the relationship observed between nose and throat affections and diseases of the reproductive system. Peyer states that maladies of the genital organs may give rise to intermittent swelling of the nasal mucous membrane (coryza nervosa), abnormal dryness of nose and throat, sensation of heat, arrested secretion, epistaxis, perversions of olfactory sense, hyperæsthesia, anæsthesia, and paræsthesia. It is not improbable that the relationship between these two systems, which, though distant, present certain anatomical and physiological analogies, may be reciprocal, that which is primarily affected in the point of time being primary in the matter of cause and effect. At any rate, abnormalities discovered in this part of the body should be corrected if possible, as thereby only good will be done, even though such far-reaching influences as alleged do not obtain.

Among the diseases whose effects are sometimes seen in the upper air passages, we have yet to mention diabetes, leukæmia, and Hodgkin's disease. In every case of persistent incurable pharyngitis sicca, we must take into consideration the possibility of its being due to diabetes. Hodgkin's disease may give rise to œdema in the mucous membrane, seen sometimes chiefly in the palate and uvula, at other times in the epiglottis or ventricular bands. Leukæmia can be attended likewise with considerable infiltration in the mucous membrane. It may reach such a degree in the glottis as to produce a grave result.

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[1] New York Medical Journal, October 15, 1898.

Having considered the various specific affections of organs and parts of the body or of certain systems, in their bearing upon catarrhal diseases of the upper air passages, we may now pass to what are known in general as diathetic conditions or dyscrasiæ. These, as a rule, are manifested to a pronounced extent upon the mucous membranes, and in some cases, as scrofula for example, the nose and throat are the places of predilection. It is as impossible to ignore them in treating of nose and throat affections as it is to ignore the mucous membranes of the nose and throat in considering them. Unfortunately for both medical writer and practitioner, the various diatheses or temperaments of the body have never yet been accurately defined and satisfactorily determined; but these boundaries remain hazy and their nomenclature is consequently much confused. This we understand at once to be due to the circumstance that they have no demonstrable pathology, but rest upon the insecure foundation of a symptomatic nosology. Thus it comes that imagination and speculation have made the most of the meagre material at their command, and disputes have arisen which cannot be settled. In the mean time, as discoveries are made in the field of pathological anatomy and bacteriology, we will immediately attempt to adjust them to our purpose, but still in some cases we must subordinate our meagre knowledge to the dictates of convenience.

Scrofula, for example, is now well known to be identical with tuberculosis, but since it lacks some demonstrable gross lesions, and possesses a distinct clinical picture, we find it convenient to retain the term.

Hysteria is a very much abused word, owing not half so much to the backwardness of science as to the ignorance and carelessness of the practitioners, who are wont to call everything hysteria which they do not understand. Clinicians have by careful observation in a great measure made up for the deficiency of the pathologists by giving such unerring symptomatic guides for this disease that it may now be said that he who diagnoses hysteria without discovering the so-called stigmata commits a blunder that should disqualify him for practice from that time forth.

But the greatest whirl of confusion is that which has been thrown about a condition generally passing current under the name of the uric-acid diathesis. We here fall into an apparently inextricable difficulty before which so far both clinical and pathological endeavors have stood helpless, but, as I believe, not hopeless. As the subject is one so inseparable from a study of the nose and throat affections, and so important, too, in a therapeutic sense, the laryngologist is compelled to take it into account. It seems almost impossible to gather from the interminable maze of literature on this subject a perfectly clear and definite conception of the conditions to which this name is intended to apply, owing chiefly, no doubt, to the perplexity which pervades the subject of the origin and formation of uric acid in the living organism. The first difficulty to be overcome is the continual confounding of neurasthenia with the conditions in question, when they are in reality the antitheses one of the other. The second difficulty consists in the error of giving to uric acid both in name and in fact a too prominent place in the pathology of the conditions with which it is found associated. There is beyond doubt a strong undercurrent of opposition to the doctrine which makes uric acid the centre and source of all the trouble with which it is accompanied, and it should be given its right place as a result and not a cause. Instead of being the chief and essential feature it is a by-product or side issue, and we may say a sign of the operation of other and more important phenomena.

Some writers, while minimizing the importance of uric acid, have sought to show that xanthin, paraxanthin, or so-called alloxuric bodies were of chief importance, and that the diathesis should be denominated accordingly. For some time I have been of the opinion that this uric-acid or lithæmic diathesis was not attribuable to the chemical products of whatever nature that were found, but rather to a certain morbid state of the vasomotor nervous system, consisting essentially in an hypersensitiveness and hyperactivity leading to nutritional changes.[1] The signs of the time seem rather to point to change of opinion in favor of this view. Granville[2] has recently written these significant words: "Cullen was nearer to the discovery of the secret than we now are, when he insisted that to the primary moving forces of the organism, viz., to the nervous system, the physicians must look for the cause or causes of gout."

Evidently, a new name needs to be invented which would better designate a morbid state of the nervous system, which underlies these uric-acid phenomena. This state, consisting, as I believe, in an abnormal excitability and over-activity of the nerve cells—that is to say, the reverse of neurasthenia (nerve-cell exhaustion), might, in lieu of some better term, be designated "neurohyperkinesia." As neurasthenia is marked by lowered arterial tension, in neurohyperkinesia, on the other hand, we have increased arterial tension prevailing. The cardinal symptoms of neurasthenia are headache, tachycardia, and insomnia. There is usually a hypochondriacal tendency, with irritability or depression of spirits. Muscular tremor, disordered sensibility, dyspepsia are nearly always present, and to these may be added a long list of other symptoms according to the degree or particular phase which the malady assumes. Neurohyperkinesia, as I understand it, presents an utterly different picture. All who call to mind their patients who have had the so-called uric-acid trouble will bear me out that these, instead of being of the weak, anæmic, wiry type of the neurasthenic, are generally stout or even corpulent, often with flushed face or generally plethoric habits. As a rule, too, they are persons of superior intellectual calibre and vigor. Eczema, hemorrhoids, hay fever, asthma, epilepsy, angina pectoris, true migraine, and a host of affections which are included under the term reflex neuroses, are seen in patients possessed of this diathesis.

There are two types of cases to be distinguished, according to the more or less prominence of a certain group of symptoms. These are (1) neuro-arthritic or gouty; (2) vasomotor sympathetic. The last-mentioned is the one which interests us, as being that in which all that class of affections depending, as I believe, chiefly upon vasomotor irritation arise, known generally as reflex neuroses. They are characterized by their periodically current, spasmodic nature, their want of an organic pathological basis, the occurrence of certain nutritional changes indicated by the urological examination, the etiological influence of psychical factors, and, as a rule, by more or less increase of leucocytes, the striking feature of which is the eosinophilia.

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[1] New York Medical Journal, November 12, 1898.

[2] Medical Press and Circular, London, February and March, 1899.

As the nose is probably the commonest source of reflex troubles, the rhinologist will have frequently to do with these symptoms, under the head of nasal reflex neuroses.

Having said so much of diatheses in general, let me now take them with particular reference to their effects upon the mucous membranes of the nose, and the best treatment which should be employed against them.

Scrofula.—The lowered vitality of the system in scrofula is particularly manifested in the proneness of mucous membranes to become catarrhally affected. While I know of no peculiarities in the catarrhal inflammation, the clinical picture is generally sufficient for diagnosis. The characteristic facies (broad nose, thick lips, etc.), the lymphatic swellings, the rhinitis with eczema of the lips, are almost classical. Atrophic rhinitis and ozæna are comparatively common. The association of conjunctivitis and marginal blepharitis as complications will be present in a great proportion of the cases.

Local treatment of the nose and throat affections is not out of place here, any more than in the disease of the eye of the same origin. It will prove of little avail, however, if not supplemented by well-directed internal medication. Our sheet-anchors are cod-liver oil and iodine in some form. The former is best given as the pure uncombined Norwegian product, when it can be so taken, but also in emulsion, of which there are to be found a number of elegant products in the shops; or, if we like, it may be given in combination with the hypophosphites. The indication for iodine is best of all met by an old-time but highly valuable preparation, the syrup of the iodide of iron. The certainty and the rapidity of improvement following its administration are among the most pleasing experiences in medical practice. In some cases, however, idiosyncrasies will be found, and then we must find substitutes. Arsenic, iron in some other form, the hypophosphites, or the syrup of hydriodic acid may be found to suit individual cases. The hypophosphites are thought to be especially indicated in cases of retarded osseous development. Of course, fresh air and supporting diet will be understood to be of prime importance. Salt-water baths, when they are within reach, will prove of the highest benefit.

Hysteria.—The real nature of hysteria is as yet so inadequately known that it is difficult to predicate anything with certainty as to its relation to nose and throat affections. If, as appears to be the case, real structural changes may be produced, it might be said to present the anomaly of a functional disease giving rise to organic changes. Whether or not inflammation may be produced, at any rate those who treat diseases of the nose and throat will with suspicious frequency encounter the associated condition of hysteria, and will be called upon to decide whether at all or how much the hysteria has to do with the symptoms present. About a year ago I reported a case of extraordinarily frequent and long-continued sneezing[1] (ten thousand to forty thousand times a day), going on for a month or more, in which there was such a combination of hysteria and local inflammation in the nose as to baffle all attempts to place the blame where it belonged. Overwhelming doses of sedative or antispasmodic drugs, however, having proved futile in controlling the sneezing, and removal of a hypertrophied middle turbinate having been followed by a cessation of the symptoms, all the *a posteriori* evidence was in favor of a local causation. Hysteria, though, no doubt plays something of a rôle in giving rise to nose and throat symptoms. Anæsthesia and paræsthesia of the mucous membranes are very common attendants upon the hysterical diathesis. Also laryngeal spasms and paralyses and the peculiar condition known as globus hystericus will come quite frequently under the notice of the laryngologist.

As already indicated, in the event of the concurrence of nasal or pharyngeal trouble and a hysterical constitution in the same patient, there may be no small difficulty in discovering their true relations one to another. It is possible that they are independent, but it is also possible that when associated they may act as reciprocally causative factors. Both local and general treatment, at any rate, are in order, and so, while we use our douches, spray, powder, or ointments, or, as may be necessary, our cautery, saw, snare, or curette, we will at the same time not overlook the needs for internal medication. Bromides, valerian, and asafetida have for long time been supposed to exercise a special influence over the hysterical state. We may try them, but I believe the newer therapeutics look rather to rational physical and hygienic methods for the best results. Electricity and balneology are the chief among these, but the *sine qua non* in many cases is a complete change of environment, especially the separation from over-sympathetic and too indulgent relatives.

Neurohyperkinesia.—As in both types of this diathesis, the gouty or neuro-arthritic and the vasomotor sympathetic, the upper air passages play a very prominent rôle, it will be necessary to consider them both, and, for reasons which will become at once obvious, separately. Much has been said recently about the uric-acid origin of catarrhal inflammations of the nose and throat, and it has become certainly established that a relationship of some kind exists. Not only do cases of acute tonsillitis and pharyngitis give evidence of a true rheumatic causation, yielding readily to the salicylates and their congeners, but we must reckon as of a rheumatic or gouty origin many chronic cases of rhinitis, rhino-pharyngitis, tonsillitis, and laryngitis. They are found so often in persons of the gouty, or, as the French would say, neuro-arthritic habits, in persons who have gravel or present other evidences of this diathesis, having manifestations, it may be, such as asthma or migraine, belonging to the sympathetic type, that mistake is out of the question. The appearance in the throat of inflammations of a gouty origin are in a measure characteristic. The soft palate, fauces, and posterior walls of the pharynx will present a highly engorged condition, approaching a degree of bogginess. The palate and uvula will frequently become œdematous. The redness of the membranes is intense, but most marked along the pillars of the fauces. There will be severe pain in the throat, pain and maybe difficulty in swallowing, and soreness in the cervical muscles. In the more chronic forms these symptoms will be less acute, and the patient will complain of intermittent burning or sticking in the throat; or frequently the sensation of dryness, tickling, or stiffness felt in swallowing. The larynx becomes likewise involved, and prolonged use of the voice is impossible or is followed invariably by hoarseness and soreness of the throat and a feeling more or less of exhaustion. The crico-arytenoid joints become, like other articulations, the seat of inflammation, as evidenced by swelling discerned by the laryngoscope in this locality. Gouty deposits are found here, and even in the cords themselves.

Throat specialists who are desirous of obtaining the very best results in these cases of inflammation of gouty or neuro-arthritic origin will, at the same time that they make use of the various topical applications which have been found of service (thiol in glycerin two to four per cent. has proved valuable in my experience), recognize the necessity of resorting to constitutional remedies. However discordant the theories of different authors and investigators on the subject of the etiology and pathology of the diathesis I am discussing, all are agreed in the efficacy of certain medicinal agents and special lines of treatment, of which the most prominent to be mentioned are the salicylates, the iodides, and the alkaline treatment. The salicylates (salicylic acid and salicylate of sodium, and its congeners salol, salophen, salipyrin, etc.) are indicated in the acute cases. The iodides, alone or in combination with colchicum, are chiefly relied upon for the more chronic forms. The salts, which owe their only virtue to their alkaline properties, are given with good results in both acute and chronic cases. It is said (Bence Jones, Chevreuil) that an alkaline medium favors oxidation, which probably explains the good results obtained from the alkaline method of treatment in the gouty habits, as here we have to do with a condition of disturbed tissue metabolism, marked chiefly by suboxidation and increase in the products of disassimilation. By some bicarbonate of sodium is given in large doses, by others bicarbonate of potassium, while phosphate of sodium or carbonate of ammonium is preferred by yet others. Mineral waters that are prescribed for this class of patients depend for their virtues upon the alkaline constituents. The waters having greatest reputation are those containing large proportions of bicarbonate of sodium, as Vals, Vichy, Fachengen, etc. The Carlsbad and Marienbad Springs, which are also very popular, are rich in the sulphate of sodium and magnesium. The lithia waters are very widely advertised and generally used for their supposed efficiency in these conditions.

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[1] National Medical Review, Washington, May, 1899.

In England, where the gouty habit is even commoner than in this country, the chemical constituents of certain of the mineral waters (Friedrichshall, Seltzer, Kissingen, and Vichy), put in the form of compressed, effervescent tablets, are very much prescribed. These tablets, not only of the mineral waters but also of lithia, lithia and potash, piperazin, etc., have been recently introduced, and on account of their convenience and elegance, having the advantages of occupying small space and therefore of being portable in the pocket, and of ready solubility, producing a pleasant effervescent drink, I have used them for about a year with very satisfactory results. In the present-day practice of medicine we have to look as well to the elegance of our prescriptions as to their physiological effects, as our ends may as well be defeated by the one as by the other. In chronic conditions, in which the patient must continue taking medicine for a long period of time, we must be careful to avoid giving doses which are disagreeable and difficult to take, else the patient will become disgusted and cease undergoing treatment altogether. If lithia is to be given for its therapeutical effects, it is much more rational to prescribe it in certain definite doses (as in tablets of lithia citrate, gr. iii. and v.) than in the so-called lithia water. The indications for alkaline medications are very precisely and thoroughly met by the tablet of lithia and potash combined. The best method to pursue to arrive quickest at the required alkalinization of the system is as follows: As early as the patient awakes two tablets should be taken dissolved in a full glass of water; then before each meal and again at night one or more, as necessary, to bring about an alkaline urine, which will be determined by testing with litmus paper.

The Sympathetic Diathesis.—By this I understand, as said, that type of the neurohyperkinetic diathesis marked by the disposition to the origin of reflex disturbance in various parts of the system. The rhinologist is familiar with this diathesis, having so frequently to do with reflex neuroses of nasal origin, hay fever, migraine, asthma, etc. As a rule he is inclined to emphasize too strongly the local causation, overlooking the important fact that the local trouble would not have produced these secondary disturbances without the existence of a certain underlying morbid condition of the system. Treatment directed to the overcoming of this general diseased state then is in order. If our theory of vasomotor causation be the correct one, we should expect those remedies to be most efficacious which are known to exert a direct depressing action upon the sympathetic. Examine the list of remedies in highest repute for hay fever, asthma, epilepsy, migraine, and angina pectoris (the group of affections most frequently occurring as reflex neuroses and having a close analogy among themselves), and it will be seen that it is the class of sedative or motor depressants which are most in vogue. In all opium, bromides, chloral, amyl nitrite, and nitro-glycerin are used with effect. In addition, quebracho and grindelia, classed as motor depressants, are found particularly valuable in asthma. An apparent inconsistency may be thought to exist in the fact that atropine, said to excite the vasomotor system, is recommended in hay fever and asthma by some. While the first effect, however, of belladonna is excitant, in large doses it produces, on the contrary, a depressant, paralyzing effect on the sympathetic ganglia. The disagreement in the experience of various observers may perhaps be explained by this circumstance. While for each kind of neurosis certain of the class of remedies will be found of greater service than others, and while regard must be had for the special indication in individual cases, in general it may be said that the measures and remedies *par excellence* for all affections (nasal neuroses) falling under the head of the sympathetic diathesis are those which act to depress the vasomotor sympathetic nerves.

For hay fever, in addition to the local treatment which is indispensable, I have found that the best prescription for internal administration is a modification of that of J. N. McKenzie. The only change made is that of the substitution of belladonna for nux vomica, the formula being then as follows:

℞ Zinci phosph.	gr. $\frac{1}{16}$
Quin. sulph.	gr. ii.
Ext. belladonnæ	gr. $\frac{1}{8}$

S. One pill before each meal.

Neurasthenia.—It is not surprising that an affection so common as neurasthenia in this age should be met with in the consultation room of the laryngologist. The mad rush after success, the infection of modern civilization, has naturally drawn upon the reserve force of the overworked nervous system, until eventually, in a very large number of cases, nerve exhaustion or neurasthenia is superinduced. That, however, the association of neurasthenia with nose and throat affection is more frequent than would be expected from the frequency of each separately, is not to be denied. Some have thought from this that the neurasthenia was the product of the existing catarrhal affection, and have described cases which appeared to them to justify this view. But I am inclined to suspect that a careful search into the history and development of such cases will not fail generally to reveal that the commencement of the neurasthenic condition antedates the local trouble, and that other causes have existed, acquired or inherited, which go to explain its presence. At least it is not clear how a local lesion of this kind, however grave or long continued, can give rise to the general disordered state of the nervous system comprised under the name neurasthenia. So far as my experience goes, the nose and throat in neurasthenic patients present objective appearances that are very insignificant as compared with the subjective symptoms. Neurasthenia, then, it seems more rational to believe, is the essential and primary disorder; the nasal or pharyngeal or laryngeal troubles, though real, are secondary, and in a great measure symptomatic;

that is to say, the neurasthenia, if not directly producing the local affection, prepares a ground of such sensitiveness and disorder that a minimum organic change shall give rise to a maximum of symptomatic manifestations. Under these circumstances, our first concern must naturally be the treatment of the constitutional state. For neurasthenia, the requirement above all to be insisted upon is rest from intellectual work, and the withdrawal of all sources of undue excitement. A complete surrender of the occupation, and a temporary vacation spent away in some restful surroundings, may have to be enforced in some cases.

Certain medicines are of demonstrable value, chief reliance being placed in arsenic, nux vomica, and phosphorus and its compounds. Of late the glycerophosphates have come very much into prominence among the French, especially for the treatment of neurasthenia. They are the products of the decomposition of lecithin, an agent known to play a very important rôle in the activity of the nervous system. It was found by Sarano, when introduced hypodermically, to improve digestion, augment the number of red blood corpuscles, stimulate nutrition, and increase the weight. Excellent results have been obtained clinically by the use of the glycero-phosphates by Robin, Kahane, Starr, and others. The different forms of neurasthenia will often require different treatment. Hydrotherapy, rightly employed, is in general of much real service. Most patients are benefited rather by the tepid than the cold douches, according to Sorchet. Insomnia and other symptoms will frequently demand particular remedies. Electricity, massage, and very moderate physical exercise will generally prove of advantage. One of the most recent writers, Dornbluth,[1] advises against too strict dieting, permitting tea and coffee, but interdicting alcohol. He advocates the assuming of the recumbent posture as much as possible, and general faradization with weak currents.

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A CASE OF FRACTURE AND MEDICAL ETHICS.

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A thorough knowledge of the theory and practice of medicine is not more essential to the young doctor than the experience which he lacks at the outset of his career. He may have graduated with honor at one of the best colleges in the country, and be thoroughly conversant with the best modern and scientific methods of treating disease, yet be ignorant of the ways and means upon which his particular career shall depend.

He must know how to adapt himself to the local, social, and professional phases of human nature he touches; learn to be tolerant of faults, charitable toward meddlesome mothers, patient with fools; he must relax his schoolish code, and discover that some very reasonable theories fade into unreality the moment they are applied to a living subject. Just as the dancer learns how to dance by dancing, so the doctor becomes proficient in his art by running foul of all the accidents that befall the average practitioner: ignorant patients, dishonest patients, quackish patients, dilatory patients; good consultants, bad consultants, consultants that take advantage; sin, sorrow, bad bills, malpractice suits, backbiting, foolish gossip, malingerers, inclement weather, night calls, Christian Science, placenta prævia, and the large number of patients that don't follow directions. If he needs the tactus eruditus for successful work in a strictly medical line, he cannot get along without another kind of tactus to guard him on occasion, and keep him from spoiling what good reputation he has gained in his work.

He must learn to be firm with his patients. "You are the doctor" is a fact that will sooner or later be thrown up to him by some patient who has been allowed to have his own way.

He must learn to show a confidence that he may not feel; appear hopeful when he is the reverse, and never express damaging surprises. Early in my practice—a few months after I graduated—I came across a case that taught me a lesson. If the experience shall help any one else, I will report it as briefly as I can.

One Sunday morning, I was hastily summoned to go out some ten miles to see a child that had "put its elbow out of joint." As I was busy waiting for such an opportunity, I went at once, taking with me L—— and an emergency case. We rode over a rough road through a cañon that seemed interminable, and came at last to the house where everybody was anxiously waiting for us. The patient was a girl aged ten years. She had been thrown from a horse while riding "bareback." I was well acquainted in the house, as I had been attending the father of the child, who was convalescing from a severe attack of typhoid fever. He lay in bed near the door opening from the room in which the patient sat crying. The mother, a large Amazonian, stood with her arms akimbo, and a daughter patterned after her mother walked up and down the veranda wringing her hands. Two of the girl's beaux were present, and very soon another daughter with her husband and child arrived. On examination, I found a much swollen and somewhat discolored right forearm and elbow, compressed by a dress sleeve that I cut open. Although there were evident appearances of backward dislocation of the radius and ulna, there was not only no rigidity, but undue mobility, the forearm dropping by its own weight. As the arm was swollen, and the child cried loudly at even the gentlest movement, there being intense pain on pressure much increased by any attempt at flexion, I decided to give an anæsthetic, and soon had the child well under the influence of ether. I was not able to accomplish this without a long parley with the mother, and repeated interference from the elder daughter. They had their doubts whether such procedure was justifiable under the circumstances, and so on. I told them that we probably had a severe fracture, and that with the amount of swelling present and the involvement of the joint it would be necessary to give the arm a thorough examination, which they must see could not be done without an anæsthetic. After some hesitation, they consented. I found that the external condyle was fractured, presenting movement and slight crepitus, while the coronoid process was also fractured, allowing the backward play of the bones of the forearm when the elbow was extended. Evidently the force upon the open hand and extended elbow thrown out by the girl to save greater injury had been transmitted through the radius to the ulna and the trochlear surface. The coronoid fracture was a rather unusual one, but not at all strange under the degree and distribution of indirect force present. The condyloid fracture came from a more direct impulse; a result of common enough occurrence. But although I had some doubts at first as to whether the epiphyses were separated (such an accident being not unusual in children), I soon found that the diagnosis was made easy by the play of the joint in my hands; now a dislocation, now a reduction, according as I extended or flexed the arm. At every moan or motion the child made, the mother and sister would fly to my side, and the old man would growl, "Say, can't you be easier with that child?" Finally, I had to ask the mother and daughter to go into the other room.

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[1] Münchener med. Wochenschrift, January 16, 1900.

I then flexed the elbow at a little less than a right angle, put it up in a fixed bandage, and left the girl rather comfortable. I asked the mother to watch the hand, and if there was more swelling, and the bandage seemed too tight, slightly to loosen it. I said that I should return in the morning, as the arm ought to be seen every day for a few days, anyway. "Oh, I can't pay fer that," said the mother, "I can't afford to pay for another visit, an' I don't think it's necessary. When a jint's once sot, I don't see that it needs the doctor any more."

In the morning I came at my own expense, although the family was well able to pay for the trip. I found that the mother had all but removed the bandage, and, while the swelling was less, the arm lay extended and as much "out of joint" as ever.

With great care I put the arm up in a permanent bandage as before. I was going to put it in a silicate or plaster-of-Paris splint, but the mother urged so against it that I foolishly gave in to her. As I left, I asked the family to report each day, because I felt very anxious to know the outcome of so serious a fracture. The mother went on to tell me that she had "sot many a jint as well as any sargint." She had fixed her daughter's "public bone" (pubic, I suppose she meant), and she had sent for a doctor in this case only because people might talk.

I heard nothing from the case for four or five days; then the daughter came to my office to tell me that her sister was getting along "right smart." She said that, the next morning after I left, Rosa complained so much of the pain in her arm that her mother thought it was best to take the bandage off altogether, which she did, putting in its place a strip of leather. She had done it up "'bout as you did," and Rosa was comfortable. "I am afraid," said I, "your mother has made a mistake, and if there is deformity you must not blame me. I have my doubts whether you will have a good arm."

"No danger," answered the sister, laughing. "You don't know what a good doctor mother is."

I had come to my professional "pons asinorum." Such a blunder I could not make now, but I did actually let that woman control me and my reputation in the case so far as to acquiesce in her demands. I should have required either absolute control of my patient, or my dismissal from any further attendance upon the case; and why I didn't may have been due to several things, the chief of which was want of experience in dealing with this class of patients. I have found that nearly every doctor has, at some time or another, done something, or failed to do something, for which he mentally "kicks himself" ever after.

Six weeks after the accident I met the mother. She said that Rosa was getting along well; that her arm was somewhat stiff, but not more than it "orter be."

In the mean time, I sent in a bill for services rendered the family, not only in this case, but for the long illness of the father. He was an old toper who, by the goodness of Providence or the interference of the devil, had pulled through an unusually severe run of typhoid fever. During the illness, which was retarded by several complications, the family had requested me to call in their former physician, a homœopathic practitioner, who very courteously expressed his opinion that Mr. J—— was getting along as well as could be expected.

But when I entered the house for the first time, I had an intuitive feeling that my directions would not be carried out; that the ignorance and vanity of the mother would have their perfect work. Had I been wise (even as wise as I am now), I should have insisted upon precedence. But when a young doctor is just getting a foothold in this and that family, trying, as it were, his doubtful skill, he is much inclined to insist less and please more.

The bills were rendered again, bringing no answer. At last they were sent with a suggestive footnote: "Please call and settle at once." I don't remember how many months later Dr. G—— called me into his office as I was going by. There he told me that Mrs. J—— had been to see him with her daughter Rosa; that the daughter had an unsightly deformity as the result of a dislocation probably.

"They have been all about," said he, "to see other physicians, and threaten a malpractice suit. I would advise you to call on these physicians, and explain the case as you have to me."

Like a true friend, this doctor had found out the names of the physicians consulted, and gathered all that would be of advantage to me.

"Well," said I, with all the inexperience of the untried, "let them go ahead; it will advertise me. They have not the shadow of a case at all, and I can bring in other doctors—any doctor—to prove that I was not to blame."

"Go slow," said the old doctor, smiling; "doctors are not all just, not all even honest, and the laws are not on the side of the doctor. I've had a malpractice suit on my hands, and I know what it means. No matter who's to blame, take this little girl into court, dwell on her innocence and youth, show her deformed arm, and the blame will be placed on the doctor that attended her. You have a case if any one has, but the world is a sad pickle-jar, my son, and a great many doctors I know are better at furthering their own interests than at telling the truth."

I went to see the doctors Mrs. J—— had consulted. One was an eclectic. He said that he had seen the arm; it was certainly an ancient dislocation. He did not remember advising the woman to sue, but if he had, he should not now, knowing the particulars. He said that the family were unreliable and unstable. The homœopath said he thought that the woman had no cause for suit, and told her so. The other physician seen was an old army surgeon who graduated in the fifties, and he told the woman that the deformity might be the result of a fracture of the condyles. He had seen such cases after the best of care. I now made another free trip to Mrs. J——'s home. She met me at the door with fire in her eye. "I know what you come fer," she said, striking an attitude, "but you needn't expect to git a cent here. We-uns don't pay sech as you. You may have to pay we-uns afore your bill's collected. My dorter's maimed fer life. The doctors says it a bad piece of work, and one of 'em tol' me not to give his name, as he's a friend of yourn, but he says it's enough to land you in jail."

I talked to this woman from my heart, and left nothing unsaid of all the cruel truth, acknowledging, finally, before I closed my address, that I was to blame for one thing only, and that was in allowing such an ignorant, opinionated shrew as she to dictate to me. Before going I examined Rosa's arm and found the deformity that would naturally result from such a vicious union. But the arm was not very unsightly, and could be used to considerable advantage. But the experience, the lesson, elbowed itself into my memory to stay.

Lynchage is the latest French term applied to executions without the red tape of jury trial. The *Gazette des Hôpitaux* thus designates the removal of certain organs from a man at Falls City, Neb., by a mob, who believed him guilty of assault upon a young girl, thus rendering him incapable of again making such an attempt. The *Gazette*, wrongly we trust, suggests that a medical man may have been in the party.

THE USE OF ELECTRICITY IN CHRONIC RHEUMATISM.[1]

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MR. PRESIDENT AND FELLOW-MEMBERS: The subject assigned to me is the use of electricity in the treatment of chronic rheumatism. First, as to our therapeutic agent, electricity: It is often claimed that we do not know what electricity is, implying hence that its medical administration is a blind pursuit. It was Lord Kelvin, I believe, or at least some one equally authoritative, who remarked: "We know more about electricity than we do about shoemaker's wax." Now, shoemaker's wax is a very simple drug, and it follows, of course, that we know more about the nature of electricity than we do about any drug in the pharmacopœia.

Next, I would remark that we are apt to be misled, and adopt invidious distinctions, if in electrotherapeutics we adhere too closely to the terms galvanism, faradism, and franklinism. In reality these expressions have no place in modern electrical science. They are relics of a bygone time. Unfortunately, they still serve us physicians as a peg upon which to hang what we do know about electrotherapeutics, and therefore I cannot abolish them wholly from my part of this discussion to-night. In truth, electricity is electromotive force, pressure, voltage, or difference of potential, whichever term one chooses to use. And electromotive force may be developed (1) from a chemical cell (galvanism); (2) in an induction coil (faradism); or (3) by a static machine (franklinism); but it may also be developed and modified in many other ways not enumerable under the above nomenclature.

Again, we administer electricity, that is to say, electromotive force, to the patient's tissue, and the result is work performed, represented in joule, namely, heat units, upon that tissue. This "work" done is, first, transformation of electric energy into other forms of energy—electrolytic, when tissue is decomposed; cataphoric, when fluids are moved along and diffused; secondly, excitation of physiological function, when the irritability of protoplasm is excited, and when nerve and muscle tissue and gland cells exhibit their characteristic irritability; or finally, though more remotely, but not less important, mechanical, when muscles contract and set up circulatory movements in arteries, veins, capillaries, and lymphatics. There is, therefore, as is readily seen from the above analysis, no question of galvanism, faradism, or franklinism, as individual entities in electro-therapeutics, but simply a question of the modality of electromotive force and of the nature of the work done by each modality. In regard to modalities, each will vary, as has been said, according to its source, and may constitute a continuous, a periodic, an alternating, or an oscillating current, and one of high or low initial electromotive force, and of high or low frequency, etc. It is then to the sort of work done by varieties in the expression of electromotive force in living tissue that we must look for our curative results. This, so far as we have gone, summarized briefly, is: (1) electrolytic and cataphoric (galvanism); (2) excitation of physiological function (galvanism, faradism, franklinism); (3) mechanical, mainly circulatory (galvanism, faradism, franklinism).

But there remains outside of galvanism, faradism, and franklinism a modern modality of electricity to which we must appeal to obtain our best results in the treatment of not only chronic rheumatism, but also many other diathetic conditions, involving many other chronic diseases or conditions of health. This modality is the high potential, high frequency current (described by the writer in 1881 and in 1891—brilliantly explored and exploited and completed in all its scientific relations by Nikola Tesla in 1892, and by Elihu Thomson; about the same time and independently studied in various further phases by d'Arsonval, and placed upon a firm therapeutic basis by him by positive laboratory experimentation upon men and the lower animals, and now admitted to be the one form of electrization which exerts by far the most profound effect of all upon the metabolism of the human being). This current, in none of its forms, produces any appreciable electrolytic effect, but it profoundly affects physiological function. In some of its forms it excites the neuromuscular mechanism and produces sequent circulatory effects; in others it fails to excite the neuromuscular mechanism, while still setting up powerful metabolic exchanges.

The current which I select for the treatment of chronic rheumatism is the high potential, high frequency current in one of its forms, and the work I accomplish in tissue is to affect both the local and the general metabolism or nutritional exchanges. The current I obtain from a powerful influence machine, using condensers to produce the "static induced current," or using the condenser principle to produce a current which, until a better nomenclature is established, is termed for temporary convenience of identification, the "electric wave current." This is, in reality, the subjection of the patient's entire person to the influence of powerful condenser waves. The patient thus forms, as it were, one plate of a very large condenser (its effect may be greatly intensified by making an independent connection to a near-by insulated and large sheet of metal). I have published and described both currents fully elsewhere.[1]

The specific work done upon tissue, in the treatment of chronic rheumatism, that is to say, the metabolic exchanges effected, are those amply demonstrated by Professor d'Arsonval, of the College of France, in his laboratory, and by Drs. G. Apostoli and Berlioz in actual practice and observation upon their patients. To these observations the writer has also contributed frequently. These effects upon the patient may be briefly outlined as follows:

1. (*a*) A total absence of action on sensation (d'Arsonval and Tesla effects); (*b*) a minimum primary effect upon sensation and a rapidly produced benumbing effect (Morton currents).

2. (*a*) Failure to excite muscular contractions (d'Arsonval and Tesla effects); (*b*) comparatively painless muscular contractions and gradual benumbing of the neuro-muscular mechanism (Morton currents).

3. Promotion of metabolic exchanges based upon the experiments of d'Arsonval. (*a*) Respiratory combustion; the oxygen absorbed is increased and the carbon dioxide eliminated is greatly augmented; the elimination of H_2O is also greatly augmented; (*b*) the urea is increased in quantity, while the proportion of uric acid to urea becomes normal.

4. The heat production is increased.

5. Loss of weight occurs during applications, but between applications the weight again increases.

6. Vasomotor action is influenced; the blood pressure at first becomes lower, and finally rises to a stationary point.

The increased combustions amount to from thirty to fifty per cent. Professor Rienzi, of Naples, has recently demonstrated that fifty per cent. more neutral sulphur is oxidized by these currents, and that there is a decisive effect upon the metabolism of nuclein.

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[1] Paper read before the Section on Medicine of the Academy of Medicine, March 20, 1900.

[1] New York MEDICAL RECORD, April 2, 1881. New York MEDICAL RECORD, January 24, 1891. New York Electrical Engineer, March 2, 1899. Bulletin Officiel de la Société Française d'Électrothérapie, January, 1899.

The theurapeutic effect of this increase in the nutritional activity of the patient's organism is a progressive and rapid return of general health. He sleeps, eats, works, and feels better; his normal secretory and excretory functions return; soon in ratio with the improvement in his defective nutrition his local disorders in turn improve, and the improvement is permanently progressive because it is built upon the sure foundation of the removal of a defective general malnutrition. Such is the fundamental basis which I have long maintained is the one most efficacious in modern medical science for the treatment of numerous chronic diseases, and in no disease more applicable than in rheumatism.

These currents should be and can be also applied locally. Moreover, in the local treatment of arthritism, we must not neglect the spark, our ancient ally of the static machine. The long, clean percussion spark, administered to a rheumatic joint, sets up within the tissue a commotion or perturbation of the physical tissue particles, a sort of maladjustment of tissue particles, followed at once by readjustment. We may speak of it roughly as a sort of molecular gymnastics, impossible to accomplish by any other means. As a result of this treatment, the joint assumes a new and healthful nutritional activity.

In another form of spark treatment ("the friction spark") an electrode is rubbed over the skin with the clothing intervening, and produces a hot, burning feeling; it excites all nerve end organs and delivers to spinal and other centres through the afferent nerves the peripheral impression, and thus produces, as has been abundantly proved by laboratory experiment on the lower animals, changes in the central nerve cells, even to the extent of modifying their microscopical structure (Hodge). Secondly, as to rheumatism: Clinically and for purposes of treatment we may divide rheumatism and its allied diseases into (1) muscular rheumatism; (2) rheumatism, acute, subacute, and chronic; (3) gout; (4) rheumatoid arthritis.

There are not wanting many and excellent authorities, who regard all forms of rheumatism as a manifestation of a disorder which has its primary seat in the nervous system. A defect in the neurotrophic nerve mechanism may well cause a defective metabolism with excess of uric acid and consequent affection of fibrous tissues by uric-acid deposit, or, indeed, in some forms of arthritis, affect primarily the nutrition of the joint structure. This general view, at present, is as good as any other, and affords a working basis for the therapeutic use of electricity.

Thirdly, as to the application of the foregoing principles to the treatment of rheumatism: There is at the present time a prevalent movement in favor of general electrization of the patient, whether by the alternating electric current bath of Gautier and Larat, by the high potential, high frequency autoconduction and inductive or direct methods of d'Arsonval, or by the electrostatic and electrostatic-current methods which I have long advocated. The reason for this is obvious. Most chronic diseases are constitutional, general, and diathetic. Undoubtedly gout, and many if not all forms of arthritis, may be so considered. Certainly no one will deny that in most cases of rheumatism we have two aims in view—one to treat the diathesis, the other to treat the local manifestations. Of what use is it to treat the affected joint alone and neglect the diathesis? It is like putting a new patch on an old garment. The new patch will tear out.

At this point I feel that my paper is practically concluded, for the application of the foregoing principles is a simple matter, though implying, of course, some technical skill, patience, and, may I add, enthusiasm. I will, however, briefly apply these principles and methods in practice, first adding a few words as to technique.

Technique.—1. The Static Induced Current: This current is fully described in textbooks, and is familiar to all who use influence machines; it, therefore, needs no description here.

2. The "Electric Wave Current" (temporary nomenclature): A powerful influence machine must be employed for this as well as for all currents and sparks. The accompanying diagram illustrates the connections necessary to produce this form of high potential current.

The electrodes may be of any pliable metal. I use block tin rolled out into fairly thin sheets, and cut off electrodes of any suitable shape. I buy a few dozen brass binding-posts and attach one to each electrode. A spinal electrode is one inch by twelve inches. The same strip serves to wrap around joints or for many other local applications. Sometimes I encase an entire arm or other member in a metallic mould. A flat plate, say a foot square, may be laid upon the chest, abdomen, back, or elsewhere. When a strictly local effect is desired, the smaller the electrode the more intense the local action.

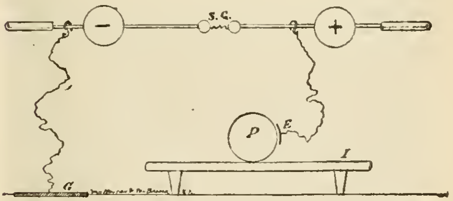

FIG. 1.—*I*, Insulated platform; *P*, patient; *E*, electrode; *G*, ground connection; *S. G*, spark gap.

In place of block tin I often use metallic cloth (such as military furnishing-shops sell) cut into bandages. With such bandages I bandage a leg or arm, or, indeed, as is quite easily done, the whole body, thus enclosing the patient's entire person in a complete metallic suit of clothing; or a metallic cloth shirt or jacket and trousers, resembling a suit of pajamas, may be quickly made and worn by the patient for the purpose of treatment. It will be noted that the bare metallic electrodes lie against the bare skin. They require no moistening. If at first, for a moment, there are points of prickling sparks, slight pressure will dispel them. However the metallic electrode may be applied, the patient's electric position is that of one tinfoil coating of a Leyden jar, whose other tinfoil coating is represented by the walls of the room and neighboring objects and the ground connection, while for dielectric or insulation the air of the room corresponds to the glass of the jar. That a condenser effect is truly established may be noted by observing that under the circumstances of administration described the spark crossing the spark gap changes its quality exactly as when ordinary Leyden jars are added.

As to the kind of rheumatism, all cases receive from fifteen to thirty minutes of the wave current, to meet the general and diathetic requirements. The duration of a treatment must be decided by the effect upon the patient, exactly as one would prescribe the duration of a ride upon horseback or other physical work. If the patient feels tired and exhausted, the treatment has been too long. The next treatment can be curtailed to a point where it ceases short of weariness. Often the general treatment is given by applying the pliable electrodes to one or more joints, thus combining the local and the general treatment.

3. The Spark: This has been fully described, and is well understood.

Special Applications.—1. Muscular Rheumatism: As has long been known, the application of sparks, at first gently and gradually increasing, will invariably, in a single treatment, relieve the pain and soreness of the muscles, and permit of their free motion. The symptoms return after twelve to twenty-four hours, and are again treated with the same results, the duration of relief being continuously lengthened until in a few days to a few weeks, according as the case is acute or chronic, a cure is effected.

2. Rheumatism—Subacute and Chronic: The treatment is in general as described; then local by long powerful sparks or by a local application of the wave current or the static induced current. I have continuously used some form of electrostatic treatment for rheumatic affections for twenty years, both in an almost continuous dispensary practice and in private practice, excluding for testing purposes every form of medication. I hope some day to collect and publish the cases. I can here only say in general that of every form of treatment I have tried, I have found none in any way comparable for relief and cure to the electrostatic.

3. Gout: More especially will the above remarks apply to gout. In the acute local attack I at once wrap the joint in a metallic cloth bandage or encase it in a pliable metallic mould, and give the wave current, or, if one chooses, the static induced. Time and again, a limping, suffering patient has walked off after treatment, with a firm tread, stamping his foot on the floor to assure himself that the pain had truly left him. Often the relief is permanent; often again it is only temporary, and requires a number of treatments to make it permanent, for often the gouty attack may be but an œdema, and again it may consist of a profuse deposition of the sodium biurate. In gout also the general treatment is indicated upon the most positive basis of producing the increased metabolic exchanges, fully alluded to.

4. Rheumatoid Arthritis: In regard to this disease, I have little to add to what I have written in the Medical Record of December 9, 1899, and to the general presentation of results obtained in my hospital dispensary work, described by my assistant, Dr. W. B. Snow, in the *Post-Graduate* of November, 1899. This I will say here, namely, that the progress of this disease in any stage may be completely arrested; if in an early stage, very promptly (say a month); if in later stages, with more difficulty (say in from three months to a year).

For instance, a recent patient, with many joints profoundly affected, came to me for treatment: first, in ten to twenty days free motion of the cervical vertebræ returned, then a free motion of the lower jaw with no further grating sounds, then free movement of one affected hip-joint—these were all recent invasions of the disease, and merely proved that the earlier the stage is treated the quicker are the results. In the same patient, other joints, now affected for five years, progress toward recovery much more slowly. In this disease, the long spark applied to each individual joint affected seems to me to be essential in establishing a new joint nutrition.

I may say here that my convictions as to the efficacy of electrostatic treatments are, in the first instance, based upon dispensary practice, in which no medicine is added to the electricity. But in private practice I put all my rheumatic patients upon a meat diet, because in their usual condition it is more nutritious and more easily digested, and in rheumatoid arthritis I have believed that ten drops of iodide of potassium, three times daily, with much water and after meals, and arrived at by increasing from one drop upward to the ten, is of assistance in treating the case.

In conclusion, I wish I could impress upon those who can control hospital work for the treatment of chronic diseases, especially arthritism, what a fruitful field for labor they have before them in the intelligent use of electrostatic administrations. In my opinion, a good influence machine—the most powerful that can be obtained—should constitute a part of the equipment of every hospital in the land. For while diagnosis, prognosis, and pathology are the letter of the law, we may yet remember that therapeutics is the good Samaritan.

The Closure of Abdominal Wounds and Hernial Openings by Means of Buried Silver-Wire Net (Healing in of Filigree Pads).—O. Witzel believes in the efficacy of buried filigree pads for protection against the development of abdominal ruptures and for the avoidance of recurrences. The wire of these pads is heavy. The diameter of the buried net should be at least three times as large as the hernial opening. The neighborhood of the femoral vein makes operation on femoral herniæ somewhat difficult. The wounds should be closed by suturing the separate layers of tissue one by one.—*Centralblatt für Chirurgie*, March 10, 1900.

Hæmogastric Infection in Yellow Fever.—Carlos J. Finlay revives this ancient term, and applies it to the form of yellow fever marked by gastric or intestinal hemorrhage. He suggests that this form is a mixed infection with a bacillus of the colon group—bacillus *a* of Sternberg or the colon bacillus, or not improbably the bacillus icteroides of Sanarelli (hog-cholera bacillus?), the latter acquiring pathogenic properties for man through association with the yellow-fever germ, whatever that may prove to be. The black vomit is therefore a sign of secondary infection. This occurs in three varieties of cases: (1) In the superacute cases in which we have a simultaneous infection with the hæmogastric germ and the yellow-fever germ, the former having already acquired pathogenic properties through previous association with the latter. (2) In the more common cases in which black vomit appears on the fourth or fifth day, we have a secondary auto-infection with a bacterium, pre-existing in the gastro-enteric tract or introduced there as a saprophyte, which becomes suddenly pathogenic. (3) In cases in which the black vomit appears suddenly in apparent convalescence from a benign attack. Here there is probably a reinfection with a new and malignant virus mixed with the hæmogastric germ.—*Revista de Medicina y Cirugía de la Habaña*, March 10, 1900.

The Double Products of the Parasitic Fungus of Human Cancer and of the Nectria Ditissima Parasite of the Cancer of Trees—the Physiological and Therapeutic Action of Nectrianin.—Bra and Mongour in experimenting with these substances found that the soluble products of the cultures of the parasitic fungus of human cancer have the same effect as, only more powerful than, the triturated liquid taken from the neoplasm. Nectrianin, though analogous in its action, is still more powerful than either. It has little or no effect on healthy animals, but in cancerous animals and in the human being suffering with this dread malady, its injection in doses of 5 c.c. several times a week is followed in a few hours by elevation of temperature from 1° to 3°. An increased dose is followed by chills, accelerated pulse, thirst, and headache. The crisis comes at the end of several hours with perspiration, polyuria, and profound sleep. It is certain that treatment by nectrianin has improved the local condition of patients—has arrested or diminished the hemorrhages, suppressed the fetid discharges, and has shown a tendency to cover the growth with epidermis. It cannot be called a specific remedy for cancer, but it has certainly ameliorated the condition of the patients. This therapeutic measure may well be combined with surgical treatment.—*Journal de Médecine de Bordeaux*, February 25, 1900.

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PERNICIOUS ANÆMIA AS A CHRONIC INFECTIOUS DISEASE.

BLOOD impoverishment may obviously result from a number of causes, and the cellular elements and the hæmoglobin may be affected variously. Far too little is known concerning changes in the plasma. In accordance with the etiological factors a classification of cases of anæmia into primary and secondary has been proposed, and in accordance with the relations between the hæmoglobin percentage and the number of red blood corpuscles and with morphological variations in the latter, together with the general clinical symptoms, attempts at subclassification have been made, but in neither instance with entire success. Although considerable advance has been made in recent years on the subject of hæmatology, a good deal is yet to be learned with regard to diseases of the blood. Among the most interesting and the most important of these is that form of anæmia designated by Addison as "idiopathic," and since known also as "essential" and "pernicious." Although, according to Addison, the disease arises without discoverable cause, it cannot be concluded off-hand that it is therefore a primary or independent disorder. Careful studies by William Hunter pursued for a long time would seem to show that in some cases at least the disorder may occur as the result of intoxication from the gastro-intestinal tract.

In a recent communication on this subject Hunter (*Lancet*, January 27, February 3 and 10, 1900) reviews his previous work and makes some additional observations. He had already determined that the pathological changes of pernicious anæmia are highly distinctive and indicative of excessive blood destruction as the characteristic feature of the disease; and that the latter is probably dependent upon the action of a certain special blood poison derived from a specific infectious process in the gastro-intestinal tract. Observations directed to the discovery of the nature and the cause of the infection indicate that it is not dependent upon general, but rather upon special conditions. Attention is called to the frequency with which an unusually cario-necrotic condition of the teeth is encountered in cases of pernicious anæmia as an antecedent to the onset of the anæmia; the frequency of the conditions of glossitis and stomatitis among the first objective symptoms of the disease, and sometimes as the first subjective and objective trouble; the frequency of gastric symptoms (sickness, retching, vomiting) pointing to gastric trouble; the presence of gastric catarrh of an infective nature in pernicious anæmia; the origin of infective gastric catarrh from necrotic and suppurative teeth; and the conclusion that in pernicious anæmia the original infection underlying the disease is in most cases to be traced to the teeth and possibly in a few cases to exposure to drain-poisoning.

As a result of observations made in seven cases and of an analysis of the literature, Hunter reached the conclusion that pernicious anæmia is a special form of chronic blood poisoning—a toxæmia—the result of a special infection of the digestive tract, especially of the mouth and the stomach, and probably, although to a less degree, of the intestine. The chief source of infection is through the mouth from long-continued and neglected cario-necrotic conditions of the teeth, and sometimes possibly from stomatitis arising from other causes. The usual effect of this infection is a chronic infectious catarrh of the mouth and stomach which may in time lead to deeper-seated changes, *e.g.*, ulcers of the mouth and tongue, chronic glossitis and atrophic changes in the tongue, and chronic gastritis with atrophy of the gastric glands. Evidences of the infectivity of the micro-organisms of dental decay are overwhelming, and in suitable cases the infective nature of the resulting catarrh of the stomach can also be demonstrated. The infection is chiefly streptococcal, and probably derives its special character from being of a mixed character. Such infection occurs the more readily if the stomach or the intestine is already the seat of disease from any cause. The gastric and intestinal irritation (sickness, retching, vomiting, looseness of the bowels, and diarrhœa), so often noticed, and which is even more common than is generally stated (being observed in almost eighty per cent. of cases), is the local effect of this infective catarrh, while the excessive destruction of blood taking place in the portal area is the result of the action of the poisons in the blood. The fever so commonly encountered is not an accidental occurrence, the effect of weakness, but is a feature of the disease, a result of the infective process itself, and its variations correspond to variations in the activity of the process. Such variations are common, occurring from week to week, sometimes from day to day, in the development of the disease, even when it is pursuing a fairly progressive course. In addition, however, the advance of the disease toward a fatal termination is often marked by one, sometimes by two periods of marked improvement, lasting, it may be, many months or a year or more, and followed by relapses. This character of the disease is regarded as the result of a relative immunity, unfortunately only temporary in nature, conferred by the disease itself—an immunity accelerated and greatly strengthened for a time by suitable medicinal treatment, notably by administration of arsenic.

The foregoing conclusions suggest certain new considerations in regard to treatment, of which the chief are minute attention to the hygiene of the mouth and especially of the teeth, with the immediate removal of every source of infection there; stricter antiseptic treatment of the stomach and the intestines; and antitoxic serum treatment with the view of antagonizing within the blood itself the poisons absorbed into it.

AURAL MANIFESTATIONS OF LEUKÆMIA.

Deafness is not an uncommon symptom of leukæmia. It may appear early and has been attributed to hemorrhage. Nausea and vomiting also may occur early. Vertigo and headache are sometimes present, and syncopal attacks may occur. An interesting case in which symptoms of acute Ménière's disease, or aural vertigo, were observed in a patient suffering from spleno-medullary leukæmia was reported by Weber at a recent meeting of the Royal Medical and Chirurgical Society. The patient was a man thirty-one years old, with advanced leukæmia and a history of a malarial fever six years previously, who presented great enlargement of the spleen and the liver. Death resulted from collapse following internal hemorrhage. During life ophthalmoscopic examination disclosed the presence of so-called leukæmic retinitis. About six months before death acute aural symptoms set in, namely, headache, vertigo, and vomiting. Examination indicated a leukæmic affection of the internal ears, and marked deafness developed within a short time. On post-mortem examination a portion of the scala tympani and the perilymphatic spaces of the semicircular canals were found filled with newly formed fibroid and bony tissue. The scala vestibuli, the canal of the cochlea, and the vestibule presented only comparatively slight changes. The nerve trunks exhibited no obvious alteration.

A study of similar cases reported indicates that the pathological appearances presented by the internal ear after death differ in different cases, partly in accordance with the length of time that has elapsed between the onset of the acute aural symptoms and death. In most cases the post-mortem appearances suggested that the onset of aural symptoms (vertigo, headache, vomiting, and deafness) marked the occurrence of more or less extensive extravasation of blood into the semicircular canals and the cochlea, the process being doubtless nearly always more or less symmetrical and simultaneous in the two ears. In such cases, although apparently lymphocytic infiltration and hemorrhages may be found in various parts of the ear after death, the labyrinthine hemorrhage is probably the essential lesion responsible for the acute aural phenomena. Subsequently, vascularization and organization proceed in the usual manner, the clot becoming gradually replaced by newly formed connective tissue, connected closely by its blood-vessels with the endosteum of the bony labyrinth. In the course of time, should the patient live long enough, more or less ossification occurs in the newly formed tissue, and irregular processes of bone project inward from the walls of the bony labyrinth. At this stage of the pathological process transverse sections of the bony semicircular canals generally show the membranous canals surrounded by a meshwork, or by irregular masses of newly formed bone and fibroid tissue completely filling up the perilymphatic spaces.

In addition to the cases presenting acute apoplectiform aural vertigo there occur also cases with aural troubles of a less severe or less sudden nature. In these the symptoms may be in part wholly independent of the leukæmia, but in part due to small hemorrhages and patches of lymphocytic (leukæmic) infiltration in various parts of the auditory apparatus.

At the same meeting Mott related a somewhat similar case. A man thirty-eight years old, who had been in poor health for two years following an attack of influenza, was seized six months before coming under observation with sudden pain in the left side of the abdomen, and a little later with pain in the head and deafness, with loss of power of maintaining equilibrium. The deafness came on suddenly, first in the left and then in the right ear. The patient was a little cyanosed, the temperature 97° F., the abdomen distended, the liver, spleen, and lymphatic glands enlarged. The hæmoglobin estimation was fifty-four per cent., and the leucocytes were enormously increased, almost equalling the red corpuscles in number. The muscular powers of the patient were good, and there was no loss of co-ordination in the arm, but he could not balance himself in walking, and could not stand at all with his eyes shut. The knee jerks were absent on both sides. Vision was imperfect; accommodation was good, but the reflex action of the right pupil was sluggish. The fundi showed slight changes. Hearing improved considerably. Taste and smell were normal. After seven days the man was found to be stone-deaf in both ears on waking in the morning, and three days later he died in coma. Upon post-mortem examination the liver was found to weigh 5.5 kgm. and the spleen 1.8 kgm. The brain was congested and the seat of hemorrhages. The petrous bone was soft and friable from rarefaction. The spinal cord and nerves exhibited no alteration. There was hemorrhage into the posterior spinal roots and into the cochlea. The hemorrhage into the semicircular canal accounted for the loss of equilibrium. This and the deafness were accounted for by hemorrhage into the cochlea and labyrinth.

TREATMENT OF ACUTE LOBAR PNEUMONIA.

It is now generally conceded that micro-organisms play an important part in the causation and progress of pneumonia, and consequently the disease must be given a place among the infectious maladies. The investigations of Klebs, Friedländer, Fränkel, and Sternberg have quite definitely settled this point. Therefore it would seem that the time has come for new methods of treatment to be put into practice. It used to be the invariable custom to bleed freely and to administer heroic doses of antimony to all sufferers from this complaint. This was the routine treatment in every principal medical school of the world. Hughes Bennett was the first English-speaking physician to point out the defects of this treatment, and he published statistics some years ago showing that medical interference did very little toward the cure of the complaint. Balfour, of Edinburgh, at the time when that school was a veritable stronghold of the antiphlogistic methods, went to Vienna and was astonished to find that Skoda gave those under his care who were attacked by pneumonia nothing but hay tea, and moreover obtained better results than did the Edinburgh physicians. Ultimately venesection and the giving of large doses of tartar emetic were almost entirely abolished, although many eminent authorities believe that in certain cases both blood-letting and antimony are of decided benefit. Sir Hermann Weber says: "The prejudice against the use of small doses of antimony and against bleeding in moderation in suitable cases is entirely unfounded. Sir Samuel Wilks and Sir William Gairdner are of the same opinion. Dr. Edward F. Wells, at the last meeting of the American Medical Association, spoke of the efficacy of venesection in plethoric persons, and considered that in these cases the procedure had no satisfactory substitute. He also recommended a simultaneous subcutaneous injection in the chest of decinormal saline solution or the use of an enema of the salt to replace the quantity of blood withdrawn. Dr. Hobart A. Hare at the same meeting said that he believed that the abortive treatment by venesection, aconite, and veratrum viride was applicable only in a few vigorous cases. Sir William Broadbent opines (*Practitioner*, March) that "in a large proportion of cases it cannot be said that the regular administration of medicine of any kind is necessary, but it is usually a comfort to the patient and friends to have the feeling that something is being done."

In regard to the germ theory of pneumonia, and referring to the investigations of scientists to establish its correctness, Dr. Pye-Smith, in "Allbutt's System of Medicine," says: "While recognizing the interest and importance of these laborious researches, we must observe that even the diplococcus of Talamon and Fränkel does not fulfil Koch's three tests of a pathogenic organism; as they are fulfilled, for instance, in anthrax, relapsing fever, and tuberculosis. It is not invariably present in the tissue of pneumonic lung; it does occur in other situations in health when injected as a pure cultivation; it does not always reproduce itself and cause a fresh case of hepatization of the lungs. Nevertheless the frequency of its occurrence and the fact that it often reproduces the disease by inoculation make it probable that it plays an important part in the natural history of pneumonia." Dr. Andrew H. Smith, in his exceptionally able monograph on the subject in the "Twentieth Century Practice of Medicine," vol. xvi., believes that pneumonia is not an inflammation of the lung, for the reason that in his opinion it does not affect the nutrition of the organ, but is a process of germ culture in which the pneumococcus grows in a culture medium supplied by the functional capillaries of the lung. The majority of writers do not agree with Dr. Smith in this view. Dr. James K. Crook, in *Medicine*, April, thus expresses his opinion on the matter: "From the author's study on the subject, he would fully agree with Dr. Smith that the process is one of germ culture, but it may also be as properly described as an inflammation, as are the conditions set up by the same microbe elsewhere, viz., in the pericardium, the pleura, and the joints. It is, of course, a special form of inflammation produced only by special forms of micro-organism and not analogous to inflammations elsewhere, because the lung itself has no analogue elsewhere in the body." Time, however, alone can prove whether Dr. Smith is right or wrong.

In the mean time the question before us is whether the knowledge that acute lobar pneumonia is an infectious disease has afforded any firm grounds for the hope that it may be possible to abort the disease. Again on this point there is a great divergence of opinion. Most authorities hold that such an expectation is not justified by the extent of our present knowledge. Dr. Smith, with many others, thinks that this may be done, and argues that therapeutic efforts should be directed to the arrest or inhibition of the germ culture from which the diplococcus obtains its nourishment. He claims that inasmuch as this culture medium is derived from the blood, any substance added to the latter will also be found in the former, and if that substance is inimical to the growth of the coccus, it will in so far act in the direction sought. The fact that the pneumococcus is the most vulnerable of the germs is in favor of this argument. Creosote, calomel, quinine, and salicylate of sodium are the drugs possessed of germicidal properties best calculated to produce the desired effect. Leaving out of the question the three former drugs, we will briefly consider the use of salicylate of sodium in the treatment of pneumonia, as demonstrated by the experience of some who have witnessed its effects. Sir Hermann Weber, in *The Practitioner*, February, writes as follows: "Salicylate of soda was tried in quantities of gr. xx. to xl. per day at the German Hospital, London. The effect was quite satisfactory on some persons in diminishing the pyrexia, the pleuritic pain, the thirst, the dry heat of the skin, and perhaps also slightly the duration of the acute stage, but scarcely sufficiently marked to be quite sure. In other persons the excessive perspiration produced by the remedy, and the noise in the ears, rendered this treatment disagreeable; the most objectionable effect, however, on some persons was excessive headache, and on some others the appearance of blood and albumin and casts in the urine, so as to oblige us to stop the remedy. Although it cannot be denied that in some cases the salicylate acted beneficially, it produced, as just stated, in others unpleasant and in some even injurious effects." Pye-Smith refers to the use of the salicylates in these words: "Salicyl compounds are only indicated when pneumonia occurs as a complication of rheumatism." Dr. de Becker recommends salicylic acid for acute pneumonia (*Annales et Bulletin de la Société de Médecine d'Anvers*, March and November, 1898), and believes that if administered at an early stage of the disease it is a sure preventive. Eleven out of twelve patients treated thus by him were quickly cured. He has also noted that the expectoration after the use of salicylic acid becomes liquefied, and is of the opinion that in the giving of the drug the expectoration should be the guiding symptom. Debility and heart disease should contraindicate this treatment. The most favorable reports of the action of salicylate of sodium come, one from Austria and the other from this country. The first stated that a series of seventy-two cases of pneumonia occurring in Austria had been treated with large doses of sodium salicylate, gr. cxx. daily. All of these patients had recovered, and in not one had the disease terminated by crisis. The second report was published in the MEDICAL RECORD, April 22, 1899, by Dr. Sebring, of Kingston, N. Y., and deals with seventy-five cases of pneumonia treated with gr. cxx. daily of the same drug, with the result that but one patient died. Dr. Sebring also says that out of one hundred and twenty-five cases of pneumonia treated with salicylate of sodium in his neighborhood only one proved fatal. Of course these results are magnificent, and if the drug should be found as effective after a more extended trial the problem of how best to treat acute lobar pneumonia will be solved once and for all. Until its use has been more widespread than is at present the case it will be as well to express no pronounced opinion as to its curative properties.

Investigators have not as yet succeeded in preparing a reliable antitoxin for pneumonia, although de Renzi has used the serum prepared according to Pane's instructions since 1896 in grave cases of pneumonia, and states that his former mortality in such cases of twenty-four per cent. fell under the treatment to nine per cent. The data at present available do not warrant us in arriving at a definite conclusion as to the value of this treatment. A great step in advance has been made in establishing the microbic origin of lobar pneumonia, and it behooves us patiently to await the discovery of the most effective means of meeting the attacks of those pathogenic organisms responsible for the condition. There has been up to the present time no sufficiently strong reasons brought forward for altering the existing expectant methods of treatment.

THE CRAIG COLONY FOR EPILEPTICS.

DR. FREDERICK PETERSON, of this city, some years ago thus described what in his opinion is the best manner of treating the epileptic: "There is but one kind of institution which can meet the case of those who suffer from this disease. No asylum, no large hospital, no single vast building in a great city is appropriate for the purpose. It must be an establishment combining many unusual features. It must have schools and teachers for the young epileptic. It must have offices, shops of all kinds, stores, dairy, farm, gardens, granaries; for, as they grow up, these patients should acquire trades or professions. It must have a group of small hospital and asylum buildings, where such as are sick or mentally infirm may be cared for. It must have skilled physicians. It must have a church, amusement hall, gymnasium, and bathing establishment. It must have finally a pathological laboratory presided over by the keenest pathologist obtainable, so that in course of time a cause and cure may be discovered for this terrible disease. Such a place would not be a hospital in the ordinary sense of the term. It would be a village in itself, a colony for epileptics."

Mainly through the exertions of Dr. Peterson himself his ideal institution became realized, and Craig Colony, founded and managed upon the lines indicated in his sketch, was established. The results so far of treating epileptics by these methods have been eminently encouraging, and the prevailing belief that detrimental effects would ensue from the close association of patients has been proved baseless. Moreover, viewed from a practical and economic standpoint, ample justification has already been afforded for the establishment of the colony. Dr. Spratling, the chief executive officer, says there is every reason to believe that the value of manufactured and home products will ultimately reach seventy-five per cent. of the entire cost of maintenance. The sixth annual report of the board of managers states that "there have been received into the colony since its opening, February 1, 1896, five hundred and four epileptics, of which three hundred and seventy-eight remain. The buildings nearly completed and those in course of construction will increase the capacity of the colony to a total of seven hundred and twenty beds. . . . There will still be urgent need for dormitories, when the buildings now under construction are completed, particularly for an infirmary for each sex." In the report of the medical superintendent mention is made of the great urgency of securing money apart from maintenance for the purpose of scientific research, and the same report, referring to admissions and discharges, states that at the time of presenting the report a year ago there were three hundred and twenty-two colonists under care; during the past twelve months this number was increased by admitting ninety-five new cases; while during the same period thirty-nine were discharged, either as recovered, unimproved, died, or transferred to some other institution, leaving three hundred and seventy-eight—a total gain of fifty-six during the year, a number limited entirely by lack of room for a larger number. With regard to treatment and results the report says: "The good results to the colonists of the various forms of treatment have been more general and far more apparent during the past year than any year in its history. Collectively they have derived vast benefit, while many of them have become important factors in the colony's daily life." The results in treatment are summed up as follows: "First, in cures effected; second, in the very marked and general reduction in the number and violence of seizures; third, in the great physical improvement, often amounting to a complete physical regeneration, in large numbers of cases; fourth, in the steady growth and development of the idea of colony life; fifth, in the marked increase in the ability and number of colonists to become fixed and useful factors in the colony's everyday life."

Craig Colony and kindred institutions have brought into evidence the fact that the rational manner to treat epilepsy is not as heretofore by confining its victims in asylums and by drenching them with drugs, but by giving them the opportunity of regular exercise and open-air work. Industrial and physical training performed under healthful conditions and intelligently directed will undoubtedly result in improvement to the epileptic.

THE NEGRO QUESTION.

The abolition of slavery, instead of exercising a favorable influence upon the negro morally and physically, would rather appear to have had a contrary effect. The physical degeneracy of the Afro-American race yearly becomes more and more evident, while it is to be feared that the moral condition of the colored man in this country is at a lamentably low ebb. The cause of this retrogression is variously explained, the most popular theory being that it is owing to the sudden alteration in the mode of life which took place after the Civil War. It is argued, and with much show of reason, that the negro ought not as yet to be regarded as altogether responsible for his actions; that, when freedom came, he resembled a child who had not learned to take care of himself, and consequently plunged unthinkingly into vice and dissipation without counting the cost. Other students of the negro problem take a much sterner view of the case, and attribute the black man's sins to inbred viciousness. Of this number is Dr. Paul B. Barringer, of the University of Virginia, who gave an address on the subject before the Tri-State Association of Virginia and the Carolinas in Charleston, S. C., on February 20th. After referring to the cannibalistic propensities of the West Coast African negro of the present day, Dr. Barringer speaks of the American negro as follows:

"Thirty-five years have passed since the negro changed from the condition of a slave to that of a freedman. In every part of the South, it is the opinion of every man of unbiassed mind that the second generation is infinitely worse than the first. So patent is this that I would be tempted to doubt the sanity of any man, having fair opportunities to judge, who declared the reverse to be true. The question for us today, then, and the question of questions for the South is, 'What is the cause of the change, and what can be done to remedy the evil?' The first thing is to seek out the truth, however unpalatable it may be, and in my opinion it is very simple: The young negro of the South, except where descended from parents of exceptional character and worth, is reverting through hereditary forces to savagery. . . . Everything points to the fact that the phylogeny of the negro is carrying him back to barbarism; that the temporary elevation produced by the discipline of slavery is not being maintained by the efforts we have made at common-school education in the hands of his own race, and that we must at once, if we would save the negro and the South, try something else. I would finally urge that we try henceforth an education of trade or industrial type, given at the hands of well-chosen white teachers, who will teach him to respect, to obey, and to work. Under this, if experience be not fallacious, he will improve in morality, in character, and in capacity as a taxpayer."

This is the judgment of an educated Southerner in regard to the negro question, looked at from the moral standpoint, and as such is entitled to the close attention of thinking men. The Medical Record has many times called attention to the physical deterioration of the colored race on this continent, clearly owing to the insanitary conditions in which its members live. The matter is of the most serious importance, and yearly assumes a more ominous aspect. It is certain that steps must be taken to relieve the present situation.

SILVER WIRE AS SUTURE MATERIAL.

Silver wire is a material which has been used for a long time more or less extensively for suturing, and the qualities which have recommended it especially are strength, ease of sterilization, and permanence. These are obvious qualities, but only the second does not include some disadvantage. The disadvantage of great strength, perhaps small, consists in the fact that it is very easy to draw sutures of such material too tight, and thus cause tension which will give rise to a certain amount of tissue necrosis, no matter what the tissue. Furthermore, great strength in suture material is apt to make us depend too much on force to maintain apposition of surfaces, and to cause us to forget that the function of a suture is to keep surfaces in contact until cicatrization is well advanced or complete. Force does not assist this process. Permanence in a suture material does not appear entirely an advantage, but rather an unfortunate quality in a substance otherwise desirable. After a wound is completely healed, a suture remaining in the tissues is no longer a suture, it is a foreign body. In one of our prominent institutions, the Johns Hopkins Hospital, the use of silver wire is very general, and in a recent publication (1899), Johns Hopkins Hospital Reports Nos. 5 to 9, a series of operations for the radical cure of hernia, chiefly inguinal, is presented. The suture material for the superficial parts of the wound as well as the deep aponeurotic structures was, in this series of nearly three hundred cases, practically always silver wire, and the primary results in the wounds were almost invariably good. It has also been a frequent practice in that hospital to cover the completely closed wound with silver foil, copper foil having been tried and found irritating. When either of these metals was used in this way, it was found that its contact with the skin and the wound exudate produced actual antiseptic effects from the small amounts of metallic salts thus generated, and we are able from this experience to infer that silver wire used subcutaneously behaves in the same way. This quality, while useful in the foil covering the skin wound, is of no advantage in a suture entirely buried, for there is no difficulty in sterilizing silver wire, and there are no colonies of bacteria under the skin, as there are in it, to require post-operative attack with an antiseptic. We cannot think that silver wire is the suture *par excellence* in operations for hernia on account of its permanence, because the final result after these operations does not depend upon the firmness with which the aponeurotic and muscular structures are held together, but upon the completeness and promptness of the cicatrization, and the accuracy of apposition. Consequently non-absorbability is not an advantage and may be a distinct disadvantage. It is well known that non-absorbable foreign bodies may remain harmlessly under the skin for long periods, and then for some undiscoverable reason begin to cause trouble. Many of these Johns Hopkins cases have apparently carried their silver sutures for many months without annoyance, and may continue to do so for many more, but this does not alter the fact that future trouble is possible for them, even if improbable, something which is avoided if an absorbable suture is used. The difficulty of securing and sterilizing satisfactory absorbable sutures is familiar enough, but cannot be logically urged against the suitability of the suture when we have it properly prepared. We know that it is possible to get a sterile absorbable suture if we are careful enough, and we know also that such a suture is more desirable than one which remains in the tissues. We may, then, fairly conclude that a complete case is not made out for the silver suture, while the properly prepared absorbable suture seems unassailable.

STATE HOSPITAL FOR CONSUMPTIVES.

The universally recognized methods of treating pulmonary tuberculosis nowadays are by the common-sense ones of fresh air and diet. This mode of treatment is, however, by no means new, but was known and practised ages ago. The beneficial effects of an open-air life as a remedy in consumption is perhaps as old as civilization itself. Hippocrates' views on the matter would probably differ but little from those held by the foremost exponents of the modern sanitarium system. The Romans, too, had pronounced opinions as to the efficacy of fresh air in the treatment of phthisis. To the Germans belong the credit of introducing the isolation methods now in vogue everywhere, combining exposure to the open air with enforced diet. Dr. Brehmer, whose establishment at Goerbersdorf was founded in 1844, was undoubtedly the pioneer in this movement. His example has been largely followed in Germany, America, and elsewhere.

But these institutions are one and all for the benefit of persons in easy circumstancs. Up to quite recent times, says Dr. Goghill, writing in *The Nineteenth Century Magazine*, February, 1899, "no attempt has been made on the European continent, and, it may be added, nor in this country, to provide like resorts for the necessitous. In Great Britain, on the other hand, the position is reversed. No private sanatoria have existed until quite lately, but consumptive hospitals for the poor and needy have existed for long periods, and to them is probably due the remarkable decrease in phthisis that has taken place in England since a date corresponding to their establishment. Among the principal consumptive hospitals in Great Britain are Brompton, founded in 1841, 321 beds; Victoria Park in 1848, 164 beds; North London in 1860, 78 beds; The City Road Hospital in 1863, 75 beds; and the Royal National Hospital in Ventnor in 1869, 138 beds." It must, nevertheless, be understood that, although these establishments are solely for the benefit of the indigent, they are not supported by the state, but depend for their maintenance on public and private charity. If, therefore, Assemblyman Henry's bill to provide the City of New York with a hospital for the treatment of pulmonary tuberculosis, at the expense of the State, becomes a law, as it doubtless will, a new departure with regard to this disease will have been taken. The desirability, and, indeed, the need, of special hospitals for consumptives is obvious, for, leaving out of the question the danger such patients are in general hospitals as a source of infection, the fact should be considered that, while they themselves will benefit to an immeasurable degree by the change of treatment, they will also no longer be a burden upon institutions which can ill bear the extra pecuniary stress. The projected undertaking is in the nature of an experiment, the success of which will hinge mainly on the manner of its conduct. It is consequently incumbent upon those intrusted with the control of this institution that they proceed warily and discreetly, that they insist upon the medical staff being selected for their professional ability alone, irrespective of political considerations. Provided that this course is pursued, and if the good results anticipated from the system are justified by experience, it will be safe to predict that money expended in so worthy a cause will be readily forthcoming, and similar establishments will be erected in sufficient numbers to meet the requirements of the situation. The tentative effort of New York City to deal with its dependent consumptives will be watched with interest in all parts of the country.

A BOARD OF EXAMINERS IN MIDWIFERY.

A bill has passed both houses of the legislature of this State, authorizing the creation of a Board of Examiners in Midwifery in this city, composed of the assistant sanitary superintendents of the board of health. As representing the medical profession of the State, we have protested against the enactment of this measure, for the reasons, first, that the practice of midwifery, being a part of the practice of medicine, should be restricted to registered practitioners of medicine; the legalizing of this practice by others will tend to perpetuate a system which we hope in time to succeed in having abolished; and second, if by any train of circumstances it should be considered advisable to legalize this practice by other than registered physicians, we believe any act of legislature with this object in view should apply to the whole State, and not be restricted to one city or county. We believe, if midwives are to be examined and licensed, the work of examining them should be placed in the hands of the State board of medical examiners.

Examine for fish bones in the throat with the finger, since they are not always seen in the throat mirror.

News of the Week.

For a Free Dispensary. — By the will of the late Jacob Justice, who died recently in Philadelphia, his residual estate, amounting to about $60,000, is devised for the establishment of a non-sectarian dispensary for the treatment of the poor and the distressed, at Mt. Pleasant, Westmoreland County, Pa.

Philadelphia Pediatric Society.—At a stated meeting held April 10th, Dr. Alfred Hand, Jr., read a paper on "The Pathology of Congenital Heart Disease"; Dr. J. Dutton Steele one on "The Pathology of Acquired Heart Disease in Children"; Dr. F. A. Packard one on "The Symptomatology of Heart Disease in Children"; Dr. J. P. Crozer Griffith one on "The Diagnosis of Heart Disease in Children"; Dr. A. V. Meigs one on "The Prognosis of Heart Disease in Children"; and Dr. H. A. Hare one on "The Treatment of Heart Disease in Children."

Philadelphia County Medical Society.—At a stated meeting held April 11th, Dr. A. A. Eshner read for Dr. David Riesman the report of a case of elephantiasis of the leg, and exhibited the patient. The disorder was unilateral, involving more especially the leg, but also to a less degree the thigh. No known etiological factor could be elicited, nor did examination of the blood disclose the presence of filaria sanguinis hominis. Dr. Herman D. Allyn read a communication entitled "The Symptomatology and Diagnosis of Empyema, with a Report of Illustrative Cases," Dr. Joseph MacFarland one entitled "The Etiology and Pathology of Empyema," and Dr. Edward Martin one on "The Surgical Treatment of Empyema."

College of Physicians of Philadelphia. — At a stated meeting of the section on general medicine held April 9th, Dr. F. A. Packard presented intestinal casts from cases of mucous enteritis, and concretions of fat from a case of possible pancreatic disease. Dr. William G. Spiller presented a case of progressive bulbar paralysis and one of progressive spinal muscular atrophy, pointing out that in both the lesions involved the gray matter, in the one instance of the medulla oblongata and in the other of the anterior horns of the spinal cord. Dr. Spiller exhibited a specimen of spinal cord presenting a hard, flattened neoplasm in the cervical region, and reported a case of compression of the upper part of the cervical cord with unusual symptoms. Dr. C. W. Burr reported a case of Pott's disease presenting varying types of anæsthesia. Dr. M. Howard Fussell reported a case of myxœdema that had not been benefited by thyroid treatment.

Pathological Society of Philadelphia.—At a stated meeting held April 12th, Drs. S. Solis-Cohen and T. S. Kirkbride, Jr., presented communications entitled "Tumor of the Mediastinum and Bronchial Glands and of the Right Lung," "Metastasis in the Liver," "Rupture with Fatal Hemorrhage." During life the growth was thought to be a carcinoma, but on histological examination it was found to be a sarcoma. The liver weighed fifteen pounds, and death was due to spontaneous rupture of this organ. Dr. H. F. Harris read a paper entitled "Remarks upon the Pathological Alterations in Bubonic Plague," and he exhibited microscopic preparations of the diseased tissues. Dr. F. P. Henry exhibited a hydatid cyst of the liver. Dr. J. Walsh made a report of a pathogenic sarcina. Drs. J. M. Anders and Joseph McFarland presented a specimen of carcinoma of the stomach with perforation. Dr. Joseph McFarland presented a specimen of carcinoma of the stomach. Dr. S. Solis-Cohen presented a specimen of valvular disease with hypertrophy of the heart and healed hemorrhagic infarct in the spleen.

The American Dermatological Association will hold its twenty-fourth annual meeting at the Hotel Gordon, Washington, on May 1st–3d, in connection with the fifth triennial session of the Congress of American Physicians and Surgeons. The president is Dr. Henry Weightman Stelwagon, of Philadelphia.

The Pennsylvania Society for the Prevention of Tuberculosis, at its eighth annual meeting held at Philadelphia on April 11th, elected the following officers: *President*, Dr. Guy Hinsdale; *Vice-Presidents*, Drs. H. S. Anders, J. Solis-Cohen, and S. A. Knopf, and Messrs. William Moss, Moses Veale, and Walcott Williams, Miss E. W. Redfield, and Mrs. Helen C. Jenks.

State Hospital for Consumptives. — Governor Roosevelt has appointed the following trustees of the New York State Hospital for the Treatment of Incipient Pulmonary Tuberculosis, which is to be established in the Adirondacks: Howard Townsend, of Manhattan, for the term of five years; Dr. John H. Pryor, of Buffalo, for four years; Dr. Willis G. Macdonald, of Albany, for three years; Walter Jennings, of Manhattan, for two years; Frank E. Kendall, of Saranac Lake, for one year. A preliminary appropriation of $50,000 has been made to establish the hospital, which will cost in the neighborhood of $200,000. The hospital is to be established in the Adirondacks, upon a site to be approved by the State board of health and the State forest preserve board. The trustees are to purchase a thousand acres as a site for the hospital, and the State forest and preserve board is to set apart a like amount of State lands for such purposes.

The Tenement-House Commission, recently appointed by Governor Roosevelt, is constituted as follows: Messrs. Raymond T. Almirall, of Brooklyn; Hugh Bonner, of Manhattan; Paul D. Cravath, of Manhattan; Robert W. De Forest, of Manhattan; William A. Douglas, of Buffalo; Otto M. Eidlitz, of Manhattan; F. Norton Goddard, of Manhattan; William Lansing, of Buffalo; William J. O'Brien, of Manhattan; James B. Reynolds, of Manhattan; I. N. Phelps Stokes, of Manhattan; Myles Tierney, of Manhattan; Alfred T. White, of Brooklyn; and Dr. George B. Fowler, of Manhattan. The duty of the commission is to make careful examination into the tenement houses in New York and Buffalo; their condition as to the construction, healthfulness, safety, rentals, and the effect of tenement-house life on the health, education, savings, and morals of those who live in tenement houses, and all other phases of the so-called tenement-house question in these cities that can affect the public welfare. An appropriation of $10,000 is made for the expenses of the commission, which may subpœna and compel the attendance of witnesses, employ counsel, assistants, and experts, and make such recommendations to the next legislature as it deems wise, to enable the best and highest possible condition for tenement-house life in New York and Buffalo to be attained.

Incorporation of the New York State Medical Association.—The governor has signed Dr. Henry's bill incorporating the New York State Medical Association for the purpose of the cultivation and advancement of the science of medicine, the promotion of public health, and the establishment of a death benefit fund for the dependents of its members.

The Marine-Hospital Service.—A board of officers will be convened at the Service Building, 378 Washington Street, New York City, Wednesday, May 23, 1900, for the purpose of examining candidates for admission to the grade of assistant surgeon in the United States Marine-Hospital service. Candidates must be between twenty-one and thirty years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to character. The following is the usual order of the examination: (1) Physical; (2) written; (3) oral; (4) clinical. In addition to the physical examination candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on a cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. After five years' service, assistant surgeons are entitled to examinations for promotion to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade. Assistant surgeons receive $1,600, passed assistant surgeons $2,000, and surgeons $2,500 a year. When quarters are not provided, commutation at the rate of $30, $40, or $50 a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, ten per centum in addition to the regular salary for every five years' service up to forty per centum after twenty years' service. The tenure of office is permanent. Officers travelling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address Supervising Surgeon-General, United States Marine-Hospital service, Washington, D. C.

The Texas State Medical Association.—The thirty-second annual meeting of this society will be held at Waco on April 24th, 25th, 26th, and 27th, under the presidency of Dr. A. B. Gardner, of Bellville.

A New Hospital, constructed and equipped on modern lines, was dedicated at Phœnixville, Pa., on April 14th. The building is one hundred and two feet deep by one hundred and fifteen feet long, five stories high, contains sixty-seven rooms, and cost about $50,000.

The Drug Clerks' Bill.—Governor Roosevelt has signed the bill providing for shorter hours for the drug clerks in the city of New York, and for the inspection of drug stores by the local board of health. Under its provisions drug clerks are prohibited from sleeping in the stores or in apartments connecting with the stores.

The International Medical Congress.—The three general sessions of the Paris Congress will be held in the large amphitheatre of the Sorbonne. As this hall accommodates only three thousand persons it is feared that many of the members will be excluded from the opening session. At the two subsequent sessions the difficulty will probably be to secure an attendance large enough to compliment the orators.

Mothers and Babies' Hospital, New York.—Mrs. Howard Gould has equipped an operating-theatre for this hospital which will seat an audience of one hundred and twenty students. This will be a very desirable addition to the teaching facilities of this growing institution, as obstetric clinics are now being held there in connection with four of the medical colleges of this city.

The Cartwright Lectures.—The first of the Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons, Columbia University, was delivered at the Academy of Medicine on April 18th. The subsequent lectures of the course will be on April 24th and 26th. The subject is "The Discovery of the Nerves and of their Function," and the lecturer is Prof. John G. Curtis, M.D., of Columbia University.

A Relief Ship for India.—A joint resolution of Congress adopted in 1897 authorized the Secretary of the Navy to charter two ships, one on the Atlantic and one on the Pacific coast, to carry relief supplies to India. One ship was sent from San Francisco, but it was decided to sell the supplies intended to go from New York and transmit the money obtained by that means. Recently application was made to the government to charter a ship from New York to take a large quantity of supplies awaiting shipment from this port. The treasury officials have decided that the authorization of 1897 has not lapsed, the famine still existing, so an order has been issued to charter the vessel.

Dr. Francis M. Banta, who was dismissed from his position as surgeon in the fire department in September, 1898, has been reinstated by the supreme court. The dismissal was made by the fire commissioner without cause or charges, after Dr. Banta had served more than three years.

The Fatality of Influenza still continues, forty-six deaths from this cause being reported to the Philadelphia bureau of health for the week ending April 14th. Diseases of the respiratory tract were responsible for a large proportion of the whole number of deaths. Thus, 134 were due to pneumonia, 9 to congestion of the lungs, 53 to pulmonary tuberculosis, 15 to bronchitis. In addition 47 deaths were due to disease of the heart, 28 to convulsions, 36 to nephritis, 24 to apoplexy, 22 to measles, 21 to old age.

The Pretoria Red Cross.—The chairman of the American committee to aid Red Cross work within the Boer lines in South Africa has received a letter from a member of the committee, who is in the Transvaal, in which it is stated that Pretoria Red Cross is in great need of medicines, instruments, wagons, etc., and the committee is asked to send money for supplying those necessities directly to the Red Cross authorities in Pretoria. The treasurer of the committee is Mr. T. G. Bergen, 55 Liberty Street, New York.

The Spitting Nuisance.—An effort is being made by the sanitary superintendent of the board of health in Brooklyn to enforce the law against spitting on the floor of elevated and trolley cars in that borough. There are notices in the cars there, as there are here, but hitherto the law has been ignored there, as it is still in Manhattan. The penalty for spitting on the floor of a public conveyance is a fine of from $1 to $250. In Paris a law has recently been passed forbidding spitting in public places, and our London contemporaries are lamenting that no such rule exists there. It is, however, better to have no law at all than to have it so persistently defied as it is in New York.

The New York State Board of Charities, at its annual meeting on April 12th, re-elected Mr. William Rhinelander Stewart, of New York City, as its president for the eighth consecutive term, and Dr. Enoch V. Stoddard, of Rochester, as vice-president for the sixth consecutive term. The incorporation of the following institutions was approved by the board: The Dobbs Ferry Hospital Association; the Maronite Benevolent Society of New York City; Guild for Crippled Children of the Poor of New York City; House of Calvary, New York City; Ladies' Hebrew Benevolent Association of Greenpoint; Hebrew Ladies' Relief Association of Rochester, and the Corning Hospital. The board also approved plans for a hospital for both the Monroe and Onondaga county almshouses and plans for small buildings at the Craig Colony and Western House of Refuge, as well as plans for building improvements by the Brooklyn Charities' Department. Dispensary licenses were granted to the following institutions: The Vanderbilt Clinic, Sixtieth Street and Amsterdam Avenue, New York City, and Dispensary of Loomis Sanitarium for Consumptives, City Branch, 104 West Forty-ninth Street, New York City.

Yellow-Fever Ships in Port.—Deaths from yellow fever occurred on several steamships arriving here recently from Brazilian ports. Quarantine against vessels from Cuba has already been established in the southern coast cities.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending April 14, 1900. April 11th.—Passed Assistant Surgeon F. W. Olcott ordered to duty at the naval recruiting rendezvous, Philadelphia, Pa.

The Hospital Saturday and Sunday Collection.—The collections of the Hospital Saturday and Sunday Association for this year amount to more than $74,000, nearly $4,000 above last year. The Woman's Auxiliary collected over $9,000. The books are now closed, and the money collected will be distributed among the hospitals soon.

Hospitals for Animals in Central Park.—A hospital for sick horned animals is being constructed between the deer paddock and the east bridle path in Central Park. The building will contain four stalls. Another hospital for invalid lions, tigers, and other caged animals is to be put up in another part of the menagerie.

Damages for a Dislocated Kidney.—A man and his wife have obtained a verdict of $10,000 against the Pennsylvania Railroad Company in the New Jersey supreme court, for injuries received by the woman while on a train. A jolt occasioned by attaching a new car to the train threw the woman down, and her physician testified at the trial that the accident was the cause of a movable kidney from which she suffered. The court awarded the woman $8,000, and her husband $2,000 for the loss of her companionship.

The Plague.—In Sydney, N. S. W., one hundred and eleven cases of bubonic plague and thirty-eight deaths had occurred up to April 13th. A death from the disease has been reported from Fremantle, a town of Western Australia, at the mouth of the Swan River, twelve miles south of Perth.—Several cases of plague have occurred at Cawnpur, in the Northwest Provinces, India, not far from Lucknow. The natives opposed the sanitary measures instituted, and a riot took place. The segregation camp was burned, and ten persons were killed. The rioters killed five constables and threw their bodies into the burning camp. It was necessary to call out the garrison and volunteers before order was restored.

The State Orthopedic Hospital.—Governor Roosevelt has signed the bill establishing the New York State Hospital for the care of cripples and deformed children in or near New York City, and appropriating $15,000 therefor. The governor has also appointed a board of managers for the institution, as follows: To serve for six years, Dr. Newton M. Shaffer; four years, Right Rev. Henry C. Potter and Mr. J. Hampden Robb; two years, Messrs. J. Adriance Bush and George Blagden, Jr. Dr. Shaffer is also appointed surgeon in chief of the hospital.

A Death from Hydrophobia occurred recently at St. Vincent's Hospital. The man was bitten by a St. Bernard dog on March 9th, and appeared to be well until April 7th, when he began to suffer from depression, and soon symptoms of rabies appeared and he rapidly succumbed.

Obituary Notes.—DR. GEORGE H. CONKLIN, the oldest physician in Suffolk County, died April 12th at Babylon, N. Y., at the age of eighty-nine years.

DR. EDWARD MULHERON, of Binghamton, N. Y., died at his home in that city April 6th, aged fifty-three years. He was a graduate of the medical department of the University of Buffalo in 1872.

DR. JOHN STIRLING BIRD, of Hyde Park, Dutchess Connty, died April 3d of pneumonia. He was born in Winchester, Conn., August 29, 1836. He was a graduate of the College of Physicians and Surgeons in this city in the class of 1863, and opened an office in Hyde Park for the practice of his profession in 1865. He was a member of the Dutchess County Medical Society.

DR. THOMAS R. HOSSIE, of Gouverneur, N. Y., died on April 14th, at the age of forty-one years. He was a graduate of Queen's University, Kingston, Ontario, in 1878. He was a prominent Mason.

DR. FRANK D. KIMBALL, twenty-four years old, for two years house surgeon of the City Hospital on Blackwell's Island, died April 12th at the New York Eye and Ear Infirmary of suppurative meningitis following influenzal mastoid disease. Dr. Kimball was a graduate in arts of Dartmouth College and in medicine of the New York University Medical College in the class of 1898.

DR. THOMAS FRANCIS ROCHE, for fourteen years resident physician at Deer Island, Boston harbor, died at his home in East Boston, April 8th, at the age of thirty-seven years. He was graduated from the Bellevue Hospital Medical College, New York, in 1883.

DR. CHARLES C. EASTMAN, assistant manager of the Binghamton State Hospital, died April 12th. He was a graduate of the Geneva Medical College in 1866, and had been connected with the hospital since it was opened in 1881.

DR. ROBERT F. CUNNION, of Brooklyn, died suddenly on April 7th, at the age of thirty years. He was a graduate of the College of Physicians and Surgeons, New York, in the class of 1892.

REV. ALFRED YOUNG, a Roman Catholic priest, and one of the founders of the Paulist community in this city, died on April 4th. He was born in Bristol, England, on January 21, 1831, and when seven years old he was brought to this country by his parents. He was graduated from Princeton University in 1848 and entered the medical department of the University of New York. From there he was graduated in 1852. He then began practice, but a year later abandoned it to study for the priesthood.

DR. WILLIAM HENRY STUART died at his home in Norwich, N. Y., on April 8th, at the age of fifty-nine years. He was a graduate of Albany Medical College in 1861, and served as surgeon of New York volunteers during the civil war. At the close of the war he began practice in Ellenville, and in 1871 removed to Norwich.

DR. FRANCES C. HATCHETTE died at Philadelphia on April 13th, at the age of forty years. She studied medicine in the Harvard Annex and did post-gràduate work in Philadelphia.

SIR WILLIAM OVEREND PRIESTLY, member of the House of Commons for Edinburgh and St. Andrew's Universities, died in London on April 11th. He was born in 1829, and was a grand-nephew of Joseph Priestly, the celebrated chemist. He was M.R.C.S. in 1852, M.D. Edin. in 1853, and F.R.C.P. Edin. in 1858.

DR. ISAAC C. HARING, of West Nyack, N. Y., died April 16th. He was a graduate of the Albany Medical College in the class of 1850, and had practised in Rockland County for half a century.

Progress of Medical Science.

New York Medical Journal, April 14, 1900.

Remarks on Perineorrhaphy, Chiefly in Reference to the Mechanics of Deep Sutures.—J. M. Mabbott maintains that in order to perform this operation properly the suture should be introduced so as to be elliptical with its long axis transverse. If we use sutures passing beneath the deep angle of the wound, we must carry them so far out to the sides that they will include enough tissue for each suture to be drawn to a circular form without crowding the lacerated surfaces out of their natural relations to each other and surrounding parts. The more deeply we carry the suture toward the sides of the pelvis the more traction we shall secure in the right direction—toward the median line. And until such a suture approaches a circular shape, it will not only be drawing the sides together, thus holding the lacerated surfaces in forcible coaptation, but it will at the same time have some tendency to bulge the cutaneous vaginal and rectal surfaces away from each other, thus giving a thick, firm perineal body.

Ankylostomiasis in Puerto Rico.—B. K. Ashford reports upon twenty cases of the severe form of anæmia seen in the island, giving in detail the typical family history, the previous history of the patient, subjective and objective symptoms. Observations show that these conditions are due to an intestinal parasite known as the ankylostoma duodenale. Thymol in large internal dose seems to be an efficient anthelmintic. Examination of the blood showed a severe anæmia, falling as low as that of Addison's disease in count of red cells, a low hæmoglobin average, and a very low color index; an occasional eosinophilia, no leucocytosis common to the disease itself, frequent presence of normoblasts, and in some instances megaloblasts but never a majority of the latter, and commonly poikilocytosis. Blood foods are utterly unreliable without the removal of the cause, viz., the ankylostoma.

A Few Experiments in Transfusion of Complete Blood.—From experiments of transferring blood from a chicken to a rabbit, A. D. Hard found that the temperature of the latter was increased. The same result followed transfer from sparrow to guinea-pig, but from land turtle to guinea-pig the temperature of the latter was diminished. In all three instances it was some days before the normal temperature was restored. Results are also given of transferring blood from a goat to the author's own veins, which produced an increase in red and white blood cells and in hæmoglobin percentage. Subjectively the author noticed a "peculiar mental acuity and facility of thought processes accompanied by undue exuberance of spirits of an optimistic nature."

Books are Injurious to the Eyes.—F. G. Murphy discusses what may be called the mechanics of reading with reference to the angle of vision, the direction from which the light falls on the printed page, and the differences in the mechanical problems presented by books and newspapers, the wide page of the book causing greater strain on the eyes than the narrow column of the newspaper.

A Report of Gunshot Cases in the Spanish-American War, and Deductions Therefrom.—By W. C. Borden.

Primary Diffuse Small-Celled Sarcoma of the Parietal Pericardium.—By J. C. Williams.

Boston Medical and Surgical Journal, April 12, 1900.

Folie à Deux.—Arthur C. Jelly writes of communicated insanity, cases of which, he says, are very rare. Heredity is the most important etiological factor. Women are affected more than men. The young and the aged are most liable to the infection. Two groups show clearly the effects of contagion: (1) Where A, who is insane, infects with the same disorder of mind B, who was previously sane; (2) where A, who is insane, infects with the same disorder of mind B, who was already insane. In other cases it is doubtful how much of the disturbance is due to actual contagion, for example: (1) Where A and B, living together, suffer simultaneously from the same form of insanity due to the same causes; (2) where B becomes insane from association with A, not necessarily because he accepts A's morbid ideas, but in consequence of the shock produced by the news, or of the pain felt on witnessing the attack, or of the continued strain due to nursing the patient. The author gives illustrative cases. Separation is the best treatment.

The Use of the Angiotribe.—J. Riddle Goffe claims that with the use of this instrument the blood-vessels are better controlled than with forceps, and more space is gained to work in. There is no protrusion of forceps handles, no removal of forceps with perhaps attendant hemorrhage. Convalescence is smooth and comfortable, and there is less pain than by the use of forceps or ligatures. The angiotribe is superior to forceps in that it is more easily and quickly applied, and is attended by less discharge during convalescence, whether the ligature used is catgut or silk. In the author's opinion the angiotribe has a field of application in dealing with hemorrhoids, and he believes that it will be proved to be superior to the ordinary clamp and cautery.

A Case of Intestinal Obstruction from a Hair-Ball.—G. W. W. Brewster reports a fatal case of a girl from whom a hair-ball three and one-half inches long and four and one-half inches in circumference was removed from the small intestine. She had had the habit of chewing her curls.

Hair-Eating Children and Convulsions.—Frederick Lyon was called to see a child in convulsions, and learning that it had a habit of swallowing hair or fibre from blankets, carpets, shirt, etc., gave it calomel. A ball of hair was passed and the convulsions ceased.

The Problem of Boston's Insane.—By Philip Coombs Knapp.

The Work of the Trustees of the Boston Insane Hospital.—By Henry C. Baldwin.

Philadelphia Medical Journal, April 14, 1900.

The Control of Hemorrhage in Penetrating Wounds of the Chest.—Robert G. LeConte formulates the following rules of action in case of penetrating wounds of the thorax: When the wound of the lung is giving only slight hemorrhage, close the external wound with gauze and watch for the physical signs of bleeding. When the hemorrhage is more marked, open the chest, insert a small drainage-tube, and regulate the admission of air according to the difficulty of respiration in the patient. When the hemorrhage is large and its symptoms are alarming, open the chest and insert a large drainage-tube, so as to form a rapid and complete pneumothorax, and at the same time, when necessary, inject salt solution into a vein. When this does not control the hemorrhage, resect one or more ribs, and deal radically with the bleeding. In severe hemorrhage from a lung, the first object of treatment should be to get pressure on that lung. By opening the chest, air will do this as well as blood in the pleura; it will do it instantly instead of waiting until a sufficient amount of blood has been poured out; it will save to the patient the amount of blood necessary to exert this mechanical pressure; it will permit the vessels to close by clots; and the remote benefits are that it eliminates the dangers of a pyothorax or of universal adhesions of the pleura.

A Peculiar Manifestation of Uræmia.—Frederick Krauss reports the case of a woman who had several attacks of convulsions followed by coma. There was conjugate deviation of both eyes to the left, and the twitchings were on this side; the right side seemed paralyzed. The woman was a stranger to him, but suspecting uræmia he catheterized her and examined the urine. It was apparently normal, containing no albumin and having no sediment. The woman died soon after the writer saw her, and at the autopsy the kidneys were found to be the seat of nephritis. The brain was slightly œdematous and congested, as it frequently is in uræmia, but there were no gross lesions and no fracture of the skull. The only lesions that could possibly have caused the symptoms observed and death were those of the kidneys.

A Case of Death from Psychic Insult.—E. Pagenstecher reports the case of a manufacturer, fifty-one years of age, in apparent mental and physical health, who cut his finger slightly when sharpening a pencil and then accidentally soiled the wound with ink. He was greatly alarmed, fearing blood-poisoning, and begged his physicians to amputate the arm. He complained of pains in the arm, and fainted. The following day he was delirious, and he died thirty-two hours after the receipt of the injury. The cause of death was difficult to determine, but as there was marked concentric hypertrophy of the left ventricle it was thought possible that cardiac insufficiency may have been the immediate cause of the fatal ending.

Selections from the Lane Lectures. By T. Clifford Allbutt.

A Case of Malarial Fever.—By Albert Woldert.

Abdominal Pregnancy.—By Center.

Medical Press and Circular, March 28, 1900.

Infantile Insanity.—Walter Bernard thinks the family physician, holding as he does the key to the family pedigree and ancestral history, and by reason of his opportunities of observation before mental action and mentation are evolved, is in a position to control inherited conditions. Reformatory influences must commence at home. The earliest possible diagnosis is of vital importance. Peculiarities and disordered states of the faculties can at this period be blotted out.

Cases of Skin Disease.—Alfred Eddowes presented a girl with lupus of the face simulating verruca necrogenica requiring surgical treatment; also a case of lupus erythematosus of the scalp of twelve years' duration with horny plugging of the hair follicles, showing beginning butterfly-forms on the face. The third case was that of a girl recovering from leucoderma. The writer believes the disease curable by drugs, but refrains from mentioning what line of treatment he pursues.

Acute Inflammation of a Subperitoneal Fibroid.—Dr. Walter relates the case of a patient four months pregnant, who five days before admission had been seized with pain in the abdomen. A hard tumor was felt on the left side. An exploratory incision revealed a subperitoneal fibroid the size of an orange attached to the left and front part of the fundus. Rapid recovery took place. There had been no miscarriage up to the time of the report.

Some Cases of Gynæcological Surgery.—By E. Stanmore Bishop.

Surgery of the Stomach.—By A. Mayo Robson.

Journal of the American Medical Ass'n, April 14, 1900.

Some of the Aspects of Renal Inadequacy from a Neuropathic Standpoint.—H. A. Tomlinson reports two cases. He considers the following conclusions warranted by our study of the clinical aspects of renal inadequacy during the past five years, supplemented by the uranalysis and post-mortem verification of the deductions made: Renal inadequacy as a temporary condition, not necessarily dependent upon histological changes in the kidney structure, is quite common, especially during adult life and after. There is definite clinical evidence that in some people renal inadequacy is congenital and dependent on limited potentiality—usually nervous. The amount of the total solids in the urine, or the presence or absence of albumin or casts, furnishes no direct evidence of impending uræmia, but the relative proportion of the solid constituents to each other does furnish such evidence.

Use of Atropine Sulphate as a Means of Diagnosis in Certain Persistent Headaches.—Otto Landman says that the headaches which are most frequently produced by ocular defects are situated, as to their frequency, in the following regions: supraciliary, occipital, occipito-frontal, vertex, and temporal; and his conclusion is that when a persistent headache situated in any of these localities disappears on the instillation of atropine, the case is probably due to eye strain, and can be remedied by proper glasses. To obtain the result, the atropine must be pushed to the complete suspension of accommodation. The directions for use are as follows: A solution of gr. ¼ of sulphate of atropine to ʒ ii. of water, three drops in each eye, three times a day, until ten instillations have been made.

Dosage in Chloroform Anæsthesia.—A. S. v. Mansfelde speaks of the responsibility of anæsthetizers and the partisan spirit of controversy as to the relative value and safety of anæsthetics. The writer says that to obtain the full value of an anæsthetic it is quite necessary that the ingredients be in the form of a vapor, to be inhaled by the patient in exactly measured quantities in a given time, and diluted to a known strength with air. He describes the apparatus of Professor Geppert, which claims to meet these requirements, and which this author believes will furnish the ideal solution of the problem for the future.

Shoulder-Humero-Scapula Articulation.—In a paper with this title Thomas H. Manley concludes a review of some complications and sequelæ attending or following reducible or irreducible dislocations, together with various modern operative measures now employed for their treatment.

Symposium on Serum Therapy.—Papers read at a meeting of the New York County Medical Association, reported in the Medical Record of April 7, 1900.

Report of a Successful Case of Excision of the Cæcum, with End-to-End Anastomosis.—By Frederick Holme Wiggin.

Medical News, April 14, 1900.

Ligation of the First Portion of the Right Subclavian for Aneurism of the Third Portion.—In this case, reported by A. E. Halstead, the aneurism involved the entire third portion of the subclavian and encroached slightly upon the second portion, so that the only rational method of treatment was ligation of the first part. The ligatures employed were of formaldehyde catgut. The author says that probably the most important factor in securing favorable results in these cases is the preservation of an aseptic condition of the wound. As regards the results thus far obtained in the ligation of the first portion of the right subclavian, the writer believes this case to be the second on record in which the patient survived the operation.

Two Cases of Recurrent Tubal Pregnancy.—Philander A. Harris reports these two cases, in each of which abdominal section was performed twice, resulting in good recoveries. The writer says that cases of ectopic gestation recurring in the same individual are, no doubt, rare. He refers to four other cases, three of which are reported by Kelly.

Recent Advances in the Treatment of Insomnia.—By Reynold Webb Wilcox.

Purulent Meningitis: Report of Six Cases.—By L. Napoleon Boston.

The Legislation Needed in Regard to Apparent Death.—By Henry J. Garrigues.

British Medical Journal, April 7, 1900.

The Gelatinous Form of Sodium Biurate and its Bearing on the Treatment of Gout.—Arthur P. Luff has studied the action of various drugs upon the sodium biurate in the blood, and formulates the following conclusions: (1) The sodium salts accelerate the conversion of the gelatinous biurate into the less soluble crystalline variety; (2) potassium salts delay the conversion of the gelatinous biurate into the crystalline form, and when the conversion is once started it is slowed by the presence of these salts; (3) lithium salts do not delay the initial conversion of the gelatinous biurate, but when the conversion is once started it is slowed by the presence of these salts, and especially by the carbonate; (4) piperazin does not delay the initial conversion of the gelatinous biurate, and but slightly slows the conversion when once started; and (5) lysidin delays the conversion of the gelatinous biurate into the crystalline form, but when the conversion is once started it has practically no effect in slowing it. From the results of the experiments it appears that in the treatment of gout the potassium salts are the most useful, the lithium salts rank next, and piperazin and lysidin are not nearly so useful. These results, the writer says, are in accord with his clinical experience.

The Action of Various Drugs and Diets on the Excretion of Nitrogen in Gout.—William Bain records the results of a number of dietetic experiments in a gouty subject. The diets were as follows: Fixed Diet—Cacao 1 pint, tea 2 pints, milk 1 pint, tea cake 2 oz., bread 11 oz., butter 1 oz.; dinner, 1 lb. 6 oz., including 4 oz. of meat and 1 apple. Vegetable Diet—This consisted to a large extent of peas and beans. Milk 1½ pints, oatmeal porridge ½ pint, pea soup ½ pint, peas porridge ½ pints, bread 11 oz., butter 1 oz., peas, beans, and other vegetables 1 lb. 8 oz. Animal Diet—Milk 1½ pints, lemonade 1 pint, meat 10 oz., bread 10 oz., butter 1 oz., potatoes 4 oz., and 1 apple. In addition to being dieted, the patient took the same amount of exercise each day. The excretion of uric acid, phosphorus pentoxide, and alloxur bases was greatest while the man was on the vegetable diet, and least when he was on the fixed diet. The administration of guaiac caused a marked and of colchicum a slight increase in uric-acid excretion.

A Note on the Telephone Probe.—J. C. Ogilvie Will says he made use of a telephone probe for the location of a bullet in a patient at the Aberdeen Royal Infirmary thirteen years ago. The employment of the instrument was suggested by Mr. McKenzie Davidson.

When is Cancer Cured?—George Elder reports cases of recurrence of cancer *in loco* or in a distant part five and eighteen years after removal. He also reports the case of a woman dying of pulmonary disease in 1899, who had had an atrophic cancer of the breast since 1880.

Puerperal Eclampsia in a Patient Aged Fifteen Years; Recovery.—By D. R. G. Corrigan.

Incomplete Inversion of the Uterus.—By J. H. Wilson.

An Operation for Complete Atresia Vaginæ.—By J. M. Cotterill.

Practical Observation on Cancer of the Breast.—By Sir William Banks.

The Typhoid Bacillus and Typhoid Fever.—By P. Horton-Smith.

Some Cirrhoses of the Liver.—By W. B. Cheadle.

The Lancet, April 7, 1900.

Practical Observations on Cancer of the Breast.—In the third Lettsomian lecture Sir William Banks reviews the various stages of development of the parasitic and infective views of cancer. He believes that as yet there is no clear and indisputable proof of its infectivity, and that any strong statements to that effect, or to the effect that surgeons infect wounds by disseminating cancer products through them by operation, are not justified. On the other hand the results of recent study render it impossible to dispose of this phase of the cancer question lightly. The present is not the time for positive assertion in this regard. Rather should we patiently experiment and carefully collate facts for future judgment.

Some Cirrhoses of the Liver.—In the second Lumleian lecture W. B. Cheadle considers several of the associated lesions such as degeneration of heart muscle, concurrent interstitial fibrosis of other organs, and the liability to erysipelas and tuberculosis. He believes that the lines of distinction between the various forms of cirrhosis are at present too rigidly drawn, and that, as at present laid down, they hold good only with regard to typical examples. Favorable condition are, first, the enlargement of the liver; second, good nutrition, and third, youth. Even some of the cases directly referable to alcohol and syphilis do surprisingly well.

A Parasitic Crustacean as a Foreign Body on the Cornea.—R. D. Batten reports the case of a fishmonger who probably rubbed his eye after handling fish. The parasite was of the variety known as "caligus curtus."

The Uses of Oxygen Inhalation.—P. G. Lodge gives his personal experience with this remedy in various pulmonary affections. He believes in using it intermittently so as not to set up a dangerously protracted state of apnœa.

A By-Result of Vaccination.—W. G. Mortimer vaccinated a man who had been greatly troubled with warts around the nails and on the chin. Four days after inoculation the warts began to diminish, and in a short time they had entirely disappeared.

Concurrent Pneumonia, Diphtheria, and Typhoid Fever.—This unusual combination of maladies occurred in a soldier under the care of D. Harris; recovery took place.

Typhoid Fever of Prolonged Duration.—H. E. Belcher narrates the history of a case in which the temperature did not reach the normal until the one hundred and fifth day of the disease.

Remarks on the Physical Signs of Pulmonary Disease.—By P. H. Pye-Smith.

The Surgical Treatment of Dilatation of the Stomach.—By L. A. Bidwell.

Münchener medicinische Wochenschrift, March 27, 1900.

Epigastric Hernia.—Eichel says that epigastric hernia occurs between the xiphoid process and umbilicus, mostly in the middle line but occasionally a little to the right or left. It produces a tumor of varying size, usually as large as a hazelnut. Its causation, diagnosis, and treatment are discussed at length.

Nervous Disturbances of the Heart in their Relation to Military Service.—J. Bauer concludes that all young men with functional cardiac disturbances are by no means unfit for military service; on the contrary, for some the gradual strengthening of the heart muscle acts as a direct cure.

Tuberculosis.—Henkel advocates puncture of the lung in order to find the tubercle bacilli in the incipient cases. He maintains that the earliest physical signs are auscultatory, and are heard over the supra- and infra-spinatus regions.

Operation upon the Heart after Pistol Wounds.—Carl Stern describes a case in which he followed the typical operation of Rother with a fatal result. The diagnosis and indications for interfernce are also discussed.

Pseudomucin in Ovarian Cysts.—By Zängerle.

Agglutinin.—By Hahn and Trommsdorff.

Addison's Disease.—By L. Huysmans.

Berliner klinische Wochenschrift, March 26, 1900.

Diagnostic and Therapeutic Significance of Tubercle Bacilli and Other Bacteria in the Sputa.—L. Brieger corroborates the statements of Fraenkel as to the diagnostic value of tuberculin when properly employed, and calls attention to the necessity of determining at the earliest possible moment the existence (if present) of mixed infection. This is shown by the occurrence of fever (for pure tuberculosis is essentially an afebrile disease) and by the presence of various micro-organisms in the expectoration. This mixed infection frequently appears as a lobular or even lobar pneumonia, producing the presence in the sputa of staphylococci, streptococci, and pneumococci. The later stage of pulmonary tuberculosis therefore becomes a chronic sepsis. The condition is still more rapidly accelerated by the occurrence of the influenza bacillus in the lungs. Various other organisms have been found, as for instance the bacillus pyocyaneus. Much of the evil from this mixed infection can be averted or lessened if vigorous measures are instituted early in the course of the disease.

Etiology and Operative Radical Treatment of Genuine Ozæna.—Nöbel and Löhnberg conclude a series of articles by advancing the following propositions: (1) By far the greater number of cases of nasal purulent discharge appearing as ozæna are referable to affections of the sphenoid and ethmoid sinuses. (2) Fetor, atrophy, and crust formation as expressions of pus in the nose can be produced by a number of causes, but as a rule are referable to purulent foci in sphenoid and ethmoid. (3) A rational treatment of ozæna in any given case can be expected only upon the discovery of its primary cause. (4) Since these causes are mostly sphenoidal or ethmoidal in origin, the therapy of ozæna must be a surgical one or it will be without result.

The Development of the Theory of Inflammation in the Nineteenth Century.—Ponfick discusses in this final paper the causes of inflammation, especially in the light of the establishment of the science of bacteriology. He defines inflammation as "a disturbance which, produced by an overthrow of tissue balance, associated with a change in the vessel walls, consists in an exudation of fluid and solid blood elements, and is regularly accompanied by formative and frequently by degenerative changes in the cells of the basement substance."

The Diagnostic and Prognostic Significance of the Diazo Reaction in Phthisical Patients.—Michealis finds that a positive reaction to this test in pulmonary tuberculosis signifies a bad prognosis. Out of 167 cases, 56 gave a negative and 111 a positive reaction. Of the former group, 5 patients were cured, 44 improved, 5 unchanged, and 3 died. Of the latter group none were cured, 15 improved, 13 not improved, and 80 died.

Local Anæsthesia and Narcosis.—C. L. Schleich makes a plea for the more general employment of local anæsthesia, showing that many operations thought to require general anæsthesia can be done under local methods as at present elaborated.

La Riforma Medica, March 19, 20, and 21, 1900.

The Disinfection of the Nasal Cavity with Certain Essences and Essential Oils.—A. de Simoni initiated a series of experiments upon animals in order to ascertain what substances would destroy certain germs in the nasal cavity, and at the same time prove innocuous to the mucous membrane. He reaches the conclusion that pure essences are so decidedly curative in grave lesions of the mucosa as to justify their more extensive use in the field of rhinology. Disinfection by means of volatile essences is the most thorough, and the most practicable. They are less toxic than dilute solutions of bichloride, carbolic acid, etc., and at the same time they stimulate activity of the mucosa and accelerate the healing of the epithelial cells.

Congestion of the Liver from Mercury Poisoning.—Angelo Lisanti writes of the effect upon the liver of mercury in men who use it in their work, as well as in syphilitics who have long taken it therapeutically. In a large number of cases he has found it sensitive to pressure and painful, with smooth surface and increased in size. Rapid modifications in its size occur, and coincide with crises of polyuria and albuminuria. Subjectively there are sensations of fulness and tension in the epigastrium and right hypochondrium, with pain radiating to the right shoulder, and increased by respiration or movement of the body. Suspension of mercurial treatment will cause a cessation of the liver congestion in two or three weeks.

Revue de Médecine, March 10, 1900.

Nervous Hyperthermia in Women.—G. Leven says that out of thirteen cases of so-called nervous fever, which he thinks it would be more exact to call hyperthermia, two patients menstruated normally. In the other cases there was some abnormality of menstruation; in two the fever appeared when menstruation was bruskly interrupted, and in two others the temperature fell when the flow began. The author concludes that there is a relation of cause and effect between menstrual troubles accompanied by symptoms of peritonism and hyperthermia, and that the phenomena can be explained by irritation of the uterine nervous system.

The Anatomical and Chemical Alterations of the Liver in Scarlatina.—H. Roger and M. Garnier find that the liver is increased in size, of a pale color, frequently mottled with red or purple, and with white, or more rarely red, spots on its surface. The lesions are situated near the porta hepatis; leucocytes abound there, and the cells undergo degeneration, especially fatty degeneration. The amount of albumin is usually increased. Further researches are necessary in order to ascertain what symptoms are caused by this condition of the liver during an attack of scarlatina.

The Rubeoliform and Scarlatiniform Erythema of Typhoid Fever.—Paul Remlinger gives a table of fifty-nine cases showing the time of appearance of the erythema in relation to the onset and to the termination of the disease, the character, duration, and localization of the eruption, the gravity of the disease and its complications, and the method of termination of the eruption and of the disease.

Revue de Chirurgie, March 10, 1900.

Tumors of the Biliary Passages.—F. Terrier and M. Auvray submit tables showing the result of operative interference in sixty cases of tumors of the gall bladder and bile ducts. The mortality in cases of simple cholecystectomy was thirty-five per cent.; in cases of cholecystectomy combined with resection of the liver it was 11.7 per cent. In nearly all cases of radical operation there was return of the tumor sooner or later. Yet in cases of cancer, operation constitutes the only known means of relief, and should be performed unless contraindicated by extension of the disease to neighboring organs, or by cachexia.

Treatment of Renal Retention.—Antonin Gosset urges operation performed at two different times. In the first nephrostomy will cause diminution in the size of the sac, and the fluid which escapes through the lumbar fistula can be analyzed and will indicate the condition of the organ. Should the retention be septic, this preliminary nephrostomy will rest the ureter, and facilitate disinfection of the tissues. In the second the ureteral passage can be re-established either by section of the sac or lateral anastomosis of the ureter to the sac.

Generalized Infected Psorospermosis.—Alexandre Posadas describes a case of this disease. The parasites producing the tumors are sporozoa; they are constantly present in the lesions in man; when inoculated in animals, they produce the same disease and the same lesions as in man, and are constantly present in these lesions. All other micro-organisms are absent from the tumors.

A Study of Burns Caused by Electricity in Industrial Pursuits.—By M. Mally.

Branchial Epithelioma of the Neck.—By Victor Veau.

French Journals.

Semeiological Value of a Painful Point in the Left Hypochondrium, Symptomatic of Gas in the Large Intestine.—Paul Reynier calls attention to a pain often complained of on the left side at the margin of the ribs, or more especially in men at a point opposite the suspender button, and in women causing them to loosen the corsage. Dilatation of the stomach is usually found, and the pain frequently disappears upon the passage of flatus. The pain is at the angle formed by the transverse and descending colon, and is believed to be due to distention with gas. The dilatation of the stomach must be treated, the bowels kept active, and if there are recurrences massage should be given. Two cases are related.—*Journal de Médecine de Paris*, April 1, 1900.

The Diagnosis of Pulmonary Tuberculosis in Young Children.—Dr. Bertherand says the diagnosis of pulmonary tuberculosis in children is based less upon a distinct symptom than upon an ensemble of functional and physical signs; and still this ensemble has only a presumptive value. It is well to employ the more precise means of diagnosis. Tuberculin and artificial serum injections, and especially bacilloscopy of sputum and stomach contents, and as accessory measures radioscopy and radiography, may give important results. It is often necessary to employ them simultaneously, in which way they will control one another.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, April 1, 1900.

The Technique of Pylorectomy.—H. Hartmann and B. Cunéo draw their deductions as to operative measures required from a study which convinces them than cancer of the pylorus extends but little toward the duodenum; that it extends, on the other hand, toward the stomach and particularly toward the lesser curvature. It invades the ganglia especially toward the smaller curvature. In the operation they propose but two ligatures are required to control hemorrhage, one placed upon the gastric coronary, the other on the gastro-duodenalis, after which one can operate rapidly and methodically.—*La Presse Médicale*, March 31, 1900.

Two Very Rare Varieties of Phlegmonous Angina in Infants.—Albert Katz relates an observation of an abscess at the summit of the uvula in a nursing infant which presented all the signs of a retropharyngeal abscess with intense dysphagia, dyspnœa with paroxysmal attacks, etc. All were promptly relieved by incision. The second case was one of peritonsillar phlegmonous inflammation of the tongue in an eight-year-old child. No similar case was found in literature. Paroxysms of dyspnœa came near causing the child's death.—*Le Progrès Médical*, March 31, 1990.

Interlobar Purulent Pleurisy.—Pagliano and Loss relate an instance of streptococcic empyema in which the use of the Marmorek serum was followed by cure, and conclude that in this remedy we possess a means of treatment which is not to be disdained. In many cases of streptococcic infection it may give almost unhoped-for results, and if its action is as favorable in other cases as in this it will not remain a resource of last resort.—*La Presse Médicale*, March 28, 1900.

Isolation of the Tuberculous.—J. Thiénot dwells upon the utility of treatment by sanatoria, of which there are relatively few in France as compared with Germany, where there are now over thirty, with about three thousand beds, capable of caring for ten thousand phthisical subjects yearly. He urges the erection of sanatoria in the country throughout France.—*La Médecine Moderne*, March 31, 1890.

Journal of Nervous and Mental Disease, April, 1900.

A Case of Unilateral Progressive Ascending Paralysis, Probably Representing a New Form of Degenerative Disease.—Charles K. Mills reports a case which he thinks may represent an unusual form of amyotrophic lateral sclerosis. The most probable diagnosis would seem to be that of a slowly increasing degeneration of the pyramidal fasciculi or of the cerebral motor neuron system. A slowly increasing focal cerebral lesion does not seem probable, for in this case the motor fasciculi for the leg and then those for the arms and face were affected. Special and general symptoms of focal lesions, such as tumor, hemorrhage, softening, and abscess, were not present. A degenerative motor neuritis would not be likely first to select the leg and then the arm and face of the same side. The deep reflexes were too exaggerated for a peripheral nerve affection. Functional hemiparesis was improbable from the persistence and progressive increase of the symptoms and the absence of hysterical stigmata.

A Case Presenting Right-Sided Hemiplegia with Hemianæsthesia, Right Homonymous Hemianopsia, Jargon Aphasia, Wernicke's Pupillary Reaction Sign, and Neuritic Pain in the Arm of the Paralyzed Side.—F. X. Dercum reports a case which is of interest because of the association of the above-named unusual number of symptoms. The presence of Wernicke's hemipupillary inaction sign in keeping with the profound hemiplegia, and with the persistent hemianæsthesia, hemianopsia, and sensory aphasia, indicates a most extensive lesion—one involving the entire posterior limb of the internal capsule, adjacent structures such as the thalamus and radiations of Gratiolet, and probably a large portion of the substance of the left hemisphere as far as the cortex. The lesion was doubtless vascular, though whether hemorrhage or embolism it is difficult to say.

Transient Real Blindness in Hysteria.—George C. Harlan reports the case of a woman who complained of loss of vision in the left eye of three days' duration. Every known test was applied, even the application of the modified Graafe prism test, viz., watching the behavior of the eyes behind a prism, but the eye seemed absolutely blind. Ten days later the sight was so rapidly returning that the patient could read with it No. LXX. of Snellen's type at twenty feet. The author divides hysterical blindness into two classes: in the first there seems to be a more or less deliberate deception, a symptom perhaps of "ganglionic insanity," as hysteria has been called; in the second the patients are themselves deceived, and are not capable of conscious vision. The author is half tempted to add a third class, in which blindness is real and absolute, but transient, and without recognizable cause.

A Case of Acute Poliomyelitis Anterior in a Youth Seventeen Years of Age.—Wharton Sinkler reports a case which he says possesses three points of interest: First, the unusual age at which poliomyelitis occurred; secondly, the fact that although there was reaction of degeneration in the anterior tibial muscles of the left leg, there was still good response to the faradic current, and that, although all the muscles of the right leg have regained almost the normal amount of strength, there still remains reaction of degeneration in the anterior tibial group. The third point which is notable is, that there is exaggerated knee jerk in the right leg, whereas two months ago this was entirely absent. The author has seen one other case in which, after recovery from poliomyelitis, there was exaggerated knee jerk.

Landry's Paralysis.—E. W. Taylor and J. E. Clark offer a clinical case and pathological findings as evidence to support their view that the disease cannot be classified as an individual entity. If Landry described a certain disease, they say, it is clear that we must find the pathological anatomy and etiology of this supposed disease and not of some other, or else give up the word as an unnecessary encumbrance to our already overburdened nomenclature. Inasmuch as there is no essential constancy in the clinical symptoms nor in the pathological findings of so-called Landry's paralysis, and inasmuch as the etiology is wholly vague, it is probable that the affection does not represent in itself a process to which the term "disease" may properly be applied.

Annals of Surgery, April, 1900.

On Volvulus in Association with Hernia.—R. L. Knaggs narrates histories of eighteen cases divided into the following classes: volvulus of the hernial contents (cases in which all the intestinal contents are involved or only a part of them), volvulus in which the hernial contents are implicated, but in which the neck and some of the coils lie within the abdomen, volvulus produced within the abdomen by the reduction of the hernia, and volvulus occurring within the abdomen from some predisposing condition more or less directly connected with a hernia. The various operative modifications called for by these conditions are then discussed in detail, and a careful study is made of the mechanical factors leading to the various morbid conditions.

Surgery in the Presence of Sugar in the Urine.—A. L. Fisk believes that while patients with glycosuria are not good surgical subjects, the opinion is growing that with extreme care in the selection of cases and scrupulous perfection in surgical asepsis they must not be denied the benefits of surgical relief. He then gives histories of operative cases, including mammary carcinoma, suppurative appendicitis, and two cases of gangrene of the foot and toes, in all of which, except one of the last two, recovery occurred. Fiske calls attention to the necessity of as little interference as possible with the vascularity of the tissues, and every operation should be planned with this point in view. He thinks it better to cut down upon and ligate the artery in gangrene of the extremities rather than to attempt the bloodless amputation method by means of the Esmarch band.

On the Principles Involved in the Immediate Hermetic Sealing of Aseptic Wounds.—H. O. Marcy makes a plea for the recognition of the vitalized structures with which we have to deal. They should be injured as little as possible. Hence dissection should be clean. But little force should be applied in occluding the largest blood-vessels, and coaptated structures are to be placed at rest so that they furnish a minimum of exudates. Suture material serves a better purpose by being antiseptic rather than aseptic, and for this reason he urges the importance of soaking tendons (which the author prefers) for thirty minutes in a 1:1,000 solution of bichloride, taking the suture directly from the solution as required for use. A strong advocacy is given to the use of iodoform collodion strengthened by a few fibres of cotton.

On the Use of Fixation Plates in the Treatment of Fractures of the Leg.—In this paper by L. W. Streinach, and illustrated by some excellent skiagraphs, the author's personal experience with the fixation plates is detailed in the recital of four cases. An incision is made under ether with its centre over the line of fracture, and the soft parts are retracted, special care being taken not to disturb the periosteum. A small silver plate is then inserted in the shape of a cleat to the flat subcutaneous surface of the tibia, secured by small galvanized steel screws. The wound is then sewed up, though a small gauze drain may be left in to take off the oozing. The plate seems to be a harmless tenant in the leg, and is left until bony union has taken place. It is then removed under local anæsthesia.

Traumatisms Inflicted by Animals.—R. Harvey Reed makes a short but interesting study of this class of injuries, giving two illustrative cases in which trauma was produced by a lion and grizzly bear respectively. He counsels the conversion of all punctured wounds into open ones by means of free incisions. He has had much satisfaction with an evaporating bichloride solution, for which he gives the following formula: Three-per-cent. boracic-acid solution, 80 parts; alcohol, 10 parts; glycerin, 10 parts; and eight drops of a saturated solution of bichloride to the pint. The latter is made by adding two ounces of bichloride to two ounces of alcohol and six ounces of glycerin; of the latter eight drops to the pint equal 1:3,500.

The Relationship between Cholecystitis, Jaundice, and Gall Stones.—A. MacLaren believes that jaundice is a very much over-rated symptom of gall stones, as during the last year he has operated on nine cases of gall stones, in none of which was jaundice present. All of the patients had had colic requiring relief by morphine. In all but one the gall bladder was found inflamed, thickened, and frequently adherent to neighboring organs. He adds some interesting observations on the infection of the gall bladder by micro-organisms which may enter from the bowel or more likely be filtered out of the general circulation by the liver.

Conical Stump after Amputation in Childhood.—C. A. Powers calls attention to the fact that after amputation through the upper part of the arm or leg in childhood, a slow development of a conical condition is physiological and is to be expected because the humerus and leg bones are developed in large part from the upper epiphyses. Parents should be warned at the time of operation of the possibility of such an occurrence.

The Surgery of Gastric Ulcers.—T. W. Huntington describes the operative procedures in two cases, one of perforating ulcer followed by cicatricial contraction of the pylorus and extensive dilatation of the stomach, and the other perforating ulcer with peritoneal extravasation. Reference is made to recent statistical literature on the subject.

Excision of the External Two-Thirds of a Gasserian Ganglion, by the Hartley-Krause Method, after Preliminary Ligation of the External Carotid Artery.—By J. M. Spellissy.

Two Cases of Anomalous Spinous Processes of the Seventh Cervical Vertebræ Articulating with the Scapula.—By J. T. Rugh.

New Operative Table and an Improved Bowl Stand.—By A. Scachner.

The Montreal Medical Journal, March, 1900.

Gonorrhœa in its Relation to Diseases of the Eye.—Frank Buller says that bacteriological investigations have demonstrated that in the early stages of gonorrhœal ophthalmia the gonococci are present only in the conjunctival epithelium, but that later on they penetrate deeply in the subconjunctival tissues. If an early diagnosis can be made the logical inference is that an antiseptic powerful enough to render aseptic the entire epithelial structure should be capable of arresting the disease. The author has the conjunctiva thoroughly washed with perchloride of mercury solution, 1 : 3,000, the patient being etherized; the outer canthus is freely divided, and the lids are thoroughly everted so that every part of the conjunctival sac is exposed, and irrigated with warm water; after protecting the cornea with vaseline, the entire conjunctiva is freely swabbed with an eight-per-cent. solution of silver nitrate, and after a few minutes with perchloride, 1 : 2,000, and lastly smeared abundantly with vaseline and cold borated compresses are applied. This method he has found effectual.

History of Gonorrhœa.—John Macrae says that the first history of this disease which merits any consideration was written forty-five hundred years ago, and that thirty-six centuries of silence intervened. About 1500 A.D., when syphilis had somewhat spent its severity, gonorrhœa again comes into prominence. Paracelsus classed it as a variety of syphilis, an error which passed unchallenged until the protest of Cockburn in 1728. From 1770 onward the Edinburgh school taught with no uncertain voice that gonorrhœa was a disease *sui generis.* In 1870 Neisser, of Breslau, announced that he had found an organism existing in gonorrhœal pus, and since that time the presence of the gonococcus can be decided as "an immoral certainty." Of late years this organism has been found in most of the serous cavities of the body, and it has been demonstrated in peritonitis, arthritis, iritis, and salpingitis; in the pleura, and elsewhere. "The end is not yet."

Acute Gonorrhœa and its Complications in the Male.—A. E. Garrow gives the symptoms of the affection, and a list of the complications, *i.e.*, balanoposthitis, with phimosis or paraphimosis, folliculitis and peri-urethritis with their complications, abscesses and cowperitis, lymphangitis, lymphadenitis, cavernitis, posterior urethritis, acute prostatitis, rarely cystitis, vesiculitis, and epididymitis. The method of treatment which he has found most satisfactory consists in copious irrigations with weak antiseptic solutions; with bichloride or with permanganate of potash, using them in large quantities and hot, at least 115° F. and sometimes 120° F. These he applies by means of rubber catheters, glass catheters, special irrigators, and meatus nozzles. Within the last six months he has followed each irrigation by an injection of protargol, one-half to two per cent., which is retained from fifteen to thirty minutes.

Hammer Toe.—G. A. Charlton describes a case in which the four outer toes of each foot were in a position commonly designated as "hammer toe." Each toe showed marked hyperextension of the first phalanx; the second phalanx was flexed at a right angle to the first, and held so firmly as to give the impression of ankylosis of the joint. Upon dissection no ankylosis was found, and the lateral ligaments were found definitely not to be contracted, in opposition to what has been observed and described in other cases of hammer toe. Upon division of the extensor tendon the toe was straightened out into the natural position. Cases of hammer toe are either congenital, being a distinct condition, or a primary stage in the development of club-foot, or acquired from traumatism producing inflammation, or the long-continued pressure of an ill-fitting shoe.

Gonorrhœa in the Pregnant Female.—J. Chalmers Cameron urges the importance of early diagnosis and energetic treatment in these cases. The cocci may lurk in so many pockets and corners of the genito-urinary tract, the rectum, and the parturient canal, that great care must be taken to turn them out from all their hiding-places. Treatment which does not succeed in doing this will probably fail, because of the lasting properties of the gonotoxin. The expectant attitude cannot be defended. Careful diagnosis, a thorough local examination, persistent treatment, the results being checked from time to time by bacteriological examination, seems to be the line now indicated.

Gonorrhœal Arthritis.—James Stewart gives an account of forty-eight cases. Only six were women. The average age of the patients was thirty years. Only three had a decidedly rheumatic history. To judge from these cases, arthritis is as liable to follow a mild attack as a severe one. The commonest form of the disease was the polyarthritic. These resembled subacute rheumatism. Inflammation began either suddenly or gradually in one joint, and extended to others with moderate fever and constitutional disturbance. Most of these cases when admitted early did well, but at least half were left with partial ankylosis of some of the joints involved.

Chronic Gonorrhœa in the Male.—George E. Armstrong is strongly in favor of dilating all dilatable strictures, and considers that nearly all gonorrhœal strictures behind the peno-scrotal angle are dilatable by the interrupted or continuous method. In a general way he reserves for cutting gonorrhœal strictures of the pendulous urethra, traumatic stricture, and congenital stricture of the urethra. In one case of traumatic stricture involving fully two inches of the urethra, he found it necessary to lay open the stricture area by dissection, and then to form a new floor, as in the operation for hypospadias. The result was entirely satisfactory.

The Edinburgh Medical Journal, April, 1900.

Reflex Salivation from Abdominal Disorders.—F. Parkes Weber writes of the reflex salivation which sometimes occurs in pregnancy, in cirrhosis of the liver, and in various disorders of the stomach and abdominal viscera. Most of these cases, he believes, are examples of what may rather loosely be termed "mistaken reflex action," because they are purposeless. Reflexes excited by abnormal irritation of the gastric and intestinal mucous membrane can all be explained as attempts to clear the alimentary canal of irritating matter. Vomiting, increased peristalsis, and excessive secretion from the bowel, stomach, and salivary glands dilute any irritating matter in the alimentary tract, and get rid of it upward by vomiting and spitting, or downward by diarrhœa. When the same symptoms are reflexly induced by other abdominal disorders, they may be considered as examples of apparently purposeless or "mistaken" reflex action.

Gastro-Intestinal Self-Intoxication as a Factor in Nervous Diseases.—O. J. Kauffmann believes that a certain number of cases of nervous disorder and nervous organic disease are reasonably explicable by gastro-intestinal self-intoxication. What proportion of the cases which are not attributable to other causes may be explained in this way, can be determined only by much more extensive clinical observation. As regards indicanuria, and its importance as a sign of disordered digestion, it must be borne in mind, first, that it is a variable sign, apt to be present one day and absent the next, and that, therefore, value can attach to it when its presence is more or less constant; secondly, that it may well happen that there is much disorder of the digestive processes without the production of indol, and that consequently we must not allow the absence of indicanuria to exclude the possibility of disordered intestinal digestion.

Pathological Amenorrhœa from Other than Constitutional Causes.—F. W. N. Haultain says that in the absence of pregnancy and deteriorated constitutional states amenorrhœa is not a common condition. From a general point of view it may be classified as of two types, primitive and acquired; and from a physiological aspect each may be considered as due to (1) atresia of the canals; (2) uterine conditions; (3) ovarian conditions. In acquired amenorrhœa, that due to impairment of the functions of the ovary, uterus, or controlling nerve centre (the last being perhaps the most frequent and most easily overlooked), treatment is often successful. The constant electric current is satisfactory. Ovarian inactivity is in many cases overcome by the administration of ovarian extract. The usual dose necessary is only gr. xv. per diem, but gr. xl. daily may be administered without untoward symptoms.

Perigastric and Periduodenal Abscess.—N. Soltan Fenwick describes in detail the symptoms and course and results of the formation of these abscesses. As to treatment, he says that as soon as the existence of the abscess can be determined, the cavity should be opened and drained, for every day that the operation is postponed increases the risk of secondary inflammation of the thoracic viscera and perforation of the diaphragm. The abscess is most conveniently opened in the left hypochondrium, care being taken not to disturb the adhesions between the stomach and the abdominal wall, which prevent extravasation into the general cavity of the peritoneum. When the pus is situated in contact with the diaphragm, a counter-opening may be made between the ribs behind, in order to secure free drainage.

Preventive Operation in Acute Inflammation of the Appendix.—Mansell Moullin says that if all the cases of inflamed appendix which come to operation at last were operated upon at once, say before thirty-six hours have elapsed, some lives which are lost now would be saved; and there is no reason to think that any of the patients who are saved now by operation would be exposed to additional risk, while certainly the duration of their illness would be materially curtailed, and the chance of grave accidents setting in considerably lessened. An operation to be preventive must be performed before forty-eight hours from the time of onset, and must not be confounded with operation upon the fourth or fifth day, when conditions are materially different and much more complicated.

On "Washing" Dysenteric Stools.—Kenneth MacLeod describes the process, and enumerates the points of information learned by it. The color of the fluid indicates the amount of blood contained in the evacuations; the size, shape, and character of the feculent masses give information as to the condition, calibre, and tone of the diseased gut; the activity of the digestive process may be inferred, and the character of the ingesta determined; the floating flecks of mucus will show the stage of the dysenteric process; the residuum, especially casts or sloughs, will indicate the nature of the destructive process; and the results of treatment may, to some extent, be judged.

A Case of Murder and Suicide.—By Harvey Littlejohn.

The Bristol Medico-Chirurgical Journal, March, 1900.

Rheumatic Disease of the Cardiac Muscle.—Theodore Fisher writes of the lesions found in the heart in rheumatic cases. It does not require the visual evidence of disease of the heart muscle in cases of pericarditis, he says, to show us that there is poisoning of the cardiac walls. The rapid fatality of many cases is the best evidence of the poisoning, for it cannot be considered possible that mere inflammation of the serous covering of the heart can arrest its action. In some cases there is acute rheumatic poisoning of the heart muscle without any pericarditis at all. Dilatation of the heart has been frequently noticed in cases of acute rheumatism, so that perhaps the mitral regurgitant murmur developing during the course of the disease will often not indicate a lesion of the mitral valve, but be secondary to cardiac dilatation. Weakening of the heart, tachycardia, and mild anginal attacks may all follow rheumatism.

The Spontaneous Disappearance of a Sarcomatous Tumor.—G. Munro Smith reports a case in which the primary lesion appears to have been a lympho-sarcoma at the angle of the jaw. This was extirpated; it recurred, and after an unsuccessful attempt at removal of the recurrent growth, the latter spontaneously disappeared. Ulcers on tonsil and palate and ascites seemed clearly due to malignant disease, yet recovery from both took place. The microscopical examination, the clinical features, and the termination by numerous pigmented tumors, etc., causing death from exhaustion, all this is in favor of the cycle of events being malignant. The late Mr. Greig Smith reported three cases of solid abdominal tumors which spontaneously disappeared.

Russki Arkhiv Patologii, etc., Jan. and Feb., 1900.

The Curability of Syphilis.—V. M. Tarnovski reports fifty cases of syphilis, most of which he saw at the beginning and kept under observation for from twenty to forty years. All cases are excluded in which there was reason to suspect syphilis in the parents, and no case is included in which less than sixteen years had passed since the last symptoms. He concludes from a study of these cases that syphilis is curable in all its stages, but it is in the secondary period that a cure is most frequently obtained. The use of mercury and of iodide of potassium is the main reliance in the cure, but there are other factors which aid in bringing about this effect. Of these factors the most important are a robust constitution and an absence of hereditary or acquired taint of any kind. The natural power of resistance, which varies in each organism, is also an important factor. The danger of syphilis does not reside exclusively in the general lesions produced by the disease, for these are amenable to our present modes of treatment, but in the special localizations and in the so-called parasyphilitic affections.

Orrhotherapy of Streptomycosis.—N. P. Neshchadimenko reports in a preliminary communication the results of a series of experiments in artificial immunization against streptococcal infection. He says that there is no essential difference in the streptococci provoking various diseases in man, but that they are identical in their biological and pathogenic properties. By means of a new method elaborated in the Bacteriological Institute at Kieff, he claims to have prepared a serum, called polystreptococcic, which agglutinates streptococci, attenuates remarkably virulent cultures of these micro-organisms, confers immunity upon animals, and cures those already infected. The details of his method of cultivating streptococci, of increasing and diminishing their virulence, of immunizing animals, as also of the pathogenosis of streptomycosis in man and its orrhotherapy, are now being elaborated by him, and will be published as soon as possible.

Echinococcus of the Brain Complicated by Hemiatrophy of the Face.—V. A. Muratoff reports a case of this nature in a boy eleven years of age, who entered hospital with the following symptoms: Severe headache with a chronic otorrhœa of two years' duration; double neuroretinitis; hemiatrophy of the left side of the face, tongue, and soft palate; weakened sensibility to pain on the same side. The child died at the end of two months, and at the autopsy there was found an echinococcus cyst of the posterior cranial fossa which compressed the protuberance and the bulb. There was marked atrophy of the nucleus of the twelfth nerve on the left side, together with a degeneration of the intramedullary portion of the root of the hypoglossal nerve. There were also atrophied cells in the left nucleus of the facial nerve.

A Case of Pemphigus Foliaceus of Cazenave.—G. M. Nazaroff reports this case occurring in a woman sixty-seven years of age. On the mucous membrane of the palate and of the lower lip there were raw patches, denuded of epithelium, surrounded by strips of tissue which had apparently formerly covered the blebs. On the scalp, the neck, the chin, the breast, and the back there were bullæ of various sizes and denuded patches; these bullæ were red, shining, and moist, and their periphery was covered with delicate epithelial strips. A slight sliding pressure on the apparently normal epidermis was sufficient to detach it from the subjacent tissue. At the autopsy, beyond the changes in the internal organs incidental to advanced age, nothing abnormal was found except the cutaneous lesions.

The Absorption of Bacteria by the Lymphatic Ganglia.—A. S. Egoroff has repeated Halban's experiments, and confirms his conclusions that the time of appearance of bacteria in the ganglia nearest the point of infection varies with the different species. The pathogenic microbes are absorbed by the ganglia less rapidly than the non-pathogenic or the pathogenic in animals naturally or artificially immune. The bacteria are carried through the lymphatic vessels in a free state, and it is only when they have penetrated into the interior of the ganglia that they are frequently englobed by the macrophagi.

The Inoculability of Typhus Fever.—O. O. Mochutkovski reports some experiments made a number of years ago, but not before published, as a result of which he formulates the following conclusions: The primary infection in typhus fever occurs in all probability in the blood. The inoculation into a healthy person of blood taken during the height of the fever produces an attack of typhus fever. The incubation period of the disease thus caused is eighteen days.

The Antitoxic Nature of the Aniline Colors.—G. Gabrichevski reports in detail a number of experiments with fuchsin, vesuvin, pyoktanin, and other aniline dyes to determine their antitoxic properties. He concludes that while the fact of an antitoxic action of these substances is undoubted, the way in which this action is effected is uncertain.

Il Policlinico, March 15 and April 1, 1900.

The Development of Cancer in the Lymphatic Glands.—Concluding an article from a previous number, Oreste Sgambati says that in all cases of mammary cancer there exists, independently of metastasis, a homolateral tumefaction of the axillary lymphatic glands, which differs macro- and microscopically from ordinary acute or subacute inflammations. The glands have the clinical characters of those really invaded by cancer; the first traces of cancer in the glands are usually found in the afferent blood-vessels, and are followed by more or less pediculated vegetations on the wall of a lymphatic space or vessel. Necrosis and the formation of lymphatic infarcts may follow the complete occlusion of an afferent lymphatic vessel, with the fibrification in mass of all the glandular tissue dependent on that vessel. These changes in the glands are due to some toxic influence proceeding either from the retrogressive products of the cancer cells, or from the parasites which may be the etiological factors of the neoplasm.

Generalized Hydroa in its Relations to Polymorphous Erythema.—Angeloni, concluding an article from a previous number, says that from the clinical facts observed it is evident that erythema iris and hydroa are identical: that is to say, that a morphological distinction is justifiable only as a convenience in the differential diagnosis between polymorphous erythema and pemphigus. Hydroa does exist without any intermediate phenomena of erythema, and it is well to recognize this fact, in order not to jump to the conclusion, in these cases, that we are dealing with cases of acute pemphigus.

Relation between Intestinal Putrefaction and the Sterilization of Milk.—Angelo Volpe from the result of experimentation and careful observations concludes that by sterilization the qualities of milk are so changed that its assimilation is rendered more difficult. In the feeding of infants with sterilized milk, what is gained on the one hand by a diminution in the number of bacteria is lost on the other by the fact that only a portion of the milk is digested, the rest remaining in an undigested condition in the intestines, where it gives rise to putrefaction, which is not a harmless occurrence. Rather than submit all milk to this process of sterilization, the author would in most cases make sure that the source of the milk supply is all that it should be, and leave it in its natural condition.

Meditsinskoe Obozrenie, March, 1900.

A Case of Streptococcal Endocarditis.—G. A. Guseff reports the case of a lad nineteen years old, who was brought to the hospital suffering from fever, right-sided hemiplegia, and loss of speech. A year before he had had acute articular rheumatism, following which he suffered from dyspnœa and palpitation of the heart. In about two months he returned to work in pretty fair condition. He was again taken ill about three weeks before admission, and a week later he fell, losing consciousness, and when taken home was found to have hemiplegia and aphasia. On admission he had a temperature of 99.5° F., and a pulse of 98. A diagnosis was made of endocarditis, the cerebral symptoms being due to embolism. Examination of the blood revealed no micro-organisms, but there was a marked leucocytosis with predominance of multinuclear forms. Cultures made from the blood showed the presence of streptococcus pyogenes albus. Two injections of antistreptococcus serum were made. After each there was a fading out of an erysipelatoid eruption on the forearm, but the temperature rose and the general condition was made worse. The parents removed the patient from the hospital, fearing a repetition of the injection, and he died soon afterward.

Malarial Insanity.—Alexander Ivanoff says that malarial psychoses may occur under two forms: (1) Periodical malarial insanity, occurring only on the day of the paroxysm, which may either be accompanied by other symptoms on the part of the temperature, pulse, etc., or be the only manifestation of the malarial infection. (2) Post-malarial insanity which develops after the subsidence of the febrile attacks or during a malarial cachexia. He attributes the occurrence of the psychical disturbance to the direct action of the malarial toxin on the cerebral cortex, or to the poor nutrition of the latter, because of the diminished hæmoglobin and the consequent lessened oxidation. The prognosis of malarial psychosis is very good. The treatment is antimalarial and symptomatic. Six cases are reported.

A New Method for the Closure of a Vesico-Vaginal Fistula.—S. Spasokukotski operates as follows: He passes a loop through the vesical mucous membrane on each side of the fistula, and by pulling on these everts the edges of the opening toward the vagina. Then he cuts into the connective tissue between the vaginal and the vesical mucous membranes. Now the loops are threaded through the eye of a large blunt-pointed probe, which is passed through the urethra, thus drawing the vesical flaps of the divided vesico-vaginal septum into the bladder and approximating the raw surfaces. Finally, the vaginal flaps are brought together by sutures, with their raw surfaces in apposition. The writer reports several cases in which his method was employed with success.

Treatment of Cicatricial Stenosis of the Pylorus.—A. Th. Kablukoff reports two cases of stenosis of the pylorus following cicatrization of gastric ulcer, in which a Heincke-Mikulicz operation was performed with successful result.

A Receptacle for Suture Materials.—By G. Graefe.

Clinical Department.

HOW TO SEND MOIST ANATOMICAL SPECIMENS BY MAIL.

By FREDERICK T. GORDON,

HOSPITAL STEWARD U. S. N., NAVY YARD, LEAGUE ISLAND, PA.

It is often both desirable and necessary that specimens for sectioning should be kept in their appropriate preserving solution while being transported by mail and express, lest they dry out, shrink, and become wholly spoiled. The postal regulations act as a bar to the sending by mail of bottles containing liquids unless certain precautions are taken, and it is sometimes very difficult so to pack specimens that they may arrive at their destination in the proper condition. Necessity being the mother of invention, the writer had recently to find a means of surmounting these difficulties, and the method used has so far given perfect success. It is, in brief, as follows:

A bottle is to be selected of a capacity twice that of the bulk of the specimens to be mailed, and fitted with a sound cork. The specimens are taken out of the preserving fluid (alcohol, etc.) and rolled up in pieces of lint, turning the ends over and twisting them tight; then this bundle is dipped into the preserving fluid and any excess squeezed out. The roll is placed at the bottom of the bottle. The next specimen is prepared in the same way, and so on until all are wrapped up in their saturated coverings of lint and packed into the bottle. Then a wad of absorbent cotton is taken large enough to fill the remaining space in the bottle, dipped into the fluid, and the excess pressed out, and then it is packed snugly on top of the rolled-up specimens. The bottle is corked tight and sealed with paraffin or wax, wrapped in paper in the usual manner, and addressed for mailing. There will be no liquid to spill if the bottle is broken.

The rationale of this method lies in the presence of an atmosphere saturated with the vapor of the preserving-fluid in the bottle, it thus being impossible for the solution to evaporate from the specimens and leave them dry and hard. The method is as applicable to a specimen half a cubic inch in size as to an entire tumor or organ; the ease of its details and the cheapness are arguments in its favor, to say nothing of the convenience in being able to send the most delicate specimens absolutely safely by mail or express. If the bottle is not uncorked, the contents will preserve their freshness endefinitely; the writer has had a bottle with two sections imbedded in celloidin for a month before opening, and the celloidin was as fresh and in as good condition when opened as when packed. Moreover, by making the package weigh lighter, there is quite a saving in postage.

It is also suggested that the same method might be of use in preserving large specimens when it is impossible to secure enough preserving fluid to cover them at the time. They should be wrapped in lint saturated with the appropriate fluid, and packed into a bottle or jar with a wad of absorbent cotton soaked in the same fluid and corked tightly.

Ununiting Fractures, it was thought, might be beneficially influenced by thyroid opotherapy, but the experiences of Guinard, Poirier, and Rochard oppose this view.—*Gaz. Hebdom.*, January 4th.

Correspondence.

MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

The Prolongation of the War is now, I think, inevitable. At the beginning of fighting, Christmas, 1899, was fixed by the British public as the probable date for the cessation of hostilities. When the fall of Kimberley or that of Ladysmith was expected to occur any day, opinion flew to the opposite extreme and the British spoke of preparations to carry on a guerilla war for ten years if necessary. Then came Lord Roberts' victories, and Easter, 1900, was popularly accepted as a convenient and fitting date for unfurling the Union Jack at Pretoria. But by the end of the first week in April it has become obvious that the Boers may be able to make effective resistance for at least twelve months, though, of course, they may decide not to do so. But Lord Roberts cannot move until his cavalry is remounted; for without cavalry he cannot clean up the Orange Free State behind him, while he dare not go farther forward while his lines of communication are so seriously menaced as Colonel Broadwood's recent experience and the disaster to the Irish Rifles show to be the case. A long and waiting game—just the game to allow the Boers time to recover their courage and reorganize their defences—is forced upon the British commander-in-chief. The medical aspects of this prolongation of hostilities are obvious. The British troops—a large proportion of whom are quite young men unused to campaigning or severe climatic influences—will have to spend the inclement season of the year under canvas or actually fighting; and camps, the sites of which will be dictated by other than sanitary considerations, will have to be formed. It is certain that there will be a great increase in sickness among the invading troops, who, save when beleaguered and actually suffering from hunger, have so far enjoyed a remarkable immunity from disease. It is almost certain that as the South African winter draws on there will be among the soldiers of both sides many more cases of pneumonia, typhoid fever, and malaria, and when this occurs the medical arrangements that so far have been sufficient may fall terribly short of the ideal. For there will be, perhaps and most probably, stubborn fighting as well as much sickness. Hitherto on the Boer side the losses have been small and the medical care required small also; while the British Royal Army Medical Corps, supplemented by excellent civilian aid, has proved competent to keep abreast with the demands of the much more numerous English wounded. But if many victims of epidemic sickness are added to the same proportion of wounded men in the future, the English medical staff will require much augmenting. I think it should be reinforced already.

Sickness among the Boer Prisoners.—There is a great deal of sickness on board the transports lying off Simonstown, in which the Boer prisoners are confined. Typhoid fever and measles have broken out, and upward of two hundred cases are serious ones, while at the end of March two or three deaths occurred daily. Everything has been done for the sick that skill and humanity can suggest.

Expanding Bullets.—That some of the Boer commandos are using expanding bullets has been proved by the actual finding of such bullets upon prisoners and in deserted laagers, but the changed character of the wounds of the British soldiers at Paardeberg would have suggested this without further evidence. Many of the wounds involving soft parts only have lately exhibited characters quite out of keeping with the injuries inflicted by ordinary Mauser bullets, while primary amputations have become more numerous as a result of the increased difficulty of keeping the wounds free from suppuration. Mr. G. H. Makins, one of the civilian consultant surgeons to the British forces, has made some pertinent remarks upon this point, and his evidence will convince all fair-minded people that the British complaints as to the use of expanding bullets have not been unfounded.

The Irish Hospital is located at Naauwpoort, and a contingent under Dr. George Stoker has gone up to De Aar.

The Hospital Ship "Princess of Wales" has been the subject of much adverse criticism. I have already referred to the unfortunate circumstances attending her start. She left Tilbury dock on November 23, 1899, but had to stop almost immediately through some accident. She started again and had to put into harbor at Sheerness. There nothing wrong could be discovered, and she went to sea and arrived at Cape Town on January 8, 1900, taking forty-seven days to do a journey which ordinary transports do in a fortnight. At Cape Town certain repairs were found necessary, and all the electric lights had to be overhauled, and the return journey to England occupied nearly as long as the journey out. To some extent the long time occupied is accounted for by the fact that the *Princess of Wales* is only an eleven-knot boat, but there seem to have been considerable carelessness and negligence as well, into which there will be an official inquiry. The practical utility of using such a slow vessel to transport the sick and wounded is very doubtful, and most medical men at the seat of war consider that the value of hospital ships is mainly as stationary hospitals. Well-found transports doing the journey from Cape Town to England in a fortnight are much better for conveying the sick, while operating-theatres, *x*-ray chambers, etc., are not required, as no patients are sent back to England until their condition is diagnosed and its acuter stages relieved. As hospitals, the hospital ships do splendid work. The *Nubia*, for example, out of six hundred and seventy-four cases discharged has sent back four hundred and forty-three to resume duty at the front.

UNRESTRICTED DIET IN TYPHOID FEVER.

To the Editor of the Medical Record.

SIR: The tenor of the article in the MEDICAL RECORD of January 6, 1900, by Dr. Morris Manges, on "The Diet in Typhoid Fever," is so much in accord with the extensive, though not tabulated experience I have had out here in Asia that I gladly add my mite of confirmation to it. In a communication to your journal which was published in the issue of February 5, 1898, I wrote: "Affections that would confine Anglo-Saxons for two weeks are thrown off here in half the time. Whether no restrictions as to food in fevers, and a little more trusting to nature than is usual, have anything to do with it or not, is an open question."

I have long been of the opinion that an unrestricted diet in fevers—and I came first to allow it because I could not help myself, treating so many in their homes and with them so ignorant of even the simplest measures—I have come to think that an unrestricted diet, trusting to the craving of the patient largely, instead of doing harm actually does good. I cannot assert that many of my cases were the usual typical text-book typhoid-fever cases. On the contrary, most of them seem to be mixed. The type of which there has been quite an epidemic the past month or so is of quite a different character from that which was prevalent this time three years ago, but the very general recovery under quinine, phenacetin, and unrestricted diet is a marked feature in common. And while it is true that by far the most of the cases are malarial, I feel sure that many would have developed into what we know as typical typhoid if they had had a chance. I lately treated in one hovel five patients who were taken down, one after the other, with what, while I would not call it typhoid here, is what I feel sure, in an American, would have been that disease; and I am inclined to think that the free feeding of rice paste and other such indigestible (?) stuffs so modified the disease, as we note in the reports of Dr. Manges has been done, that its typical character never came out.

I wish to report the success of an ordinary and a liberal diet not only in fevers in general and typhoid in particular, but also in membranous enteritis as we have it rather commonly among Americans out here. The restricted diet reduces the strength of body and of mind so much that what might be thrown off in a comparatively short time, and which has done so in the cases in which it has had opportunity in full diet, has run on for months under the old plan. This subject has been well elucidated by Dr. Max Einhorn in the issue of January 28, 1899, and I am merely reporting clinical experience corroborating his plan of treatment.

Patients who date their recovery from fevers from the time they surreptitiously obtained some forbidden food are known to all of us, and one whom I recall, who attributed his recovery from yellow fever to molasses cake which he hid in his bedclothes, is in point. Out here in Asia they do not have to sneak it in, but their friends give them anything they want, and as yet, I must say, I have not seen so much evil resulting from it as I have good. This may not be scientific and it may shock the laboratorians, but it is fact, and if you wish to pass it by with the thought that Asiatics are different from Anglo-Saxons, very well. All I know about it so far is that they recover from fevers under unrestricted diet and very simple medication, with a promptness and an ease which I longed to see manifested in such cases in private practice in the United States before I came out here to the shining Orient. As everything else—ventilation, or rather, the lack of it, huts low on the ground (though they have hot floors, which must be a good thing), no drainage, invariable crowding, and filth in general—is against them, there must be something greatly in their favor, for their weak constitutions, rice fed, cannot count for much; so for the present, and as the drugs used are so simple it can not be they, I will say it is the unrestricted diet which is the secret, and so I will go on that presumption until some one shows me my mistake about it.

J. Hunter Wells, M.D.

Pyengyang, Korea, February 27, 1900.

A NAVAL ENCOUNTER IN THE PHILIPPINES.

To the Editor of the Medical Record.

Sir: Generally little is interesting in the detail of a normal case of labor, but it is different sometimes in our tropical possessions, as the following tale will show. It is a perfectly true "yarn," and I merely "tell the tale as told to me," leaving comments to those who read.

It was after mess at district headquarters in the quaint town of Zamboanga that a handsome young naval officer, sitting with us, gave his unique experience. He had been stationed at a place called Balabac, near the most southern end of the Philippines, with a small detachment of sailors to guard a lighthouse. One of his men having a slight wound on a foot, the officer had been furnished with dressings for it, and, seeing him apply these dressings, the natives believed he was "el medico." It should be said this young gentleman is one of those highly favored individuals who fear naught and are ever ready to go where work is hardest or most dangerous.

We were sitting on our veranda enjoying the moonlight on the water and our after-dinner cigars, when one asked our naval guest to tell his experience as a doctor. Briefly stating the reason for his being at Balabac and the dressing of the wound above referred to, he continued:

"But all I could say would not make the natives believe I was not a doctor, and one evening a man came to me and said his wife was going to have a child, and would I come and help her get rid of her cargo. I refused, and he persisted, putting down my assertions of ignorance to modesty; so at last I gave way, and we got under way for his shack. When we entered, the woman was on the floor. She got up shortly and walked up and down, seemingly in a good deal of pain. By and by she lay down on the bed, an ordinary bamboo bed, and sung out something I did not understand, for I know but little Spanish, and she appeared to heave more than before. Watching, I saw the big lump in her belly went down a bit with every heave, but came back again as big as ever, so I concluded something had fouled inside, and some help was necessary, and I told the husband to board and push, not punch, with his knees on the top of the lump. He did —and for fair, and evidently cleared the jam below, for before long the kid's head came out, and it began to yell. So did the mother. I took hold of the young one, and it was easy enough to finish the launch after his head had come clear.

"There was a string that came along that I did not know what to do with. However, I took up the slack so as to give the youngster room to swing in, and then saw I must cut him adrift. How long a line to give him was a puzzle, but I decided he would ride all clear if he had a line the length to his knee; so measuring I stood by to cut. Then I thought if I let all go the line might unstrand, so I got some stops ready, making them out of heavy thread. Now how many stops to put on was another question; so, to guard against any chance of the line parting, I put a stop about every inch and cut away between the seventh and eighth. The kid being all clear, I shoved it over to an old woman who was in the room.

"For all the child was away the lump did not go down, and I thought there might be more inboard. I had stowed the fast end of the line back where it came from as well as I could; but now to find out if there was a consort. A little girl was in the room, and, cutting her nails so they could not tear, and disinfecting her hand and arm, for I had brought my kit along, some permanganate, two or three darning-needles, and a pair of scissors, I told her to go up in there and see if she could find anything. She said she had hold of something, and, being directed to haul away, she fetched out some liver. Told her to see if anything else would come away, and I kept her at it until we had a big heap on the floor of liver and intestines. I was a little uneasy for fear we had hauled out everything inside of the woman, but, as she seemed easier and the lump had gone down, I considered that all the fixings had not fetched away, so I washed down decks, put the old woman on watch, went back to quarters, and turned in."

"And—and did the mother and baby live?"

"Oh, dear, yes! But I don't want any more like cases. Say, doctor, how do you fellows get on in such foul-weather work?"

L. B.

Two Drops of Spirit of Camphor on the toothbrush will produce a fresh feeling in the mouth and prevent sore tongue, gums, etc.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Stated Meeting, April 9, 1900.

Charles N. Dowd, M.D., Chairman.

Sarcoma of the Sphenoidal Sinus, Removed Three Years and Eight Months ago Without Recurrence.—Dr. Joseph A. Blake presented this case, that of a woman twenty-four years of age, who had been admitted to the Harlem Hospital in July, 1896. He had first seen her on August 18th. At that time the left nasal fossa had been completely filled with a large tumor, but there had been no implication of the muscles of mastication. On August 20th, a portion of the tumor had been removed for examination, and it had been found to be a round-cell sarcoma. After previous ligation of the external carotid, the operation for the removal of the tumor had been undertaken a few days later. The tumor had been friable and had been enucleated easily with the fingers. The woman had made an uneventful recovery, and had left the hospital in two weeks. The vision of the left eye was perfect. There had been no eye symptoms except a slight diplopia when not wearing glasses.

Ligation of the Subclavian Vein for an Arterio-Venous Fistula.—Dr. John F. Erdmann presented a young man upon whom he had performed ligation of the subclavian vein for an arterio-venous fistula, the result of a gunshot wound received in August, 1898. The bullet had lodged in the supraspinous fossa, and had been removed a few days later. At the operation it had been found necessary to saw through the clavicle. The communication between the artery and vein had been about one inch and a half in width. The functional result had been perfect, so that his injury in no way interfered with his occupation, which was that of an acrobat.

Persistent Suprapubic Fistula following Lithotomy on a Prostatic; Cured by Bottini's Operation.—Dr. Willy Meyer presented a man aged forty years, who had come under his care in November, 1898, with a urinary trouble that had existed since 1891. Physical examination had revealed the presence of vesical calculi and a moderate prostatic enlargement. There had been at this time a very marked catarrh of the bladder. He had opened the bladder from above on November 25, 1898, removing three rather large stones. The bladder had been in wretched condition at the time, and as a result some tissue had sloughed away. At the end of the fourth week the patient began to pass urine through the natural channel, but a fistula persisted. When seen on October 5, 1899, the man stated that only about half of the urine passed through the normal channel. On October 11th three incisions had been made into the prostate, according to the Bottini method, and without the slightest reaction resulting. The patient soon began to pass a much larger quantity of urine through the normal channel, and less through the fistula. The latter had been tortuous and funnel-shaped, and efforts to secure its closure by injections of balsam of Peru had failed completely. He had then introduced 200 c.c. of water into the bladder, and had followed this by ♏ xv. of pure carbolic acid. Alcohol had next been introduced to neutralize the acid. As a result of this treatment the fistula had healed promptly.

Removal of Half of the Tongue.—Dr. B. Farquhar Curtis presented a man, sixty-two years of age, having a negative previous history. He had used a pipe moderately. About September 15, 1899, he had noticed a small fissure on the left side of the tongue, apparently due to the irritation of a sharp tooth. He had been admitted to St. Luke's Hospital in February, and on the 22d of that month the operation had been done. The Kocher incision had been made below the jaw and a flap turned up, but left attached. The mouth being held open with the Whitehead gag, the tongue had then been drawn forward and split, and half removed. All of the tissues in the floor of the mouth had been removed at the operation. The patient had made a very rapid recovery. The tip of the tongue had been turned around to one side and secured with three or four sutures in order to avoid the disagreeable narrow point left. Although it was only six weeks since the operation, he had regained the use of his tongue, and could talk fairly well.

Removal of Half of the Tongue with Removal of the Tonsil.—Dr. Curtis also presented a man of sixty years who had been admitted to the General Memorial Hospital on December 15, 1899. At that time he had been suffering great pain; the saliva had been dribbling from the mouth, and there had been a deep ulcer at the tonsil extending over to the root of the tongue. However, the mouth could be freely opened, showing that there was no involvement of the pterygo-maxillary parts. The operation had been done on December 7th, beginning with the Mikulicz method. The vertical incision had also been made over the carotid. After separating the periosteum the ramus had been divided, and twisted out of its socket without any division of the soft parts above. This operation had always given him free access to the tonsil, and perfect control of hemorrhage. With the finger in the mouth, hemorrhage could be stopped entirely, or the bleeding point could be turned out and secured. This method of operating, particularly in elderly people, was far better than by dividing the jaw. The growth had been cut away, including the entire tonsil and wall of the pharynx. The tongue had been found extensively involved, and hence it had been removed by the method of splitting it and dividing it at the root. The man had made a rather slow recovery, but the result was good. This method of operating seemed to him far better than the splitting of the cheek or dividing the jaw vertically as was done so often.

Resection of the Rectum and Anastomosis by Maunsell's Method.—Dr. A. A. Berg presented a woman who had been admitted to the Mount Sinai Hospital on September 11th with a history dating back about eighteen months. For a few weeks previously blood had been passed in the stools. She was slightly cachectic. About three inches from the anus the rectum was constricted by a tumor. The growth was movable over the sacrum, and the vagina was not involved. On September 15th, under chloroform anæsthesia, he had removed the rectum. He had first cut down upon the rectum, and freed it up to the peritoneal reflexion. He had then opened the peritoneal cavity and drawn down the peritoneum and sigmoid flexure. He had next closed the peritoneal cavity before opening up any channels of possible infection. The superior hemorrhoidal artery had been ligated and divided so that there had been almost no loss of blood. Having resected about six inches of the rectum the proximal end of the rectum had been inverted into the distal end by the Maunsell method. The patient had been in bad condition at the time, and hence this method of inversion had been adopted as the most rapid and the safest under the circumstances. The patient had rallied well from the operation, and there had been no leakage after the third day. The patient had insisted, however, on lying on the back, and as a result there had been a marginal necrosis, and, on the sixth day there had been a fecal discharge from the opening on the posterior margin of the anastomosis. On December 11th Dr. Gerster had operated to close the fistula. The mucous membrane had been dissected free and inverted, and the fistula closed with the Lembert suture. There was now considerable induration at the site of the anastomosis, but not so much as had existed some time ago. It was possible that some of this induration was due to a recurrence.

A Rapidly Recurring Carcinoma.—Dr. George E. Brewer presented for Dr. H. Lilienthal a woman who had been admitted to the Mount Sinai Hospital on September 17th with a marked carcinoma of the left breast and glandular involvement. On September 26th the radical operation had been done, including the removal of the pectoral muscles; yet on January 31st she had been readmitted with a recurrence. At this time she had been found in very poor condition. Dr. Mundé had done a double salpingo-oöphorectomy, and since then improvement had been very marked and rapid.

Dr. T. H. Manley, speaking of Dr. Erdmann's case, commented upon the excellence of the collateral circulation after this operation, and also upon the admirable shoulder action that the man was said to have had even while there had been only ligamentous union in the clavicle. In this case the lumen of the vein had not been occluded. The collateral circulation had been so well restored that the radial pulse could be felt on that side eight months ago.

Dr. Willy Meyer said that in cases like those presented by Dr. Curtis he had been accustomed to do a tracheotomy and insert a tampon cannula, provided the patient was operated upon in the ordinary recumbent position. With the Kocher operation there was great risk of the blood entering the trachea.

Dr. Erdmann remarked that by the use of the Trendelenburg position the necessity for a preliminary tracheotomy was avoided.

Dr. A. A. Berg said that recently Dr. Gerster had done a resection of the superior maxilla for a retronasal sarcoma, and had done a low tracheotomy. Following the latter operation there had been an inflammation between the pericardium and the pleura, and, as a result of this process in the mediastinum, the patient's life had been in great danger for some time. This was another reason for avoiding tracheotomy in such cases.

Dr. William B. Coley thought that in some cases tracheotomy greatly facilitated the operation. In a case that he had presented to the Surgical Society a preliminary tracheotomy had been done, the glands of the neck removed, and the linguals tied.

Dr. Franz Torek said that if one wished to prevent blood from running down into the trachea it was not sufficient to lower the head slightly, but the head should be allowed to hang down completely over the end of the table. This was not the ordinary Trendelenburg position.

Dr. Charles N. Dowd said that by the method of operating employed in Dr. Curtis' cases hemorrhage was almost entirely avoided by the ligation of the lingual arteries in the first stage of the operation; hence there was but little reason for doing a tracheotomy. He had seen the operation on Dr. Curtis' second case, and the hemorrhage had been under full control. He could not but think that the danger of allowing blood to run into the throat had been exaggerated, especially in view of the many cases of operation on children suffering from adenoids.

Dr. James P. Tuttle, referring to Dr. Berg's case, said that while he could not say positively that this was a recurrence, there was present what he had seen in every other case in which he had used the Maunsell method, *i.e.*, a stricture. This stricture was very much more marked by the Maunsell method than by the end-to-end method or by the use of the Murphy button. If after the gut had been brought together by the Maunsell method, or by end-to-end union, a large-sized silk suture was passed into the lower rectum and brought down and sutured rather tightly into the edge of the skin wound, the parts were relieved from tension. If this was done there was very much less risk of fistula. This anchoring suture could be cut away in four or five days. His own three cases, and the one just reported by Dr. Berg, in which the Maunsell method had been employed, were certainly very discouraging for those desirous of using this method.

Dr. Manley said that in one case of recurrent carcinoma of the breast which had reached the operable stage he had adopted this plan of removing the ovaries and tubes, although the woman was forty-seven years of age. The operation had been followed by a very decidedly beneficial effect on the growth in the breast. He had also followed the suggestion of the originator of this plan, *i.e.*, to administer after the operation the thyroid extract, and he thought the result had justified its use.

Dr. Coley said that the improvement in these cases following the removal of the ovaries seemed to him to be entirely explicable by the change in the blood supply. He did not think there was a single case on record in which the improvement following this operation had been of sufficiently long duration to warrant one in considering it a cure.

The Relative Bearing of the Conjoined Tendon and the Internal Oblique Muscles upon the Radical Cure of Inguinal Hernia.—Dr. Joseph A. Blake read a paper with this title. He said that by the conjoined tendon was usually understood the insertion of the lower fibres of the internal oblique and transversalis muscle, extending along the ilio-inguinal line laterally for a short distance. As a rule the lowermost fibres of the internal oblique did not form a part of the conjoined tendon. The speaker said that he had made a series of observations in the dissecting-room on twenty-five subjects, and had found that the conjoined tendon never extended on the internal surface of the rectus more than five-eighths of an inch. In all cases it consisted only of scattered muscular fibres. The true conjoined tendon was ordinarily such a weak affair that it was negligible in operations. In the radical cure of hernia the main reliance of the surgeon must be the external oblique. As a rule it was futile to attempt to draw down the transversalis aponeurosis. The author closed his paper by a consideration of various operations for hernia, and the parts usually divided in the incision, as on this point, he said, there had been some confusion in the published descriptions of the operations.

Dr. William B. De Garmo said that in the Bassini operation he had been in the habit of separating the internal oblique from the fascia beneath and the external aponeurosis above, so that it came down to Poupart's ligament without undue tension. He had not felt that it was necessary in any case to split the rectus. Even in the largest hernias he had succeeded in closing them by the Bassini method pure and simple. His first puncture of the internal oblique and transversalis was made considerably higher than that of many other operators. He did not cut the muscular fibres passing above the cord; he stripped them up and tried to preserve them. He had operated upon over six hundred unselected cases, and there had been only six recurrences. These patients had been of all ages—from five months to extreme old age.

Dr. Coley said that the cutting of the fibres of the internal oblique had always seemed to him a great defect of the Halsted method. In the Bassini operation, as he had done it, great care had been taken not to cut these fibres. By thoroughly freeing the apo neurosis over the internal oblique, and bringing the internal oblique from the transversalis fascia below, he had never experienced any difficulty in bringing the fibres down easily to Poupart's ligament. The only conditions in which Bloodgood's operation seemed indicated were in cases of large direct hernia. Even in the few cases of this kind that he had had there had been no difficulty in securing good apposition of the parts and firm union without splitting the rectus. Such division of the muscle seemed to be called for in only a very small number of cases.

Dr. J. P. Tuttle asked what the drawings exhibited by Dr. Blake showed that had not been brought out by Alexander H. Ferguson in his paper published last June.

Dr. Blake replied that in Dr. Ferguson's paper it had been shown that the internal abdominal ring was normally situated a considerable distance lateral to the insertion of the fibres of the internal oblique. The paper had been entirely upon the anatomy of the internal oblique muscle. Dr. Blake's paper, on the other hand, was intended to show just what was meant by the conjoined tendon.

Preliminary Report and Demonstration of a New Method of Sterilizing Catgut.—Dr. C. A. Elsberg presented this report. He said that there was much difference of opinion regarding the relative value of the non-absorbable ligatures and the absorbable ones. The use of catgut had been considerably curtailed by the difficulty of uniformly securing complete sterilization without interfering with certain properties of the catgut. Sterilization by dry heat had been recommended, but time, care, and special apparatus were required. Most of the fluids that had been used for this purpose were inflammable, or their vapors were, so that they must be boiled in special apparatus. Formalin catgut was often excellent, but under the same conditions of preparation it was sometimes soft and strong, and at other times hard and fragile. This catgut was absorbed somewhat more slowly than that which was prepared by other methods. Prolonged immersion in dilute solutions of antiseptics required time, and the catgut so prepared was not always reliable. Sterilization by dry heat was impracticable. The requisites for good catgut were sterility, strength, softness, and pliability. In the method about to be described he had made use of a very well-known chemical principle, *i.e.*, that animal substances were insoluble in solutions of those drugs by which they were themselves precipitated. Thus, ammonium sulphate was precipitated by albumin, and therefore albumin was insoluble in solutions of ammonium sulphate. This substance was made use of in this connection, and certain hitherto unknown properties of this substance had been discovered and applied in the new method of sterilization about to be described.

Technique.—The fat should be removed from the catgut by immersion for forty-eight hours in a mixture of one part of chloroform and two parts of ether. The catgut should be wound tightly in a single layer on spools. The chloroform and ether mixture was then allowed to evaporate. The spools were next boiled from ten to thirty minutes in a hot saturated solution of ammonium sulphate in water. This solution was made by adding chemically pure ammonium sulphate to boiling water until saturated or almost saturated. This salt was a neutral salt which became acid on boiling. It boiled at 220°–226° F. When the spools were removed from the boiling solution, some of the salt crystallized out upon them, but this was removed by a momentary immersion in a cold or warm sterile water. It might then be preserved dry, or in alcohol. Careful experiments showed that the catgut was as strong as before treatment, and sometimes stronger. It was readily absorbed in the tissues in from four to eight days. Bacteriological experiments showed that the catgut was always sterile after boiling in the ammonium-sulphate solution for five minutes. The catgut could be chromicized by boiling it in a chromic-acid solution of the desired strength. It was probable that catgut could be made more or less absorbable at will, depending upon the strength of the chromic-acid solution. His experiments on this point were not yet completed. Ordinarily the catgut should be boiled for twenty or thirty minutes in a saturated solution of ammonium sulphate in a 1 : 1,000 chromic-acid solution. The ammonium-sulphate solution could be used over and over again. As this salt costs only fifteen to twenty-five cents per pound, the method could not be said to be expensive; moreover, the solution was non-inflammable, and the method was so simple that no skill or elaborate apparatus was necessary. As a rule, the catgut should be boiled in the saturated aqueous solution of ammonium sulphate for from ten to twenty minutes. A method founded on the same principle, though somewhat modified, could be applied to the sterilization of sponges or other material of a similar nature.

Dr. George E. Brewer said that he had made some tests with this catgut in hospital practice, and had found it very soft and pliable, and exceptionally strong. The method was so simple that the profession should feel greatly indebted to Dr. Elsberg.

Dr. Willy Meyer said that for many years he had been accustomed to prepare his catgut by immersion in a 1 : 1,000 watery solution of bichloride of mercury, and preserving it in alcohol. However, the method just described seemed to be more in accordance with modern ideas of aseptic surgery. He would like to know if the raw, cheap catgut could be sterilized in this manner.

Dr. Blake said that it was admitted that to insure perfect sterilization there should be hydration of the albuminous elements, and hence the objection to dry sterilization or to boiling in alcohol. The method just presented subjected the albuminous materials to this process of hydration.

Dr. Elsberg said that he had tried a great many different grades of catgut, obtained from various manufacturers, and the bacteriological results had been absolutely identical in all of them, though the number of germs in these different grades had varied very greatly. It was important to wash out the ammonium sulphate after boiling, by immersion and agitation either in sterile water or in a solution of bichloride or of carbolic acid. This catgut had been used by Dr. Gerster in several herniotomies and in one very extensive radical operation on a carcinomatous breast in which over one hundred ligatures had been used, and the results had been perfect.

THE MEDICAL ASSOCIATION OF THE GREATER CITY OF NEW YORK.

Stated Meeting, February 12, 1900.

Robert F. Weir, M.D., President.

Inaugural Address: Remarks on the Formation of an Artificial Anus (see page 661).

Report of a Case in which the Operation was Done, with Remarks.—Dr. W. Gill Wylie, reported the case of Mrs. N. M——, aged forty-five years, who had been married twenty-five years. Her family history was negative as to cancer. Her general health had been good. At sixteen years of age she had had typhoid fever. She had had no intestinal affections previous to the present trouble. During May, June, and July of 1898 she had chronic intestinal obstruction, followed by jaundice in August. She had, at that time, vomiting, obstipation, and a great deal of pain in the abdomen. The jaundice slowly disappeared. In September, during an attack of acute obstruction, she was operated upon at Clifton Springs. She had a left inguinal colostomy performed, and the surgeon thought the obstruction was due to "bands." In November, 1898, an exploratory lapatotomy was done by one of the surgeons. He found a tumor of the bowel as large as a goose-egg in the splenic flexure of the colon, and the artificial anus was apparently made in the hepatic flexure. He thought there was a carcinoma of the gut, and closed the incision. Since then the patient had been perfectly well up to four weeks ago (the history was taken July 5, 1899). Then she began to have pain in the left side and back, which became constant and caused her confinement in bed. There were no bladder symptoms, no chills, no nausea, no constipation, but the temperature ran daily between 99° and 103° F. On July 9, 1899, operation was performed. Aspiration brought pus; then a free incision was made in the lumbar region and about two quarts of very foul-smelling pus was evacuated. A small sinus apparently communicated with the bowel. With the hand inserted into the cavity nothing could be felt but an apparently small stump of the left kidney. The wound closed up by granulation. On January 11, 1900, she returned and the artificial anus was closed. The bowel was freed from the edge of the skin and separated very carefully downward, freeing the fascia without opening the peritoneal cavity. The mucous membrane was first stitched, then came the muscles; and finally Lembert sutures of silk were introduced into the peritoneum. The fascia and abdominal wall were closed in the usual way with silk.

Discussion.—Dr. Robert Abbe said that if an artificial anus could be made to contain fluid this would be an admirable procedure. To-day the operation was much more often done than a few years back, especially when a bad cancer was situated below. If such a procedure could be resorted to he believed that it should be done in every case of inoperable cancer, in order to give patients better health. His own experience had been with the Maydl method, which he found very satisfactory; but in the future he certainly would adopt Dr. Weir's method. Maydl's method had certain advantages; for instance, in most cases the operation could be done under cocaine anæsthesia; probably one-half of all the cases could be done in this way. He had resorted to the use of the intermuscular method, but it did not seem to him to be of great value, having certain disadvantages; the two ends of the intestine could not be brought through the intermuscular layer with the same satisfaction as to the future closure of the opening as when brought out through the end of the wound. If it was desirable to get the two ends separate we must go through the deep muscular layers of internal oblique and transversalis muscles, because, when the two ends were brought out of the wound, there was not enough room to unite the skin well together. Returning the lower end of the intestine was the most popular method, and he had adopted it in the last two or three of his cases. This got it out of the way; it was perfectly innocent; the slight secretion of mucus discharged itself. Inverting the lower end, at the same time handling the upper end, was not easy in cases of stout people; sometimes extensive epiploic masses became very troublesome; if the attempt to invert was made, the question arose, whether it could be done satisfactorily. The ends popped out; if they were cut off there was slight hemorrhage; therefore, with fat people he thought it was very difficult to invert. The question of circulation should not be overlooked in bringing out the upper portion of the bowel; occasionally gangrene of the distal end had occurred because the circulation had been none too good.

Dr. William B. De Garmo said his experience had been largely mechanical in trying to prevent leakage. He appreciated the importance of trying to secure some operation that would aid in preventing leakage of the bowel. The appliances usually shown had been in the form of a truss with a hard-rubber pad; he thought the soft-rubber pad better. He had labored many hours in trying to adjust appliances to prevent soiling, but with poor satisfaction. He believed the operation suggested was a rational one.

Dr. Arpad G. Gerster said that if we would think back twenty years and recall to memory the status of colostomy, and compare it with what it was to-day we all must see an enormous revolution in the operation. Colostomy was then considered a dreadful thing. It was then only a palliative measure—to relieve patients of uncontrollable vomiting. To-day it was one of the most useful operations. To illustrate: one experience he had was in the case of a man who was a waiter in Delmonico's for twelve or thirteen years; he waited on his various customers with an artificial anus in his groin, and none of them knew of it. He was able to attend to his business perfectly well. He recalled experiences with lumbar colostomy years ago, when the surgeons dreaded coming in contact with the peritoneum; the peritoneum tyrannized every surgeon. Often the old war-horses, following the old strict precepts, failed to find the colon, but found the upper part of the small intestines, and so had a most alarming form of fistula result, which tended to hasten their patients over to the majority more quickly than otherwise. This operation became useful only when the bowel was attacked from in front. The greatest drawback to lumbar colostomy was that the patients could not control their movements. This was obviated when the artificial anus was made in front. Regarding the various methods he wished to state, from his own experience and that of his colleagues, that there was no one operation invented that would obviate all the drawbacks of an artificial anus, such as leakage, etc. He believed that the old operation, the old Maydl procedure, gave just as admirable results in that the patients could control their bowels. These muscular methods he did not think were always successful; certain conditions arose which each surgeon must contend with, and which were peculiar to each individual case. He called attention to the enormous difference in the tonus of muscles in various individuals—a strong muscular man had a tonus of muscles different from that in a woman who had borne ten or fifteen children. All this showed that the operation was not yet what it ought to be. On the other hand, he stated that old operations had given good results. Why any operation had not been successful we have learned to explain in some cases, but not in all. For instance, in some cases there was found an extremely long mesocolon; sometimes there was found a short mesocolon, and then the operator was in a quandary as to further procedure. The status of the colon was very important. Prolapse could be prevented by withdrawing as much as possible of the bowel, making a tense mesocolon, and then sacrificing to prevent eversion of the mucous membrane. Most disagreeable effects were produced by the irritation of the skin, which was caused by the irritable qualities of the acidulated contents of the intestines. If the intestinal contents were neither alkaline nor neutral, but acid, an eczema would be produced which was difficult to control. The speaker emphasized the importance of intestinal hygiene, regulation of the diet to keep the fæces solid, often dosing with alkalies; he advised experimenting with the patient to learn what diet would keep the fæces solid in consistence. If these endeavors proved successful, large scybala would act as in the rectal pouch, and would produce an energetic contraction of the bowel, and the whole mass would be expelled.

Methods of Closure.—Very frequently and very fortunately, surgeons were called upon to close an artificial anus after its purpose had been fulfilled. This was one of the most agreeable duties a surgeon had to perform. The two methods were (1) extra-peritoneally; (2) intra-peritoneally. The extra-peritoneal operation was less risky, yet a great drawback was the fact that it so often resulted in ventral hernia. In women this was very disagreeable. He could hardly indorse the opinion expressed by the president that it was best to dissect away the colon from its adhesions, invert it, and then perform the radical operation for the cure of a ventral hernia.

DR. HOWARD LILIENTHAL said that an artificial anus could be made wind and water tight by the Gersuny method, in the sacral region. He was glad that Dr. Gerster had referred to the changed conditions regarding colostomy, and especially that he had brought it before this society. Many family physicians had old-fashioned ideas that the formation of an artificial anus meant an earlier grave; he did not believe that too much could be done to get rid of that idea. In spite of what Dr. Gerster had said regarding the closure of an artificial anus, he certainly believed that the danger was a pretty real one. He had had the hard luck to lose one patient in closing an artificial anus. The disease had been cured, but the patient died from his attempts to close the artificial anus. He believed that such a thing could happen, and it ought to make us more careful in advising colostomy in every case of cancer. He was not afraid of the operation, but he thought that patients should be made aware of the dangers in closing an opening of that nature. Regarding the extra-peritoneal method giving rise to subsequent hernia, it seemed to him that a subsequent operation could be performed safely. He felt that we were justified in attempting to close these openings extra-peritoneally.

DR. GEORGE WOOLSEY confessed that he still retained a certain dislike to the formation of an artificial anus belonging to that class called the permanent type. The reason had already been mentioned, that no operation had been invented that could control the evacuations. Personally he had never tried the operation reported to-night, but so far as the control of the movements went it seemed to him that it was better than Maydl's, which he had used. Regarding Dr. Abbe's question in reference to the vitality of the intestine brought out through the opening, he understood that it was the lower end of the gut that was necrotic in the third case of the president's, the upper end not being affected. He thought that, at the present time, intestinal anastomosis could in most cases take the place of the formation of an artificial anus in the small intestine. When an artificial anus was required simply as a temporary measure, he thought it might prove of value. If we had a perfect method of producing an artificial anus he thought all surgeons would admit the usefulness of the procedure to be very great.

DR. MARKOE said that the protrusion of the mucous membrane could be prevented by drawing down the upper loop; in that way there was no question that the discharge from the upper into the lower loop could be avoided. At the present time he had two patients in whom, by slight attention to the food and by a properly fitting pad, this was prevented. In the presence of a diarrhœa there was no remedy for this great drawback. By attention to intestinal hygiene he thought we could get a fair control. The relief of pain and of a certain amount of sepsis by the establishment of an artificial anus in cases of ulcers, carcinomas, etc., he thought was very marked.

DR. BREWER said that if the operation was done in the region of the cæcum there was less likely to be gangrene than if it was done in the descending colon; the anastomosis there was freer.

DR. ROBERT F. WEIR closed the discussion. He believed the determining question was the possibility of gangrene in that portion given back into the abdominal cavity.

Medical Items.

A Trichobezoar (hair tumor) weighing 160 gm. in a dry state, and removed by laparotomy from a twelve-year-old girl, was demonstrated by Schopf on October 27, 1899, at the Gesellschaft der Aerzte of Vienna. The girl, from her fifth year on, had been in the habit of biting at her hair. About a year before the time of operation the patient began to vomit and to have pains in the stomach; a tumor appeared in the region of the stomach, and was diagnosed as a floating kidney. A long process of the hair tumor extended into the duodenum. With the operation all disagreeable symptoms disappeared. According to Schopf bezoars are common in animals (horses, goats, cattle, swine, etc.), but only sixteen cases have thus far been described in man, and of these seven have been cured by operation. — *Wiener med. Blätter*, No. 44, 1899.

Traumatic Aneurism of the Carotid Artery Caused by a Sewing Needle.—Douty (*Lancet*, December 9, 1899, p. 1584) reports the case of a man, sixty-two years old, thin but healthy in appearance, without a history of syphilis or of other previous illness of importance, who three weeks before coming under observation began to complain of soreness of the throat, with difficulty and pain in swallowing. Nineteen days later a lump appeared on the right side of the neck, and on the following day the patient began to spit blood. This latter symptom had persisted for two days. The blood was bright red in color, and frothy in character. It was generally expectorated in small quantities, although it was stated that on two occasions the patient had been nearly choked by a sudden rush of a pint or more of blood. On examination a pulsating swelling was found on the right side of the neck reaching from the angle of the jaw to the clavicle. A thrill and a loud bruit synchronous with the systole of the heart were present over the swelling. The area of cardiac dulness was normal. On auscultation nothing abnormal could be detected in the heart-sounds except that the aortic second sound was accentuated. There was no appreciable difference between the radial pulses on the two sides, but the right temporal pulse was markedly smaller than the left, and also delayed in time. The right pupil was contracted. Digital examination of the pharynx revealed an ulcer behind and below the epiglottis on the right side, from which point the blood appeared to come. The patient was operated upon within a few hours after coming under observation. The swelling extended so far down that it was thought necessary to tie the innominate artery. This vessel was explored, but the proximal part of the carotid being found healthy, this vessel was tied with two silk ligatures about a quarter of an inch from the bifurcation, and the pulsation of the tumor ceased absolutely. There was much restlessness after the operation, but this was controlled by hypodermic injections of gr. $\frac{1}{6}$ of morphine. On two occasions during the following day there was marked left unilateral sweating of the face and head, each lasting for about an hour. A small quantity of blood was expectorated. Subsequently the patient again became restless and the pulse weak, and death occurred suddenly. On opening the incision after death the artery was found to be securely tied by double ligatures, below which there was no aneurismal dilatation. The first part of the aortic arch appeared to be dilated, but when opened afterward nothing abnormal was to be seen, and its circumference was found to be normal. The common carotid was lost in a mass that was copiously suffused with blood, so that it was impossible to dissect out the various structures. The carotid artery, however, did not open into anything like an aneurismal sac. In the process of dissection the mass broke down, and much soft coagulum appeared. The tumor-like mass was formed below the angle of the jaw or on a level with the thyroid cartilage. On careful dissection it was found that the spine was not affected—*i.e.*, not eroded, etc.—and that the bleeding had extended behind the pharynx and the œsophagus, forming a small tumor-like mass on the left, on a level with the cricoid cartilage. On opening the carotid and tracing it upward, no aneurismal dilatation whatever was found, but on a level with the cricoid cartilage there was an eroded opening through which blood had passed into the parts around, so as to produce the hemorrhagic tumor-like mass. Just outside, *i.e.*, to the right of the carotid artery, on a level with the eroded opening, a sewing-needle was found, point downward and blackened. On opening the pharynx and the œsophagus, on a level with the upper border of the cricoid cartilage, an ulcer was found opening into a cavity as large as a hazelnut. This cavity was continuous with the hemorrhagic mass on the left and on the right. It was, therefore, assumed that the needle had caused the ulcer and that it had passed through the œsophageal and pharyngeal walls, and pierced the carotid artery, producing a traumatic aneurism. There was neither atheroma nor granular kidney. There was much œdema of the veil of the palate and the posterior wall of the pharynx, and also of the larynx. There was, however, no evidence of paralysis of the vocal bands, although the right band was œdematous. Lungs, heart, and brain were normal. It was learned that the patient had been a beer-drinker, and that he drank large quantities. A week before his symptoms had begun, he had, when with friends, drunk a very large quantity, and more than was good for him. It is probable that while semi-intoxicated he swallowed the needle, which became impacted in the pharynx, working its way subsequently into the carotid artery.

Deadly Drugs are manufactured on a large scale in Baltimore, and a recent publication of that city gives many interesting facts connected with their production and the care necessary on the part of the workmen employed. Hydrocyanic acid is produced in air-tight retorts and receivers to obviate the danger from inhaling the fumes, which even in minute quantities are deadly. While the compounds of copper and sulphuric acid are considered dangerous, the manufacture of nitric acid seems to be especially dreaded, because of its volatility. The story is told of the accidental breakage of a carboy of the acid, setting fire to some sawdust and then to a room in which many men were at work. Four workmen who volunteered to put out the fire to save the entire works succeeded in their efforts and were apparently unaffected by the fumes, until four hours later, when each became ill with distress in the chest, and in less than an hour all four were dead.

X-Rays in Pregnancy.—*The Lancet*, in its annual review of the Annus Medicus in its issue of December 30th, discourses as follows upon the above subject: "Very little progress appears to have been made in the use of the *x*-rays in cases of pregnancy. Professor Varnier, writing in April last, announced that while he had been able to obtain fairly good photographs of the child's head and its relation to the pelvis, he had not so far been able to obtain complete photographs of the whole fœtal skeleton in any one case. It is possible to obtain a good idea from an *x*-ray photograph of the volume, position, degree of flexion, and amount of engagement of the head, but so far no attempts have been successful with the mother in the dorsal position in obtaining a complete view of the whole fœtal skeleton in utero. He believes the difficulty to lie in the fact that the pelvic and abdominal parts of the uterus lie in different planes, and, further, in the extreme thickness of the intervening maternal tissues—namely, the back muscles and the spinal column.

Modesty is a characteristic of physicians as a class, just as it is of all the truly great. Recent literature has shown one or two lapses. An Australian physician, for example, has described what he thinks to be a new affection, and has named it after himself in large type, instead of waiting for others to pay him the compliment.

Health Reports.—The following cases of smallpox, yellow fever, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended April 14, 1900:

		Cases.	Deaths.
Smallpox—United States.			
Alabama, Huntsville	April 4th	19	
Mobile	April 1st to 7th	11	
Colorado, Arapahoe Co.	March 28th	4	
El Paso Co.	March 28th	1	
Las Animas Co	March 28th	1	
Rio Grande Co	March 28th	1	1
Weld Co	March 28th	3	
District of Columbia, Washington	April 1st to 7th	6	
Illinois, Aurora	March 18th to 31st	14	
Chicago	April 1st to 7th	2	
Indiana, Evansville	April 1st to 7th	3	
Kentucky, Covington	April 1st to 7th	12	
Lexington	April 1st to 7th	2	
Louisiana, New Orleans	April 1st to 7th	50	23
Michigan, Detroit	April 1st to 7th	2	
Grand Rapids	April 1st to 7th	1	
Minnesota, Albert Lee	March 20th to 28th	2	
Anoka	March 20th to 28th	4	
Anoka Co.	March 20th to 28th	1	
Butterfield	March 20th to 28th	2	
Duluth	March 20th to 28th	1	
Freeborn Co	March 20th to 28th	1	
Kandigohi	March 20th to 28th	5	
Minneapolis	March 18th to 31st	18	
Rice County	March 18th to 31st	2	
Watonwan Co.	March 20th to 28th	5	
Missouri, St. Louis	March 10th to 31st	20	
Ohio, Cincinnati	March 23d to 30th	3	
Cleveland	April 1st to 7th	24	
Pennsylvania, McKeesport	April 3d to 10th	2	
South Carolina, Greenville	April 1st to 7th	2	
Virginia, Roanoke	March 30th to 31st	7	
Washington, Spokane	April 1st to 7th	7	
Tacoma	March 24th to 31st	1	
Smallpox—United States Insular Possessions.			
Philippine Islands, Manila	February 17th to 24th	5	
Smallpox—Foreign.			
Argentina, Buenos Ayres	January 1st to 31st	2	2
Austria, Prague	March 10th to 17th	3	
Belgium, Antwerp	March 10th to 17th	3	1
Brazil, Cairo	February 25th to March 11th	..	13
England, London	March 3d to 17th	12	
France, Lyons	March 10th to 17th	..	1
Nice	February 22d to March 15th	0	4
Paris	March 17th to 24th	..	2
Gibraltar	March 18th to 25th	11	1
Greece, Athens	March 10th to 24th	19	9
India, Bombay	February 20th to March 6th	..	537
Mexico, Chihuahua	March 17th to 31st	..	7
Vera Cruz	March 24th to 31st	..	9
Russia, Odessa	March 10th to 24th	15	5
St. Petersburg	March 3d to 10th	31	12
Warsaw	March 3d to 10th	..	3
Spain, Corunna	March 3d to 10th		1
Valencia	March 18th to 24th	1	1
Straits Settlements, Singapore	February 17th to 24th	..	3
Switzerland, fifteen towns	February 10th to March 10th	..	2
Turkey, Constantinople	March 19th to 26th	..	1
Yellow Fever.			
Brazil, Rio de Janeiro	February 9th to 23d	..	32
Colombia, Panama	March 20th to 27th	3	1
Cuba, Havana	March 24th to 31st	..	1
Mexico, Vera Cruz	March 24th to 31st	..	2
Plague—United States Insular Possessions.			
Hawaii, Honolulu	March 25th	..	2
Philippine Islands, Manila	February 10th to 24th	19	15

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Original Articles.

BOTTINI'S OPERATION FOR THE CURE OF PROSTATIC HYPERTROPHY.[1]

By WILLY MEYER, M.D.,

NEW YORK,

PROFESSOR OF SURGERY AT THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL; ATTENDING SURGEON TO THE GERMAN AND NEW YORK SKIN AND CANCER HOSPITALS; CONSULTING SURGEON TO THE NEW YORK INFIRMARY.

Mr. President and Gentlemen: Bottini's operation for the cure of prostatic hypertrophy has come to stay. The experience of the originator of the method, covering a period of more than twenty years, and of many operators all over the world during the last three years, has proven the value of the procedure beyond the show of a doubt. If properly carried out in a suitable case, Bottini's operation *can* cure the patient afflicted with prostatic hypertrophy. It, therefore, clearly belongs to the class of radical procedures that have so far been devised for the treatment of this trouble. And it can cure such a patient in a comparatively simple way at a stage of the disease when even the most enthusiastic advocates of prostatectomy would not propose the operation, and the patient surely would refuse to submit to it; it can cure when prostatectomy might be impossible on account of, for instance, the too great softness of the gland, or of the too far advanced age of the patient. What remains to be done is to give Bottini's operation its proper place among the various radical operations for the relief of prostatic enlargement, to determine its proper indication.

Certainly this operation must not be done indiscriminately. The cases must be carefully selected, the same as has to be done for prostatectomy. Nor do I believe that the latter procedure will ever be entirely supplanted by Bottini's operation. But we shall have to learn which class of prostatic enlargement will be suitable for the former and which for the latter method of operation. It will, no doubt, take us a good while to determine this definitely, since nearly every case of prostatic enlargement in the advanced stage has its peculiarities, and is different in some respect from every other. A much greater series of cases will have to be operated upon, carefully observed, collected, and unbiassedly published by each individual operator, before we shall learn to decide this question of indication. I personally am inclined to believe, however, that the result of such investigation, based, not on "enthusiasm" as is so often claimed by the opponents of Bottini's operation, but on cold facts, will tend to lessen the indication for prostatectomy and establish the necessity of early operation for the disease in question according to Bottini's method.

As regards the results so far obtained with Bottini's operation, they have demonstrated: (1) that the urinary troubles of prostatics are not dependent upon a weakness of the muscles of the bladder, due to arteriosclerosis (Guyon and Lannois' theory), but are the direct result of a true mechanical obstruction to the normal outflow of the urine at the neck of the bladder, viz., the enlarged prostate gland; (2) that we are able to overcome this mechanical obstruction in a comparatively simple manner, namely, by the multiple division of the swollen gland with the galvano-caustic knife, which latter is part of a modern and reliable instrument; (3) that we can generally accomplish this without any additional operation on the cords, testicles, or bladder; (4) that we have every reason to expect that, if the desired result of the operation be once thoroughly obtained, the cure will in most cases be a permanent one.

In view of these facts it becomes the duty of every one who takes an interest in the further development of this procedure to give a résumé of his work from time to time, and make known the conclusions he draws from his experience. A proper comparison and study of these conclusions of the various operators will call forth suggestions as to the still further improvement of the technique of this delicate operation, and will place the indication for its performance on a firmer basis.

This is all the more important as there still are colleagues who not only condemn the operation as such, but deny that it does or ever will deserve the designation "radical." One of them recently claimed[1] that a cure could not be obtained by the operation, because the division of the prostate gland with the galvano-caustic knife could never effect "the restoration approximately to its normal position of the attachment of the vesical muscle to the prostate." This he considers one of the essential points in curing prostatic hypertrophy by direct interference. Of course, the argument is advanced on purely theoretical reasoning, according to the doctor's own statement. The author of the dictum as reported in the Medical Record "had done the operation but once. In spite of all efforts, the result was most unsatisfactory. He had seen several cases which had been operated upon by this [Bottini's] method by well-known surgeons, and in all of these the later results of this operation had been unsatisfactory. The operation did not promise to accomplish sufficient drainage to the bladder. The best that could be said for Bottini's operation was, that it caused temporary amelioration in the symptoms of retention. He desired to protest against the views which were being so freely expressed, by men whose opinion was entitled to respect, in favor of this operation; too much had been claimed for it. . . . It was a good thing to be progressive and to try new things, but it was most unfortunate to permit our enthusiasm to interfere with our scientific judgment."[2]

How a medical man can make so sweeping a statement in face of the entirely different experience we find published by surgeons all over the world, I cannot understand. He either did not follow the recent literature on this subject, or he refuses to accept as true the statements made by some of the most conscientious and unbiassed observers. However, with purely theoretical reasoning and sweeping statements, one can no longer nullify such absolutely positive and favorable results as have been achieved with Bottini's operation here and abroad. That time is past.

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[1] Read by invitation before the Medical and Library Association of Detroit, February 26, 1900.

[1] Report in Medical Record, December 30, 1899.

[2] The doctor's part in the discussion was read from a typewritten manuscript and then handed to the gentleman representing the Medical Record at the meeting. The report, as printed, is therefore authentic.

In view of the fact, however, that there still are such disbelievers among us, I deemed it my duty again to come forward and tell what I have learned regarding this operation in the course of my experience, which now covers thirty operations on twenty-four patients. Hence it was with a great deal of pleasure, indeed, Mr. President and gentlemen, that I accepted your kind invitation to come to Detroit and address you on a subject of my own choice. I really could find no better one than that now before us. I dare say it is superfluous for me to tell you how highly I appreciate your courtesy, which enables me to lecture here to-night before so distinguished a body of men. I know that the interest of the profession in the West for this fascinating procedure has been great from the start, that is, since the time when Freudenberg of Berlin revived it, and the first Bottini operations on this side of the ocean were done in New York in the fall of 1897.

Bottini's operation, at first glance, appears to be a very simple interference indeed; and while this is true of its immediate technique, it is by no means so with regard to many of its details. The point in this operation, the same as in every other, is not so much to do it, but to do it properly. And this certainly requires a great deal of personal experience, especially yet at present, when the patients afflicted with a hypertrophied prostate do not apply, as a rule, to the surgeon for relief until the disease has reached a very advanced stage. If we extirpate a vesical growth, or if we crush and evacuate a stone from the bladder, we know more or less what we have accomplished. We see the result of our work before us. Barring unforeseen complications, we are able to predict, with a reasonable amount of certainty, the future course of the disease. Not so with Bottini's operation. It will be a long time, I think, before we shall be able to state a definite prognosis in a given case immediately after the operation has been performed. The patient as well as the doctor must await further developments. It is just this uncertainty, however, that makes the after-treatment of the operation so interesting, and that, if the outcome be successful, gives the surgeon an amount of satisfaction that he can rarely hope to find in any other branch of operative surgery.

In order to unroll before your eyes a proper picture as to the present status in the evolution of Bottini's operation, it appears to me best to review, as briefly as possible, the different phases of the technique of the operation as they present themselves to us during its performance. This will enable us to determine, to some extent at least, how we can hope to avoid complications during the after-treatment, how we can hope to bring to the patient not only partial and temporary, but total and permanent relief, and that by means of one single operation.

I. Preparation of the Patient.—The patient is prepared in general the same as he is for any other surgical procedure. On the day prior to operation the bowels are thoroughly emptied, and the whole body is cleansed in a lukewarm bath. Shaving is unnecessary, as is also fasting. Local anæsthesia suffices for the operation. Fifteen grains of quinine are given on the night preceding the operation, eight more about one hour before the latter is done. As Nitze has found in his intravesical mode of removing benign tumors of the bladder with his operating cystoscope, internal administration of quinine prior to operation is the best prophylactic against the appearance of the so-called urethral fever. If one wants to be especially careful, the quinine is administered a number of days in advance of the operation, best, it seems, in connection with two to three grains of methyl blue (Freudenberg). See below under "urethral fever."

II. Instruments.—As stated in my paper read before the New York Academy of Medicine, November 3, 1898,[1] Bottini's incisor, as modified by Freudenberg, is now manufactured in New York, in a most satisfactory way. In my last twelve cases I have made use of this incisor and have not had a single complaint to make of it. Once only within the last year did it become necessary to have the incisor repaired, the knife not sliding in its groove with sufficient ease. For safety's sake, however, I invariably have two instruments on hand for every one of my operations; for it could well happen that the operator or his assistant might drop the instrument, or injure a part of it, etc., and thus the operation would be rendered impossible for that time. I certainly have derived great comfort from the sense of security afforded by the presence of a second instrument, the proper working of which I had also previously tested, to fall back on in case of an accident to the first. The incisor I use—which is a copy of that made by Kiss, of Berlin—can be easily unscrewed and sterilized in boiling water.[2]

A very important point is the proper heating of the knife. Recently I was informed that a colleague in Boston had had trouble with the incisor made in New York. Great difficulty had been experienced in extracting it, and when finally removed from the urethra it was seen that the blade had bent sideways. I fancy that in this instance too much current had been applied. It can be readily understood that if we overheat the knife, a slight unintended twist of the shaft, the handle of which rests in the left hand of the operator, or a sudden move on the part of the patient, may turn the knife sideways. On its return trip through the prostate gland it will then not re-enter the groove at the beak of the female part. The best means of heating the knife is certainly the current supplied by a central station. With the help of an alternator and rheostat we have full control of it and an inexhaustible, steady supply. Unfortunately, it is not everywhere at hand. Hence we need a storage battery. The one with an amperemeter, as recently brought out by me—best answers the purpose, I think.[3] It gives 50 amperes, and if properly charged will furnish sufficient current for the work. It must be well taken care of, however. a weakness which it shares with all other batteries. Special directions are sent out with each battery. If they are properly followed, many repairs and consequent annoyances to the operator will be avoided. To guard against possible disappointment, it is advisable to recharge the battery the day previous to the operation. When using two 50-candle-power lamps it will take ten hours to charge the battery; five hours when two 100-candle-power lamps are employed. When fully charged, the battery will store sufficient electricity to do three successive operations, each lasting about ten minutes; but if they are not done on the same day, recharging is advisable, for the current steadily diminishes during non-use.

To demonstrate the importance of personally supervising the charging of the battery in cases in which the street current is not available for doing the operation, I will relate the following instance: Recently a colleague who, with me, believes in the efficiency of Bottini's operation, told me that the storage battery, as designed by me, had given out in the midst of the operation, and therefore could not be looked upon as a reliable supply. Upon my query whether he had charged the battery himself, he answered that it had been sent to him with the statement that it was properly charged. On further inquiry I learned that the company which had furnished the battery was not in a position to charge batteries, for the reason that it was not connected with the street current, and that it therefore sent all batteries entrusted to it for charging to another concern. I am sure my friend would have been saved the annoyance above mentioned, had he personally supervised the charging of the battery. The only disadvantage of this battery is its weight. It is heavy. Experience has shown, however, that cells of smaller size cannot be trusted for this particular kind of work.

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[1] "Personal Experience with Bottini's Operation in the Radical Treatment of Hypertrophy of the Prostate." MEDICAL RECORD, January 14, 1899.

[2] *Cf.* Author: "Bottini's Galvano-Caustic Radical Treatment for Hypertrophy of the Prostate." MEDICAL RECORD, March 5, 1898, p. 327.

[3] The addition of an amperemeter to the battery used for Bottini's operation, we owe to Freudenberg.

III. Operation.—Bottini's operation is certainly one of detail. "The oftener I applied the galvano-caustic incision," says Bottini,[1] "the more I became convinced that the technique requires adroitness and care in order to avoid annoying surprises. To be successful with the operation is not mere chance, but the result of careful study and conscientious performance." I therefore do not hesitate to describe to you minutely all the various steps to be observed in the course of the procedure, even at the risk of overtaxing your patience.

I personally carry the operation out in the following manner: The surgeon, after proper sterilization of his hands, should stand on the right side of his patient, who is placed on a table and covered below and above the pubes with sterilized sheets or towels. The glans and prepuce are thoroughly cleansed with soap and water, bichloride solution, and alcohol, the same as is customary in our daily operative work. The battery is placed on a table to the left of the patient, so that it is always in full view of the operator. A soft-rubber catheter which has been boiled for three to five minutes is taken from the bowl of sterilized water and handed to the surgeon, its tip being lubricated with boiled glycerin or sterilized paraffin. It is first introduced down to the cut-off muscle, and the anterior urethra is then irrigated with a two-per-cent. sterilized boric-acid solution. After that the catheter is pushed on into the bladder. If the soft-rubber catheter cannot successfully overcome the obstruction at the neck of the bladder, a Mercier's gum-elastic—which I keep disinfected in a five-per-cent. solution of formalin with glycerin—must be used. Then the bladder is thoroughly irrigated with the same two-per-cent. sterilized boric-acid solution, until the water returns clear. As soon as the latter has been accomplished, 50 c.c. of a three-per-cent. sterilized boiled eucaine-B solution is drawn into a hand syringe; the catheter is pulled out so far that its eye still rests within the posterior urethra, and the solution is slowly injected. This will produce local anæsthesia of the parts to be operated upon.[2] The catheter is pushed back into the bladder and its outer end closed with a stopper. During the following five minutes—the time required to produce sufficient and proper local anæsthesia—the operator will do wisely to test once more the proper working of the incisor, which has meanwhile been taken apart and boiled. Bottini himself advises to test the heat of the knife on a piece of moist gauze or potato. I must confess that I no longer do this, but trust in the reliability of the instrument and the proper charging of the storage battery which I personally superintend. If the current turns the knife to white heat, I am satisfied. This generally occurs when the needle of the amperemeter in my battery points to 45–48. A properly instructed attendant takes charge of the battery and, later on, turns the rheostat till 48 or 50 is reached, according to the orders of the operator. The cable attachment is now pulled off the instrument, and a long and small rubber tube, previously boiled, is slipped over the two metal tubes which are attached to the handle of the incisor, for the purpose of supplying and carrying off the ice-water used to cool off the instrument when at work. Thus prepared, the incisor is placed on an aseptic towel.

After the expiration of the five minutes allowed for the local anæsthetization, the eucaine solution is withdrawn, and 150 c.c. of a sterilized boric-acid solution introduced. The catheter is pulled out. Then the patient's pelvis is placed on a hard pillow some twelve inches high, so that the upper part of his body is tilted slightly downward.

He spreads his legs, between which a pus basin is placed on the table. With a small sterile glass syringe the anterior urethra is now once more washed out with sterilized boric-acid solution and then filled with three-per-cent. eucaine solution. While the fingers of the left hand compress the urethra near the external meatus, those of the right hand gently massage for a while the urethra toward the bladder. By doing this a part of the eucaine solution is pressed into the posterior urethra. This still further insures complete local anæsthesia of the latter. After the remaining part of the solution has run out of the meatus, a syringeful of sterilized paraffin is slowly injected into the anterior urethra, the meatus being compressed. The nurse then hands the incisor to the surgeon for introduction into the bladder. In the majority of cases the handle must be deeply pressed down before the beak slips into the viscus. Cases in which the instrument cannot be introduced at all will be a rare occurrence, I think. In one only of my twenty-four cases did I find difficulty, but I succeeded in my third attempt.[1] As soon as the instrument has entered the bladder, it is turned around, and the glass nozzle of the fountain syringe which contains the ice-water is attached to the long rubber tube previously fastened to the handle; the short tube is made to enter the pus basin between the legs of the patient. Now the cable attachment is slipped over the upper end of the instrument, and the prostate well hooked with the beak of the incisor exactly in the median line. This is one of the most essential parts of the operation. At this stage the right forefinger (covered with a finger cot) of the operator should be pushed into the rectum in order to control the place of the tip of the beak within the bladder and properly gauge its distance from the anus. In patients with a very much enlarged gland, a short forefinger will never succeed in feeling the tip of the beak. For such instances it will be well to have an assistant at hand on whom nature has bestowed a forefinger long enough to enable him to reach up four inches and more above the anus, as I have found it necessary in two cases. Having measured the distance of the beak from the anus, the operator must make up his mind how long the incisions should be made in the given case. Now the rheostat is turned, so that the needle points to 45 amperes. The screw of the cable-attachment, which makes and breaks the current, is turned to the right and tightened. We wait about fifteen seconds—the time required for properly heating the knife. The real operation may now be started. I now generally make three cuts, one in the median line directly posteriorly and one through each lateral lobe. The posterior cut is, of course, the most important one. It is made first. As stated in my former paper, the incisions are made very slowly, by turning the outside screw as if the knife had to overcome a very great obstacle, with 45 amperes. For the return trip 49-50 amperes are turned on; this, too, is made at no greater speed than the first. The lateral cuts I make at an angle of from 45° to 90,° and I must confess that I have no definite rules yet that guide me in determining the exact angle. So far I have based my decision in this respect on the previous cystoscopic examination and on rectal palpation; that is to say, the larger the lobe the more acute the angle. The anterior cut I have given up entirely since it caused me the loss of a patient (see below, Case XVII.). While the incisions are being made the assistant now and then auscultates the suprapubic region to make sure of the sizzling noise produced by the cauterization. However, the odor of burnt flesh, escaping from the meatus, and especially the needle of the amperemeter give us assurance that the work is being properly done. The operation performed this way takes me generally about ten minutes, counting from the moment the current has been turned on until the third incision through the gland has been finished. During this time I never turn off the current, but only reduce its strength to 45 amperes after each return trip of the platinum knife. The three cuts having been properly made, the current is turned off and the cable detached from the instrument; the latter is turned 180° and slowly withdrawn. During this procedure I continue to let the current of ice-water pass through the instrument. A reintroduction of the catheter for final irrigation I deem unnecessary. The patient, after being cleansed, is brought to bed.

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[1] Langenbeck's Archiv, vol. liv., p. 118.

[2] For the last four weeks I am trying a one-per-cent. sterilized watery solution of chloretone, for producing the desired local anæsthesia, with quite satisfactory results so far.

[1] Freudenberg had an interesting experience in this respect in a patient sixty-seven years of age, who had had complete retention for the last two years. He was absolutely unable to enter the bladder with any stiff instrument; cystoscope, stone searcher, sounds, as well as Bottini's incisor, were all unsuccessfully tried. The operation had to be abandoned for that day. On the following days sounds of increasing size could be introduced; three days after the first attempt the introduction of the incisor succeeded, though with some difficulty. Bottini's operation was done, and the patient was cured.

IV. After-Treatment.—In my former cases I generally insisted upon the patient's attempting to pass some water immediately after the operation, but found that very few only were able to discharge a few drops under pain, and I therefore no longer make this request; although I am sure that in a number of cases the occasionally following urethral fever would be avoided if the patients could, immediately after operation, clean the urethra with part of the fluid retained in their bladder. I have also given up attempts at introducing the catheter into the bladder as a routine practice directly after the operation, with the view of leaving it in place, except in cases with a very pronounced vesical catarrh, and in which catheterization had always been difficult. I now prefer to await further developments, but must confess that I am always relieved to learn that the patient has begun to void urine voluntarily within the first hours after operation. If, on the other hand, retention sets in, the reactive swelling of the gland in advanced cases may be so tremendous as to tax to the utmost our capability of emptying the viscus (see below, Case XX.). If the patient begins voluntarily to urinate, the after-treatment is comparatively simple. "Hands off" is the watchword as far as instrumental interference is concerned. The probably following painful spasms at the neck of the bladder are overcome by morphine and suppositories of opium and belladonna. Salol, urotropin, and strychnine (as stated in my former article) constitute the drugs used for internal medication.

Some patients, while they are able to pass some water after the operation, are subject to such great and constantly recurring pain during and after each act of micturition, day and night, that they are soon worn out. In such instances, whatever we may employ, anodynes, sitz-baths, or permanent catheter, is of no avail. With the withdrawal of the latter—even after six or seven days of continued drainage—the pain reappears, and early repetition of the operation is the only alternative left to these sufferers. This brings relief, as I have observed in two instances (see Cases VII. and XX.). In cases in which absolute retention follows, and the introduction of the catheter is not difficult, I should prefer the use of the latter at regular intervals of six to eight hours, rather than to leave it in place permanently. The latter, no doubt, produces funiculitis and epididymitis oftener and more easily than frequent catheterization.

In instances in which a chill sets in, the surgeon must be careful to interpret its cause correctly. The chill may simply mean urethral fever of a few hours' duration; it may mean the beginning of a prolonged feverish attack, or of a more profound sepsis or pyæmia; or it may be the first warning of a perforation of the urethra from within with the galvano-caustic knife. Careful local and general examination will soon enable us to make a distinct differential diagnosis. The first three occurrences would have to be treated on general principles. Perforation of the urethra is promptly attended to by a perineal incision under eucaine, followed by drainage. If perforation has occurred, one can rest assured that the posterior incision has been efficient (!).

Inflammation of the cavum Retzii will not happen if we omit the anterior incision.

The length of time that I keep patients under my immediate supervision averages three weeks. While this may seem, and is, longer than necessary in some instances, it is not safe to let patients go any earlier, for the reason that hemorrhages may set in as late as twelve to twenty days after operation, the time when the eschars are cast off from the gland. If patients walk around, these hemorrhages may become more serious. They are generally easily controlled by rest, if more severe by the permanent catheter. In a few instances they have required suprapubic cystotomy and packing with gauze in the hands of others.

In favorable cases the quantity of urine discharged at each micturition will with lessening frequency gradually and continually increase until the normal amount is reached, in say two or three weeks, sometimes earlier.

I should now like to discuss a few important questions in connection with the operation, regarding a number of which differences of opinion still exist.

Should Cystoscopy Invariably Precede Bottini's Operation?—There can be no doubt that cystoscopy is of utmost importance, not only in establishing the diagnosis of prostatic hypertrophy, but also in determining the configuration of the gland. In cases in which the enlarged prostate is not palpable per rectum, and, according to Albarran and Motz, this is so in almost twenty-eight per cent. of all the cases—the cystoscope alone can establish the exact diagnosis. We see the pathognomonic groove at the internal urethral fold; on turning the prism posteriorly down to the fundus, we see the body of the gland often bulging into the bladder; on turning it to the sides, we recognize distinctly the enlarged lateral lobes, though not in full illumination. We are, furthermore, enabled to determine the absence or presence of a median lobe. And even if all these symptoms should, in exceptional cases, be but imperfectly developed, the finding of a trabecular bladder in the absence of a urethral stricture would still settle the diagnosis beyond dispute. Then, too, the cystoscope enables us to diagnosticate the presence of a vesical calculus which had not been suspected before, on account of its symptoms having been masked by those of the prostatic enlargement. Only very recently did I thus detect a stone in the bladder of a patient who had not had one of the clinical symptoms generally attributed to vesical stone.

Yet, notwithstanding the great benefit that may be derived from cystoscopy in obscure cases, it may become harmful in some instances, as for example in prostatics with chronic sepsis. Here cystoscopy, the same as any other intravesical instrumentation, may be followed by serious urethral fever. One should therefore well weigh the pros and cons in deciding whether this most desirable visual inspection should be added. I have grown particularly careful in this respect since I lost a case a few months ago as an indirect result of cystoscopy. The patient, a man of seventy-six years, who had been sent to me for Bottini's operation, was suffering with chronic cystitis and pyelo-nephritis. Cystoscopy was performed by me and followed by a protracted urethral fever to which he finally succumbed. I insisted upon the examination only because all symptoms pointed to the presence of a stone, so that it was necessary, under all circumstances, to resort to intravesical instrumentation of some kind in order to ascertain the correct diagnosis. The cystoscope proved the suspicion to be unfounded.

To sum up, I would therefore say: cystoscopy should precede Bottini's operation, provided there be no contraindication to its performance. What deserves to be especially emphasized, however, is, that in cases of doubt, *i.e.*, when the symptoms are misleading, and when all other means at our disposal for rendering the diagnosis could not be relied upon with absolute certainty, it is the cystoscope alone that can definitely clear up all doubt and enable us to establish the correct diagnosis even at an early stage of the disease.

Filling of the Bladder.—Shall we do the operation with the bladder empty, as Bottini at one time proposed, or shall we fill it with a fluid, or with air, or with carbonic acid gas?

1. Operation with the Bladder Empty: This procedure should be, and I think has been, dropped altogether. It is well known that by filling the bladder, at least to some extent, entrance to the same in prostatics per vias naturales is greatly facilitated. In the distended viscus the projecting hypertrophied rugæ of the detrusor muscle furthermore are smoothed out, and not so apt to be hooked by the tip of the incisor when gliding over the fundus of the bladder in order to hug the prostate. It was when doing the operation in this way that Freudenberg cut through a transversely running fold of the fundus of the bladder and lost his patient from acute sepsis.

2. Operation with the Bladder Filled with Sterilized Boric-acid Water: This is the procedure which, as stated above, I personally am still adhering to in my Bottini operations. What others claim to have experienced in their patients does not seem to me proven, viz., that the heating of the fluid immediately surrounding the galvano-caustic knife produces the scalding sensation. If the prostate is thoroughly hugged with the beak of the incisor, the knife must at once enter the prostatic tissue, and surely is surrounded by so very small an amount of fluid that I cannot understand how just the heating of this bit of fluid could be the principal source of the sometimes rather great pain to the patients. On questioning the latter regarding this point, I almost invariably received the answer that they did not mind the burning part of the operation, but that the pain produced by the compression of the prostate by far overshadowed all other sensations.

3. Operation with the Bladder Filled with Air: I personally should have no hesitancy about doing the operation with the bladder filled with air, were it not for the unfavorable results of the experiments made by Lewin and Goldschmidt, already referred to in my former articles.[1] I there stated that these two investigators had found that, under certain conditions, unknown to us, air may pass upward through the ureter into the pelvis of the kidney, and from there, by way of the branches of the renal vein, enter the inferior vena cava and the heart. Instant death is the result. I am aware of the fact that Dr. Bransford Lewis, of St. Louis, Mo., in his experiments,[2] has obtained results entirely at variance with the findings of the German investigators, and it was this report that impelled me to write direct to Professor Lewin, at Berlin, with a view to eliciting from him some data that might perhaps explain the apparent difference in their conclusions. Dr. Lewin, under date of June 29, 1899, sent me a most interesting answer, from which, with the author's permission, I quote as follows:

"The phenomenon of air ascending into the renal vein, etc., as well as the antiperistaltic transmission of liquid from the bladder into the pelvis of the kidney, does not occur in every animal. I have opened the abdomen of about two hundred animals in all, but have not succeeded in determining the conditions under which the experiment gives a positive result.

"I can say, however, almost with absolute certainty, that a constant pressure of air within the bladder, filling this viscus nearly to bursting, never produced the phenomenon in question. Whenever it appeared, it did so immediately after the injection of air, even when the bladder had been filled to a small extent only. It occurs, as it were, during the first moments when the air enters the bladder, sometimes also while injected air is allowed to escape again through the catheter; eventually, also, immediately after the second or third injection. Death is the absolutely certain consequence of the entrance of air into the venous system in this manner.

"I shall take opportunity, within the very near future, to demonstrate the aforesaid to Dr. Freudenberg" [who had then just stated, in a letter addressed to Dr. Lewis,[3] that he now also prefers to do his Bottini operations with air injection into the bladder, and who also, according to Professor Lewin, had interpellated him regarding the latter's entirely different findings from those of Lewis] "that he may learn from the same, what such experiments must teach, viz., *the possibility* of the occurrence of the phenomenon in question also in the human subject. More than that can, of course, not be claimed. The same conditions are extant here as obtain in the case of other dangerous operations. Hundreds of patients are unscientifically narcotized, the quality, the concentration, and dosis of the narcotic may not come up to the standard, yet, thanks to unknown circumstances, the patients do not die. But, in view of such occurrences, the conscientious physician will be mindful of the possibility of a fatal result."

With a view of obtaining personally further light on this important question, I have carefully studied the various original and other treatises of Professor Lewin regarding this subject.[4] The doctor's researches prove that the possibility of air entering the venous system by way of the renal vein does exist.

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[1] *Cf.* Author: *Loc. cit.*, MEDICAL RECORD, 1898, vol. liii., p. 332; and 1899, vol. lv., p. 41.

[2] MEDICAL RECORD, 1899, vol. lv., p. 425.

[3] MEDICAL RECORD, 1899, vol. lvi., p. 34.

[4] "Experimental Studies on the Relation between Bladder and Ureter," by Drs. L. Lewin and H. Goldschmidt. Berlin. klin. Wochenschrift, No. 32; paper read before the Berlin Med. Soc., July 12, 1893.—"Experiments on the Relation between Bladder, Ureter, and Renal Pelvis," by Drs. L. Lewin and H. Goldschmidt. Arch. f. pathologische Anatomie und Physiologie und klinische Medicin, vol. cxxxiv., i., Berlin, 1893.—"Absorption of Foreign Substances from the Bladder," published in the Arch.

In the face of these positive statements of Dr. Lewin, I believe I shall never agree to do Bottini's operation with the bladder filled with air. If sudden death should set in as a result of such filling, the conscientious doctor would have to confess that the lamentable outcome might have been avoided.

4. Operation with the Bladder Filled with Carbonic Acid Gas or Oxygen: As just stated, some colleagues claim that the operation is less painful and, perhaps, also more effective when done with the bladder filled with a gaseous instead of a fluid medium. It was on the strength of these assertions and of the unknown amount of risk attached to ballooning the bladder with air, that, upon the suggestion of Dr. A. Rose, of this city, I experimented with carbonic acid gas filling the viscus. The blood is, of course, capable of absorbing large quantities of carbonic acid gas as well as of oxygen. The small flasks filled with liquefied carbonic acid gas, make the ballooning of the bladder with this gas a very simple procedure. I have not yet done a Bottini operation with the bladder inflated in this way. The question which has first to be solved is the amount of expansion of the gas caused by the presence of the red- or white-hot platinum knife. This question does, of course, not concern us, if we would work with oxygen. However, the chemical production of this gas in smaller quantities, instead of making use of the large tanks sold in cities by every druggist, is less handy than the use of carbonic acid gas in the manner just mentioned; oxygen also does not possess that slight anæsthetizing property which various authors have claimed for carbonic acid gas. I shall not fail to report on the further evolution of this interesting question in the near future.

Length of Incisions.—The question as to the length of the incisions to be made through the gland undoubtedly constitutes the most important and, at the same time, the most difficult point in the technique of Bottini's operation.

a. In cases of *fibrous* prostates the length of the urethra measured from the external meatus to the internal sphincter muscle, that is to say, up to the spot where the water of a filled bladder begins to flow through a catheter which had been introduced, may serve as a reliable guide in estimating the proper length of the incisions to be made. Such a prostate can be but very little compressed. If we have found the length of the urethra, for instance, to be 29 cm., the incision may with propriety be made 8 cm. long, because we know that the normal urethra is on the average 21 cm. long. In other words, we make the incision correspond to the difference in length between the normal urethra and that in the given case.

It will be wise to control and possibly modify this decision reached before the operation according to the result of rectal examination after the prostate has been well hooked during the operation.

A useful clew in regard to the required length of the incision is furnished by rectal palpation, performed in the following manner: If an assistant (the proper length not only of whose forefinger, but also of each phalanx of the same, has been previously ascertained) inserts his finger into the rectum as soon as the prostate has been firmly hooked, and gropes for the tip of the instrument at the upper end of the gland, he can determine the exact distance of this tip from the anal ring. If he then again introduces his finger, measuring the distance of the lower end of the prostate from the sphincter muscle, and deducts the latter measurement from the former, we know the palpable length of the prostate per rectum. The length, thus found, can then be compared with the abnormal length of the urethra, previously ascertained. If, however, we now make the length of the incision exactly correspond to such rectal diameter of the prostate, we may find quite often that the incision has not been sufficiently long. I have noticed this in a number of instances, and have come to the conclusion that it will be best to make the incision about 1 to 1.25 cm. longer than the longitudinal diameter of the prostate found per rectum. That is to say, if the tip of the beak was 8 cm. distant from the sphincter muscle and the lower end of gland 4 cm. in diameter, we should not make the incision 4 cm., but 5 to 5.25 cm. long.

b. All these points are entirely different, however, in the other far more frequent class of prostatic enlargement, namely, that in which *the glandular elements preponderate*, and in which, consequently, the organ can be compressed. Here the simple means of measuring the length of the urethra is of little avail, for it is obvious that the length of the urethra found before operation will be entirely different after the beak of the incisor has hugged the compressible gland. This shows clearly that in this class of cases the length of the cut to be made cannot be determined beforehand, unless we should, as a preliminary measure, ascertain to what extent the prostate may be compressed. Such a procedure, however, generally is inadvisable, inasmuch as it might be followed by very serious symptoms, so much so that Bottini's operation, the one interference that is likely to bring relief to the patient, might be rendered impossible. This question, how long must and dare we cut in the given case, must therefore, in the majority of our Bottini operations, be reached during the operative work. Some of the unforeseen occurrences that may then baffle the operator are, that a large median lobe may be turned back and thus increase the length of the urethra by almost an inch; or it may happen that the gland, which appeared quite large on rectal palpation, is so much compressed by the hugging beak that its diameter shrinks to almost *nil*, and the surgeon will ask himself whether his diagnosis, clearly established by all the exact clinical methods at his disposal, was correct, and whether there ever was an enlarged prostate.

That the occurrences here mentioned may often put the operator into a most annoying position, will be readily admitted. For if, in the case of a fibrous prostate with lengthened urethra, he should exhaust the full length which the ordinary incisor permits of cutting, namely, 4 cm., the incision may easily be too short and never properly divide the obstruction down into the prostatic urethra; an experience which I have had in a few cases. Or if in a soft, compressible gland he should make an incision of only 2.5 to 3 cm. in length, he may at once do a real internal posterior urethrotomy and perforate the urethra, an accident that happened to me in two instances. When operating on a patient with a very large prostate, and correspondingly lengthened urethra, I therefore now always make use of an instrument which allows of making incisions as long as 8 cm. This I have had made specially for such cases, in February, 1889.

I should strongly advise to make use of the incisor that permits of the long cut, (1) whenever the prostatic enlargement is very pronounced, so that the upper border of the gland cannot be reached on palpation per rectum, and particularly if the organ be of the fibrous variety; (2) whenever there is a median lobe of some size present; (3) whenever the length of the urethra has been found to be materially beyond normal.

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f. experimentelle Pathologie und Pharmacologie, vol. xxxvii., 1896, by Professor Lewin.—"The Passage of Hard Substances from the Bladder into the Kidneys and Remote Organs of the Human System," also "The Entrance of Air from the Bladder into the Heart and the Path it Follows," by L. Lewin, with microscopical contributions by Dr. Lommen. Arch. f. Experimentelle Pathologie und Pharmacologie, vol. xl., 1897.

In patients with a very soft and compressible prostate, on the other hand, I now make incisions not longer than 1 to 2 cm. I do not, however, in such cases omit to explain to the patient or his relatives why I had to make short cuts: that, in case of partial relief only being obtained by the operation, a possible repetition might become necessary, and that this would surely be preferable to perforating the urethra in our endeavors to overcome the obstruction by a single operation.

Number and Direction of Incisions.—As a rule three incisions should be made at every operation. Of these, as I have repeatedly stated in the course of this paper, the posterior one is the most important, since upon it principally depends the success of the operation. If properly carried out it must and should lower the prostatic urethra to the fundus of the bladder. In very much enlarged glands, and especially in the fibrous variety, I shall in future make it a point, when doing the posterior incision, to have the knife plough through the same groove twice in succession. Such a procedure is not likely to be followed by complications; at the same time it is sure to enhance the probabilities of obtaining the desired result.

The question of definitely determining the proper angle at which the lateral lobes had best be divided has not yet been solved. Practical experience has shown, however, that it is not of very great importance. As stated before, I am guided by rectal palpation and cystoscopic examination, that is to say, if these show considerable difference to exist between the size of the lobes, I cut through the larger lobe at a smaller angle than through the other, in order to obliterate more thoroughly the communicating blood-vessels. For it is evident that the closer together the cuts, the more effective will be the destruction and obliteration; in other words, local atrophy must be the result of such close division.

The anterior incision I have found to be of real danger. It should therefore be dropped; or at least made only in cases in which the result after the first and second operation is incomplete, and in which cystoscopy plainly shows the mechanical cause to be situated in the anterior aspect of the internal urethral fold. Freudenberg has recently published a very striking illustration of this condition.[1]

Depth of Incisions.—In order to insure the proper depth of the incisions the following three factors should be carefully observed: (*a*) Position of the instrument during the operation; (*b*) the height of the knife and the proper heating of the same; (*c*) due slowness in making the incisions.

a. To bring the instrument into proper position for making the posterior incision, the outside handle has to be raised to such a point that one can feel the tip of the beak glide over the fundus of the bladder. In this position the prostate should be firmly hooked, after which the position of the instrument should not be changed again. Of course, care must be taken not to raise the handle too much, as by doing this the tip of the beak will be pressed down too far, and damage might result to the posterior wall of the bladder.

b. Freudenberg[2] considers 1.2 cm. ($\frac{7}{16}$ inch) the best average height of the knife. He has knives the heights of which vary between 0.8 and 1.5 cm. ($\frac{4}{16}$–$\frac{9}{16}$ inch) and bases his selection of the proper one on the cystoscopic examination and rectal palpation of the tip of the incisor, which had been put in position and turned posteriorly. Although this may perhaps be useful in some instances, I fear it complicates matters unnecessarily, and am, therefore, in favor of trying to operate with one and the same size of knife in every instance. Moreover, the knife when brought to white heat and drawn very deliberately over the field—if needs be, twice in succession—will produce such a far-reaching eschar that a difference in height of 3 mm. can be of no appreciable account, as Freudenberg himself also admits. It is, of course, of greatest importance that the knife be brought to white heat in its entire length, a point to which particular attention should be paid when testing the instrument as to its proper working. The height of the knife of the American instruments averages 1.2–1.5 cm.

Complications that Have so far Been Observed to Arise during Operation.—Complications that may arise during operation are:

1. Perforation of the Bladder: This may occur by hooking a transverse fold of the vesical wall with the tip of the beak of the instrument and perforating it by drawing through it the galvano-caustic knife when hugging the prostate. Filling the bladder with a liquid or gaseous medium will, I believe, avert this danger in every instance.

2. Perforation of the Urethra with the Electric Knife: This is a consequence of the incision having been made too long, an occurrence which, I fear, cannot be easily guarded against, if the work is to be done thoroughly, so as to avoid the necessity of a second interference. The complication, however, comes into question only in case of extremely soft prostates that are more compressible than the operator anticipated or could have imagined. I believe that in these instances the incision should not exceed two centimetres in length, and it will be well, as mentioned before, to prepare the patient or his relatives after the operation for the possibility of a repetition of it, in case the work just done should prove unsatisfactory or entirely unsuccessful. As much as I am in favor, in every other instance, of trying to get through with one operation, I believe that in these cases treatment in two or more sittings is to be preferred.

Other complications which might arise as a consequence of the instrumentarium as such, can, I am convinced, always be avoided. The accidents in question are bending of the knife, and giving-out of the battery. Bending of the knife will result from (*a*) overheating; (*b*) not steadying the instrument properly during operation; (*c*) an accidental movement on the part of the patient; (*d*) an assistant's finger pressing the prostate against the instrument.

By using the instrument manufactured here and keeping within the limits of 45–50 amperes, it seems to me that point *a* can always be avoided.

b. The surgeon should steady his instrument thoroughly during the operation, which rarely takes longer than ten minutes. The continuous cooling of the handle with ice-water may sometimes render a firm hold almost impossible, and it will be well, therefore, to slip a sterilized, thick knitted glove over the left hand.

c. A sensible patient, if warned beforehand that a move on his part may have annoying consequences, will rarely disregard such warning. I have never met with any trouble from this cause.

d. The finger of an assistant should never rest on the prostate during the operation; I consider this a fundamental mistake.

Complications that Have so far Been Observed Occasionally to Occur Sooner or Later after Operation.—1. Urethral Fever: Unfortunately, it is not in our power, in spite of most scrupulous asepsis in every particular before and during operation, always to avoid the occurrence of this complication, which is to-day looked upon as a more or less serious form of septic infection. It is evidently caused by the absorption of micro-organisms or their toxins through a superficial or deeper wound of the posterior urethra. It will be found to set in sometimes on the first, more often on the second, rarely on the third day after the operation. As is well known, in patients who are inclined that way the simple introduction of a catheter may suffice to produce it. It is all the more likely, therefore, to occur after the use of steel instruments and prolonged intra-urethral and intravesical manipulations. In favorable cases pulse and temperature will suddenly rise after a pronounced chill and then drop again within twelve to sixteen hours, without materially affecting the general condition of the patient. This I have seen only the other day in a neurasthenic subject, twenty-three years of age, who had been suffering for years from gonorrhœic prostatitis, but whose urine had been absolutely clear for the last month, at least macroscopically, although it evidently still contained bacteria. I used Bottini's cauterizator on him, after which he developed a chill at 3 o'clock in the afternoon of the second day after the operation; but his pulse and temperature dropped to normal again the next morning, after profuse perspiration. In less favorable cases the chill may recur on one of the following days, or there may be no chill at all, and only rise of temperature, after which the normal is reached again only after a distinct lysis in the course of a few days. In these instances the general condition of the patient is usually not particularly alarming.

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[1] "Neue Mittheilungen zur Galvanokaustischen Radikal-Behandlung der Prostatahypertrophie per vias naturales (Bottinische Operation)." Deutsche Medizinal-Zeitung, 1900, Nos. 1–6.

[2] *Loc. cit.*

In malignant cases the normal condition is not reached so soon; fever will continue and then become a symptom of true sepsis or pyæmia. It is to be hoped, as Freudenberg[1] mentions, that bacteriology will here come to the surgeon's help. It cannot be doubted that one or more kinds of certain micro-organisms are responsible for the disturbance. If they could be found, we might hope to prevent the occurrence of urethral fever and its sequelæ by previously administering hypodermic injections on the basis of serotherapy.

As mentioned above, Nitze has found, in connection with his intravesical work with the help of the operating cystoscope, that gr. xv. (1 gm.) of quinine administered on the night preceding the operation exerts a distinctly prophylactic influence. Freudenberg advocates the use of methyl blue in conjunction with quinine. He prescribes gr. viii. (0.5 gm.) of quinine with gr. ii.–iii. (0.1 to 0.2 gm.) of methyl blue to be taken three times daily for two or more days prior to operation, and to be continued for a few days afterward. This certainly seems a very useful addition, in that, as we all know, methyl blue has a most powerful antiseptic influence upon the uropoietic system. Even if it should not be an absolutely reliable preventive, I believe that it would, nevertheless, be advisable always to make use of the drug.

If the fever once has occurred, it will have to be combated on general principles. The internal regular administration of urotropin, salol and quinine, also small doses of phenacetin, alcohol, strychnine, caffeine, etc., hypodermically and by mouth, for stimulating the heart's action, and the ingestion of large quantities of liquids, has given me the best results.

The more serious class of urethral fever is:

2. True Sepsis: This complication generally results fatally in older patients, especially if they have been suffering from similar attacks in former years, also from pyelonephritis. As stated in my former article, there are chronic septics among the prostatics, and in these the least cause may suffice to bring on the catastrophe. It would be gratifying indeed, if this complication could in time be avoided by the application of proper sero-therapy.

3. Pyæmia has been observed by Freudenberg. In my Case XXII. I had the peculiar experience that varicose veins on the left leg and thigh became inflamed on the third day after the operation, the immediate result having been simply ideal. This patient had passed through a tedious treatment at the hands of his family physician for a cellulitis of the hand, which, at the time of the operation, had been almost overcome. Whether multiple minute abscesses were present in his extremely soft prostatic gland, I am unable to say. I believe, however, that streptococci still circulated in his blood and produced an infected thrombus at a place where the blood-current was the slowest, *i.e.*, in the varicose veins. In a similar case I would certainly raise the lower end of the bed of the patient immediately after the operation, thus having him in a recumbent posture. As he died suddenly on the twelfth day after the operation, I believe that an embolus was thrown into his pulmonary artery or one of its branches. To my regret, an autopsy was not permitted.

4. Embolism into the lungs has been observed by Freudenberg, as proved by autopsy.

5. Absolute Retention: As I have already stated in my first article on Bottini's operation, every operator undertaking to treat his prostatic patients according to Bottini must be able to meet this complication in an absolutely aseptic manner. As will be seen further down, in Case XX., I could not enter the bladder for fully three days in any other way than by aspirating above the pubis every eight hours; thus the trocar had to be pushed into the bladder eight times. I found it very useful in this case first to penetrate transversely the thick adipose tissue with the knife under cocaine, by making an incision of about one-eighth of an inch, and then pushing the trocar through this wound into the bladder. In this way I avoided always re-entering the same tract with the trocar tube. On the fifth day at last I was able to introduce an olive-pointed Mercier with a double curve, No. 12 French, which, of course, was left in place.

6. Hemorrhage: This, if it occurs at all, is apt to set in at the time when the eschars are thrown off, that is to say, usually between the twelfth and the twentieth day, although I have in one instance seen a large piece come away as late as thirty-five days after the operation. However, I am inclined to think that here the eschar had dropped into the viscus some time previously, but had not been expelled before. On the whole I believe that, if the patient keeps quiet and the doctor abstains from washing the neck of the bladder during the first three weeks after the operation (!) this complication will rarely be observed. The introduction and tying in of the permanent catheter will almost in every instance enable us to cope with the complication. Yet a number of cases have been reported in which only immediate suprapubic cystotomy, followed by tamponade, saved the patient's life.

7. Very Frequent and Painful Spasms at the Neck of the Bladder with Partial Retention: As repeatedly mentioned in the course of my article, this is a complication rather often met with, especially in cases of a large median lobe and too short an incision. If a large projecting median lobe has been turned back by the pressing down of the beak at the time of the operation and the cut is then, for instance, made only 4 cm. long, it will be readily understood that such an incision will end within the parenchyma of the prostate itself, instead of entering the prostatic urethra, as I believe is necessary for a satisfactory result. We then have to deal with a condition similar to that found when performing immediate suture of the suprapubic incision of the bladder after the removal of a vesical tumor, the base of which had been thoroughly burnt with Paquelin's thermocautery. Experience has taught me in such cases not to sew up the bladder, but

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[1] *Loc. cit.*

to drain it. It will be seen thus, that by learning to give our incision the proper length we shall probably be able to avoid the occurrence of such painful and frequent desire to urinate. In case it does set in, large doses of morphine with suppositories of opium and belladonna, extr. hyoscyami in two-grain pills at regular intervals of four to six hours, may be found valuable. If the catheter enters without great difficulty, it ought to be introduced every six or eight hours according to necessity. If the desire to empty the viscus should be too frequent, the catheter must be left *in situ*. In that case, provided there is no chronic pyelitis present, which so often causes fever, we have to watch the temperature carefully; for a rise, as I have seen, may be the precursor of a funiculitis with abscess formation of the same or of the testicle. The catheter should be removed just as soon as a rise of temperature occurs. If the patient does not begin to urinate voluntarily within a reasonable time after the operation, the latter will have to be repeated.

How Soon Should the Operation be Repeated if the Result of the First Operation was Not Satisfactory? — This question certainly is of very great importance. To answer it definitely is impossible at the present time owing to lack of sufficient experience. Then, too, there are individual differences that have to be considered in each case. Of course, if, as just stated, the first cauterization of the gland produced continuous, painful vesical spasms, accompanied by inability of the patient to empty the viscus sufficiently, a second operation should be soon performed. The unceasing and undiminishing suffering of the patient will here have to be the guide. Thus it became necessary for me to repeat the operation in my Cases VII. and XX., eighteen and twenty-nine days, respectively, after the first interference. In Case XXI., in which I thought I should have to do a prompt instrumental revision, I could temporize on account of the steady improvement that set in on the eighth day after the operation.

On the other hand, if the suffering of the patient be not the immediate cause for a second operation, if the amount of residual urine still present is the only indication, the decision as to when to repeat the operation is far more difficult. Many patients will be perfectly satisfied as soon as the frequent painful spasms at the neck of the bladder are relieved, and will not care about the residual urine, no matter how large the amount may be. And that Bottini's operation can remove these pains, and permanently, is absolutely certain. The proposition to repeat the operation at a later time will, therefore, often meet with opposition on the part of the patient. He naturally shrinks from going through a second operation as long as the former ever-present pain no longer constitutes a *causa movens*.

In patients with large fibrous prostates in whom the first operation did not effect the entire removal of residual urine, we should not be, it seems to me, too hasty in repeating the operation. I have seen a case, that of a man seventy-one years of age, a pronounced diabetic (eight per cent.), getting decidedly worse after the third operation when the second had brought great improvement. I have mentioned that, if we make our incision to correspond to the difference in length between the normal urethra and that of the given case, as explained fully in the foregoing pages, we may hope to help our patients at once. If it be found that an incision longer than 4 cm. be necessary, while the instrument at hand permits only of cutting 4 cm., the surgeon had better temporize. The case just referred to has made a very strong impression upon me, so that I would venture to give warning to my colleagues, although my experience is based on one case only. In this instance the prostate was extremely hard and did not yield a bit to pressure. At present the patient passes but a small amount of water voluntarily during the day. However, all his many pains and annoyances prior to the Bottini's operations have been overcome by catheterizing himself twice in twenty-four hours. He now lives a comparatively comfortable life. Catheterization, which had been practised for seven years, is much easier than it was ever before. Of course, had I made my incision sufficiently long at once, and had I burned the posterior groove twice in succession, the result might have been entirely different.

Recurrence.—It is, no doubt, too early to say much about this question. Bottini claims not to have seen a single recurrence in all of his more than eighty cases. As stated in my former article, it is to be regretted that he never gave a careful synopsis of his experience. Nobody, therefore, can blame the man who shakes his head when reading that, even in preantiseptic times, this operator never met with any complications in his patients. Nor will it be taken amiss if he should express his doubts as to the correctness of the statement that a recurrence was never seen. It certainly would seem necessary to have reports on re-examination at a later period.

In my eleven cases which belonged to the category of "so far cured," I have seen but one case in which at present the trouble has returned to some degree, and which now is about as it was a short time before the operation, at least as far as frequency of micturition is concerned. This patient (Case XI.), however, was operated upon at the time when I still used the original small battery, which did not enable me to read the strength of the current from an amperemeter during the operation. I therefore cannot claim that the four cuts were made with the same strength of the current throughout. In fact, I rather incline to the belief that this was not so, for the reason that this is the only one of my cases, so far observed, in which the trouble has reappeared to some extent. I have, of course, advised the patient to undergo a second operation. He, however, refused to have it done, being satisfied with his present condition. In this respect also, Freudenberg's latest article is of particular importance, for he, too, has carefully traced his cases. In eleven out of the twelve selected cases published by him—of which six were operated upon once, three twice, and two three times on account of a previously insufficient result—the cure obtained by the last operation, that established perfect vesical drainage, is reported by him to be still lasting and unchanged. In five of these the operation was done as long ago as thirty-one, twenty-six, twenty-two, twenty, and sixteen months; in the other six it was done less than a year since. In the twelfth case the result of the operation was negative, the retention not having been overcome. Thus the foregoing shows that in the oldest case, *i.e.*, the one in which the operation dates back furthest, the perfect condition primarily brought about by Bottini's operation has so far continued absolutely unchanged for over two and one-half years. I personally can prove the lasting effect of the operation in my patients, who were primarily cured of all their subjective and objective symptoms—in one only the vesical catarrh did not entirely disappear—twenty-two, twenty-four, and twenty-five months after the operation (Cases V., VI., and VII.).

The Advantages to be Derived from Bottini's Operation Aside from its Main Purpose, *i.e.*, the restoration of vesical drainage, are: (*a*) The disappearance of the vesical spasms; (*b*) cure of the generally present chronic constipation; (*c*) improvement in general condition, as shown by increase in weight.

a. As I have stated in a former article, Bottini's operation seems to me to take the same place in regard to the spasmodic contraction of the sphincter-vesicæ muscle, as forcible stretching or division of the sphincter-ani muscle takes in connection with anal fissure. The muscle is divided in two or three places and therewith comes to rest. Furthermore, the threefold division of the glandular tissue interferes with the former blood supply of the gland, and thereby prevents the intermittent "congestion" (Guyon), the cause of the recurrent attacks of cystitis and acute retention.

b. It is interesting to observe how almost invariably the chronic constipation these patients so frequently suffer from disappears after Bottini's operation, even though the latter has been but partially successful. This is probably attributable to an improvement in the nervous condition of the patients. For with the cessation of the former continuous spasms at the vesical neck, the irritability of the nerves supplying the lower sigmoid and rectum will also disappear, and thus the normal function be restored.

c. An other striking feature observed in connection with Bottini's operation is, that in nearly every instance the patients gain in weight, and that even in cases in which the obstruction to the proper flow of urine has been but partially or not at all overcome. Every one of my patients illustrates this point. It is explained, I believe, by the fact that these poor sufferers, who sometimes for ten or fifteen years have not known what a fair night's rest means, are again able to sleep five or six, sometimes eight to ten hours in a stretch. Their nervous system at once recuperates, and this naturally reacts upon all other functions. Freudenberg has paid considerable attention to this interesting phenomenon, and proves his observation by figures. Thus, one of his patients, in whom the operation was performed twice but the functional results remained *nil*, wrote him that everybody considered that he looked younger by ten years, and that he had gained thirty pounds within about two years.

What Constitutes a Cure after Bottini's Operation?—The three factors that, in my opinion, would determine an ideal cure of a prostatic are:

(*a*) Removal of the obstruction to the outflow of the urine; in other words, complete elimination of residual urine, or reduction of the same to an insignificant amount; (*b*) return to normal frequency of micturition; (*c*) disappearance of vesical catarrh.

As regards *a*, the mechanical effect of the operation, of course, must remain the decisive factor. So long as the obstruction is not satisfactorily removed, the surgeon has no right to consider his patient cured. However, it should be remembered that it is more or less within his power to accomplish this result by repeating the operation, or, if need be, doing it a third time. The patients' demands are not, as a rule, very exacting. So long as they have been relieved of their former continuous suffering, they consider themselves cured, even though there still be a residual urine of 250–300 c.c. (eight to ten ounces). From a scientific standpoint, such a definition of the meaning of a cure is, of course, untenable.

With regard to point *b*, the re-establishment of normal frequency of micturition, this evidently depends upon the success or failure of the surgeon in removing the residual urine and the vesical catarrh or pyelitis. In proportion to the degree to which one or the other or both of these factors have been overcome, will the frequency of micturition be reduced. To give any exact figures as to what constitutes "normal frequency" would be impossible, since this must depend largely upon the total quantity of urine passed within twenty-four hours. A diabetic, for example, or a man with a contracted kidney will probably urinate twice or three times as often as one not so afflicted, although the residual urine may have been removed in the latter as well as in the former.

Now, as regards the vesical catarrh, this disappears in exceptional instances as a direct result of the operation, *i.e.*, as soon as the obstruction to the proper outflow of the urine has been removed. In other cases careful after-treatment is imperative. The administration of the different drugs so often mentioned in the course of this paper, aided by local irrigation —best with increasing doses of nitrate of silver— will often clear up a patient's urine that has been turbid for years. Nevertheless we should not be surprised if our efforts in this direction are not always crowned by success, even if pyelitis be absent. Whoever has looked through the cystoscope into the trabecular bladder of a prostatic, with its larger and smaller acquired diverticula, its numerous and deep grooves between and behind the protruding bundles of the detrusor muscle, will understand the difficulty, nay, impossibility, in some instances, of curing an infectious catarrh that has once been thoroughly grafted upon such a surface. However, it has been my experience that patients in whom the urine remained more or less turbid after Bottini's operation are not, as a rule, in the least disturbed by this condition. They have no pain; they are well able to retain their urine when the natural call comes; they have no tenesmus. If they did not see their urine, they would not know that they had a catarrh; in other words, if the catarrh should disappear, this would cause no difference to them as far as their feeling is concerned. I personally have observed the entire disappearance of all turbidity in the urine in five of my cases. In these the urine cleared up by itself after the removal of the obstruction, without any further vesical irrigation, the patients merely having continued taking salol and urotropin internally. In none of the remaining cases, however, was I able to carry out a suitable after-treatment. All of them left my immediate supervision three to four weeks after the operation.

Indications for Bottini's Operation.—I have purposely reserved the discussion of this question because it is by far the most important of all.

The principal decision the surgeon is called upon to render in the case of a patient with hypertrophy of the prostate who needs radical relief is: Which of the many operations in vogue for this affection is indicated?

Simultaneous ligation of the internal iliac arteries— a procedure which certainly belongs to the radical operations, in my estimation—has been abandoned on account of the severity of the interference in old patients, and the possible complications arising.

Castration, an operation which has brought permanent relief to many prostatics, is losing ground owing to the objections offered by the patients, many of whom have heard that there are other means at our disposal, nowadays, to help them. It also seems inadvisable to propose the operation, because quite a number of patients thus treated have become mentally affected.

Ligation of the vasa deferentia (including resection of the spermatic nerves—angioneurectomy) has received a severe blow by the compilation of cases from Mikulicz's clinic, in 1897, by which, as will be remembered, it was found that even in cases with, at first, favorable result, the old trouble recurred at about the end of the first year. In my former two articles I expressed the opinion that the preliminary performance of vasectomy might be a rational procedure in order to reduce the hyperæmia of the prostate gland. In my twenty-four cases I have worked upon this basis in two instances, but must confess that I have not been particularly impressed by this method; at least I have no proof that it has been of value. In the second patient treated in this way (Case XIX.), in which I left a permanent catheter in the urethra for five days, a suppurative funiculitis set in, which it was very interesting to see stopped short at the point of ligation and division of the vas deferens. Here the suppuration following gave me a good deal of trouble during the after-treatment, inasmuch as it took almost half a year before the sinus definitely closed. I am, therefore, rather inclined now not to let this interference precede Bottini's operation.

Prostatectomy, suprapubic or perineal, will, I believe, at the present time be advisable only in cases of large, fibrous prostates, provided the patients are not too far in the seventies and seem able to stand an operation under general anæsthesia.

It is interesting to note the marked divergence of opinion with regard to the value of Bottini's operation in patients with a fibrous prostate. Morton, of Brooklyn, when publishing his five cases of hypertrophy of the prostate treated by Bottini's operation, expressed the view that only fibrous prostates were amenable to improvement or cure by the said method. Also, a renowned American surgeon, after much reflection on this subject, wrote me the other day that it was his belief that hard prostates only could be relieved by Bottini's operation. On the other hand, I personally have seen the most beautiful results in those patients in whom the glandular enlargement preponderated, and had less success when operating on patients with a hard gland. A similar divergence of opinion as to the effect of Bottini's operation still exists in regard to the significance of the amount of residual urine. Lohnstein in a résumé covering the experience of many operators claimed that the best results are obtained in cases of absolute retention, while I personally have had more success in cases with incomplete retention. Thus it will be seen that the class of cases that were most successful in the hands of one operator proved less so in the hands of another—a circumstance that, in my opinion, speaks well for the operation, since it demonstrates that *each* type of prostatic enlargement with its varying clinical symptoms has shown good results in the hands of *some* operator. Of course, this may be perhaps, to some extent, explained by the fact that no two cases of prostatic enlargement are exactly alike. Further experience of individual operators is absolutely necessary, before it will be possible definitely to settle the points here under consideration.

The question, when Bottini's operation shall be done, I would to-day answer in the same way as I did eighteen months ago: namely, as soon as it will become necessary to give the catheter into the hands *of the patient himself*. As I have said in my previous paper on this subject, the danger to life begins at this period. A single mistake in regard to asepsis may set up an incurable cystitis with pyelitis or pyelonephritis. That the surgeon will be able to avoid these complications by doing Bottini's operation on a patient with a hitherto uninfected urinary system can, of course, not be guaranteed. Yet if the work was properly carried out, under the most scrupulous asepsis, I do not think it likely that the complications mentioned should set in.

I do not share the view expressed by various authors, that Bottini's operation is absolutely contraindicated in the presence of a pyelitis. Among my twenty-four cases there certainly were at least two in which a marked degree of uni- or bilateral pyelitis was present. Both patients stood the operation very nicely, the one being absolutely cured, the other much improved. Nevertheless it is certainly necessary to make it plain to the relatives, if not to the patient himself, how greatly the risk is enhanced in the presence of pyelitis.

That Bottini's operation is a safe and harmless procedure, as might be inferred from the original publications of the author of the operation, will no longer be claimed by any one in view of the experience of operators all over the world. It will have its deaths, if done in more or less advanced cases, the same as every other operation so far devised for prostatic enlargement has had. However, it should be remembered that a comparative compilation of the cases of the various authors up to date shows Bottini's operation to have had the lowest mortality, while at the same time it shows the greatest percentage of cures. And I believe we shall be able to decrease considerably even the present low rate of mortality, by making use of the experience we have meanwhile acquired, and by advising an early operation, that is to say, as soon as unmistakable clinical symptoms have appeared. Whenever the doctor finds the premonitory symptoms of prostatic enlargement slowly developing, he should insist upon a distinct diagnosis of the trouble. At this stage, too, the diagnosis can be made with absolute certainty with the aid of the cystoscope. If that well-known groove at the internal urethral fold at the neck of the bladder is seen during cystoscopy; if, furthermore, there are symptoms of a beginning trabecular bladder, in cases in which the catheter repeatedly finds a small amount of residual urine, the diagnosis, according to my belief, is definitely established. These cases, as Freudenberg so well says, are not yet ripe for the incisor. Nevertheless, from a prophylactic point of view it would be well for the patients if the indication for radical treatment even at this early date could be established. I refer to the use of Bottini's prostatic cauterizator.

As is known, Freudenberg has also, within the last year, improved the original cauterizator of Bottini with reference to aseptic principles. It can now be boiled the same as the incisor, and is a reliable instrument. It shows two platinum blades, resting on a porcelain plate, at the concavity of the junction of shank and beak, which can be brought to red or white heat by the electric current.[1] If these blades are pressed against the projecting prostate at the neck of the bladder, a slight or stronger effect can be produced, according (*a*) to the amount of pressure used, (*b*) to the amount of heat applied, and (*c*) to the length of time the cauterization is made. It will be readily seen that a great amount of prostatic tissue can thus be burnt away right at the neck of the bladder and the prostatic bar just appearing lowered down to the base of the bladder. It is further evident that such a surface cauterization does not share the certain amount of risk attached to the interference with Bottini's incisor. The only complication, the operation otherwise being aseptically carried out, might be hemorrhage at the time when the eschars are cast off, and this can here be more easily coped with than when occurring after the ordinary Bottini operation. According to the author, one must not be surprised to see improvement begin as late as at the end of the third or fourth week, in some instances. However, even if future experience should prove the aforegoing assumption to be correct, it is more than questionable whether doctors will be ready to propose such an operation to prostatics in the early stage of the disease, and whether the patients will accept such advice. I fancy that time is far distant; perhaps it will never come. Yet I am inclined to believe, with Freudenberg, that such an early cauterization of the beginning prostatic enlargement would have to be looked upon as an operation void of all danger, which bids fair to save the patients thus afflicted all the untold suffering that is otherwise bound to come sooner or later.

(To be concluded with report of cases.)

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[1] The improved instrument was demonstrated by me before the Section on Surgery of the New York Academy of Medicine, December 11, 1899. See MEDICAL RECORD, December 30, 1899.

THE PAST AND PRESENT OF REFRACTION.

By FRANCIS VALK, M.D.,

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SOME years ago I had the pleasure of reading a paper before the State Medical Society on "Our Refraction Cases," at a time when the objective examination of the dioptric apparatus of the eye was just beginning to demand the attention of the profession, and in that paper quoted these words: "It has the misfortune to depend for its promulgation and practical application upon the specialist, and almost upon the specialist of a specialty, and this in a profession and in an epoch in which it is fashionable to sneer at specialism and at the specialist who dares to plead for the truth he knows—and that at first, at least, only he can know." Yet to-day how materially all our work has changed!

Before that time we had no objective methods of quickly ascertaining what was the refractive condition, except by the use of the ophthalmoscope, and in reference to the use of this most excellent instrument for the estimation of refraction I may state that at that time, in a case fully under the influence of a complete mydriatic, examined at the Manhattan Eye and Ear Hospital by all the surgeons and attending physicians, out of nearly twenty records only two were very near the exact refractive condition as shown by the "trial by glasses," while all the others concluded that the case might vary in all the degrees of myopia to hypermetropia, two exactly opposite conditions. Hence only a decade ago all ophthalmologists were compelled to rely, almost constantly, on the use of atropine to paralyze fully the action of the ciliary muscle, and then to depend on the statements of the patients examined as to what glass would secure the best vision and correct the refractive condition. This was considered the crucial test, to be followed by ordering the glass that would be accepted after the effects of the cycloplegic had passed off. All this would require three careful examinations, at the same time depriving the patient of the use of the eyes for distinct vision for about ten days.

It is very true even at the present day that the use of atropine in refraction is the crucial test, and the examination of the refraction under this mydriatic leaves nothing to be desired, but, except in the case of children, it causes extreme inconvenience to others, and has a certain amount of danger when used in old persons; while to-day, in many cases, it is not needed.

In 1876 the late Dr. C. R. Agnew, whom every one remembers for his kindness and admires for his skill, published a monograph on "One Thousand Cases of Asthenopia," in which he reported two hundred and eighty-one with normal or emmetropic eyes and four hundred with hypermetropia and its complications; but at the present time how few cases of emmetropia do we meet in our daily work—almost none at all. So seldom do we find these cases that some of our best men have concluded that this condition of the refraction does not exist; that the hypermetropic eye, of low degree, is truly the emmetropic eye. This is a proposition I do not fully indorse, as we do at times find an eye that is perfect in reference to its vision and its refraction, and this, in my estimation, must always represent the standard eye. We do meet these cases in our clinical work and in the office, not often, I must confess, but we must remember that the human beings so fortunate as to have emmetropic eyes either do not, or rarely do, need the services of an oculist. They never have any symptoms of asthenopia, so we do not have the opportunity to test this vast number we believe must exist, and if they do need glasses it is only when old age has come to them; when they have passed the age of forty or forty-five years, their "arms are not long enough," and almost any simple convex glass will give the necessary reserve power to see at their reading distance, only requiring a slight change every three or four years.

We had other tests in those days besides the ophthalmoscope, as that of Green's, with the radiating lines, that was useful in myopic astigmatism, but in my opinion in that condition only; also Placido's disc and the cobalt blue test; but all these, as you are well aware, depended entirely upon the statements of the persons examined. As I look at my records of those days and at my notebooks of to-day, I am sure we must have but imperfectly corrected the refraction of very many cases.

It was not until about 1885 that we began to realize the importance of the objective examination of the dioptric apparatus, though the same instruments of precision were in use as at the present day, in the private offices of several ophthalmologists, yet those who possessed them seem to have placed very little reliance upon their use until the past fifteen years.

When I published the results of my examinations of the first one thousand cases, they were as follows: Hypermetropia, 351 cases; simple hypermetropic astigmatism, 192; compound hypermetropic astigmatism, 165; compound myopic astigmatism, 90; myopia, 75; emmetropia, 54; mixed astigmatism, 49; simple myopic astigmatism, 26; "giving a total of 2,004 eyes examined, of which I found that in 774 cases the refraction error was the same in each eye, and in 174 cases the refraction error was different, or the condition of anisometropia, the largest percentage being in the cases of mixed astigmatism. In all statistics of refraction the hyperopic eye stands foremost in numbers," but do we find it so at the present day with our improved methods of examination?

All the above examinations were carefully made according to our knowledge of refraction at that time, but I feel very positive that if I would take the results of my last examinations of one thousand cases from my case-book I would find the figures very different, and simple hypermetropia would not stand at the head of the list, for it is in the diagnosis of this condition that I find the most pronounced changes.

About 1885 I commenced the study of the method of retinoscopy, or the so-called shadow test, with Dr. George J. Bull, who is now associated with Javal of Paris, and recommended it to the profession in a paper read before the County Medical Society in February, 1890. At that time we had no retinoscopes, but simply pieces of looking-glass to observe the phenomenon that was shown in the pupillary space. This was the first practical test that we had for the objective examination of the total refraction, and in my hands it has been in constant use ever since, and to-day, fifteen years afterward, I still consider it one of the best tests in the hands of the oculist for the examination of the refraction. By the use of this instrument—as we notice the movements of the retinal reflex as it passes across the pupillary space—we estimate the refraction of the entire dioptric apparatus, or, in other words, the parts of the eye through which the rays of light pass in the act of seeing both at the distant and near points of vision. Wishing to carry this test to its full completion, we may place glasses before the eye until we neutralize the movements of the reflex in the two principal meridians, testing each meridian separately, and the glass so placed will very nearly indicate the refraction. In this way we rapidly and accurately note the existence of any astigmatic error, its amount in diopters, and the axis of the correcting glass.

About 1890 my honored friend, Prof. D. B. St. John Rossa, brought from Europe one of Javal's ophthalmometers, and, though there were several in use in this country, yet it was due to his persistent and earnest advocacy of this most excellent instrument that its use has spread and extended from one end of the country to the other, and at the present time no oculist's armamentarium can be complete without one. Hence I feel that to Dr. Roosa all honor is due for the introduction, in this country, of one of the most valued objective instruments for the diagnosis and measurements of corneal astigmatism. As this condition almost always exists in the anterior surface of the cornea, its findings can be relied upon with almost positive exactness in reference to the axis of the glass and the amount of the astigmatism. I published a full description of this instrument in my book on the "Errors of Refraction," in the issue of 1890, and since then—though many improvements have been added by others, in its mechanical advantages only—no changes have been made in the use of the ophthalmometer for the diagnosis of corneal astigmatism.

I also remember that about fifteen years ago we began to hear rumors of the relief of certain reflex symptoms by the use of glasses. One physician, speaking to me on the subject, said a certain physician "could relieve corns by the use of glasses," a very sarcastic remark in reference to the work of a brother physician; but in spite of the opposition, at that time, to the influence of the eye upon certain reflex symptoms, perhaps clearly indicated, the work was still going on; effects and results were noted; some cases with certain reflex symptoms were relieved by the correction of the refraction error, but in others the glasses failed to give the required relief, and our attention was turned to the movements of the eye in reference to its power of fixation. Then Dr. George T. Stevens demonstrated that many nervous phenomena were due to the want of balance in the movements of the eyes, one to the other, and he gave us the excellent nomenclature so frequently in use at the present time. So heterophoria has taken its place as one of the causes of certain reflex phenomena that may be relieved by the correction of that condition. Hence the tendency to a deviation of the visual lines has been established, more or less, in this special branch of medicine, and no examination of the eyes is complete until the power of "duction" has been fully studied, and, if need be, corrected. While I appreciate the great advances Dr. Stevens has made in his study and explanation of this most intricate condition of heterophoria, and while I think his nomenclature of these various conditions, so frequently found, is all that could be desired, yet I cannot say I fully commend his methods of diagnosis. In my private as well as clinical practice, I prefer to base all my conclusions in reference to the action of the ocular muscles, as regards their power, on the old and simple prism test, firmly believing that nature intended there should be a certain balance of power between the action of the antagonizing muscles of the eye, and in which we may expect to find a certain standard in the power of the muscles one to the other.

In the finding of this standard condition, orthophoria, then, we will have no muscular asthenopia; and all this has to-day convinced me that we should have three fields for examination, namely, the field of vision, in which we estimate its quantitative and its qualitative extent; the field of fixation, in which we estimate the excursions of the eyeballs within the field of perfect vision—in other words, the extreme limit of the visual lines in all and every direction with perfect fixation, this being about 90° laterally and vertically; and lastly, we have the field of fusion, a region shown and estimated by the prism test, representing the power to fuse, upon the macula, rays of light falling upon other parts of the retina. This field is generally found to be, taking the macula as a centre, about 30° outward, 8° inward, 2° upward, and 3° downward, forming what I consider the normal field of fusion, controlled by the guiding sensation or fusion force of the retina and limited by the individual power of the eye muscles.

The last two fields have attracted much attention from the profession within the last few years, and they seem to be controlled by separate centres of the brain. The extent of the field of fixation is a voluntary act, while that of the field of fusion is, to my mind, involuntary, as no force of the will can make the images fuse beyond this certain extent, though it may be extended in certain directions by constant practice.

All this shows what the past of refraction has given to us; and now what is the present state of refraction to-day? Do not all these exact and useful objective methods, all the advances in the examination of the eye and our better understanding of the ocular movements, show that we can now, in almost all cases, estimate the true and total refraction of the eye without depending upon the subjective tests—in fact, correct the refractive error without asking a single question of our patients? I have done this over and over again in my clinical work, and afterward proved it by the subjective examination, by the ready acceptance of the glasses, or by the crucial test, the use of atropine, and the test by glasses.

To do all this requires many hours of constant practice in the examination of our cases; the eye of the examiner must be trained to know and to appreciate all it sees, just as the fingers of the surgeon, by their delicate touch and skilful manipulation, will indicate the diagnosis, and the surgeon will know, almost to a certainty, what is the condition of the underlying parts he examines. We may look through the aperture of the ophthalmoscope and see the details of the fundus, but that will by no means tell us what is the refraction. This we must estimate by the appearance of the most delicate parts of the retina as the correcting glass is placed before the aperture, and this must be done in the principal meridians of the eye. In my opinion the oculist who can diagnose and estimate the true refractive condition in a case of mixed astigmatism has truly learned and mastered one of the most useful instruments in our hands.

Then with the retinoscope we can quickly see and estimate the true and total refraction in the two meridians as we note the reflex as it passes across the pupillary space, and we can confirm all this by the examination with the ophthalmometer, at the same time showing the corneal curve by the length of the radius, in which we may find a clew to the refractive condition; and finally we conclude our examination by testing the eyes for any want of balance in their movements in reference to the fusion power. After we have corrected all these findings, brought about normal vision and normal balance, we may reasonably conclude that, if relief is not obtained, the eyes cannot be at fault, and the reflex symptoms must be due to some other cause.

And now, as we look over the notes of refraction in our books, we find that hyperopia, pure and simple, is not the leading refractive condition; that in the vast number astigmatism, both simple and compound, stands at the head of our list, which, when corrected, may give success in many cases; that if we fail with the use of glasses we may find some unbalance of the ocular muscles that can be adjusted; and that, having placed the eyes in the condition originally intended by nature, we may feel confident that our work has been performed in a truly scientific manner.

Projectiles of hard exterior are more humane than the old leaden bullet, and amputations are not so often required, while less cripples are returned to the state. This agrees with recent experiences in Cuba. —Major Louis A. La Garde.

PROGRESSIVE PERNICIOUS ANÆMIA AND MALIGNANT DISEASE OF THE STOMACH.

By ALBERT ABRAMS, M.D.,

SAN FRANCISCO.

In the cases of pernicious anæmia counterfeiting carcinoma of the stomach, culled from the medical literature, I can find no instance in which simulation has been more marked than in the two cases which have been made the subject of this contribution.

Case I.—A man aged forty-three years, referred by Dr. W. Barrett, of Redwood City. The patient for more than a year has grown progressively weak. He suffers from dyspnœa, palpitation of the heart, and gastric irritability. He has lost twenty pounds in weight. The status præsens in brief is as follows: Marked pallor; malleolar œdema; hæmic murmurs at the cardiac base and in the cervical veins; slight evening exacerbations of temperature. The stomach contents, after an experimental meal of Leube, shows the absence of hydrochloric acid and the presence of large quantities of lactic acid. Palpation reveals marked tenderness in the region of the pylorus, and percussion easily demonstrates ventricular dilatation. The glands of the neck and inguinal region are slightly enlarged. In this patient a pulmonary lesion was suspected, and in the absence of palpable physical evidence he was submitted to a Roentgen-ray examination. The rays demonstrated a dark patch in the apex of the right lung. The question naturally arose whether in this patient I was dealing with the anæmia of the pretuberculous stage of phthisis, a condition of the blood which I have designated elsewhere as pulmonary anæmia.[1] Pulmonary is distinguished from all other forms of anæmia, the one exception being pernicious anæmia, by the fact that while the ferruginous preparations benefit pure anæmics, in pulmonary anæmia they are practically of no value, or at any rate the benefit accruing from their use is only evanescent. The pathognomonic sign of pulmonary anæmia is the therapeutic test. If a suspected individual is subjected to a single pneumatic treatment, employing inhalations of compressed air, one invariably finds, after an examination of the blood, an increase in the percentage of hæmoglobin. A collective investigation made by me, in a number of patients demonstrated that the hæmoglobin percentage could be increased fifteen per cent., on an average, after a single pneumatic-cabinet exercise. This test proved negative in my patient.

Case II.—A woman aged seventy-four years, seen in consultation with Drs. von Hoffman, Thorne, De Vecchi, and Aronstein of this city. The symptoms were similar to those in the previous patient, excepting that there were more pronounced emaciation and gastric irritability. Vomiting in the incipiency of the disease was of daily occurrence, and repeated examinations of the vomitus invariably demonstrated the absence of hydrochloric acid and the presence of lactic acid. One of us detected the presence of an intumesence in the pyloric region, while all concurred in the demonstration of increased sensitiveness and resistance in that area. Pronounced cachexia was present, but there was not the characteristic yellow lemon tint of pernicious anæmia. The foregoing anamneses were decidedly suggestive of malignant disease of the stomach, and would, in the prehæmatological era of medicine, be accepted as conclusive clinical evidence of its existence.

The following differential table. taken from the excellent text-book of Anders on the "Practice of Medicine," suggests the conventional evidence employed in differentiating obscure gastric carcinoma from progressive pernicious anæmia:

Pernicious Anæmia.	*Gastric Carcinoma.*
Red corpuscle count falls to, or below, 1,000,000 per c.mm.	Count does not fall to 1,000,000, as a rule.
Found earlier in life.	Occurs after middle life.
Gastric symptoms not pronounced.	Gastric symptoms more suggestive.
Lemon-tinted skin common.	Skin pale, muddy, or jaundiced.
Adipose tissue fairly preserved.	Progressive emaciation.
No glandular enlargement.	Supraclavicular or inguinal glands enlarged.
No physical signs over stomach.	Increased area of resistance over stomach.
Gastric contents after test meal negative.	Deficiency or absence of hydrochloric and presence of lactic acid.
Some improvement may be brought about, even cure, though rarely.	Condition becomes steadily worse until death ends the case.

To the foregoing table the dictum of Osler may be added: "In carcinoma of the stomach, the condition is an anæmia with wasting, and the layer of panniculus is not retained as in the ordinary forms of pernicious anæmia."

Hæmatology has won so many triumphs in modern medicine that no clinical examination may be regarded as complete without a methodical blood examination. Cabot, in his monograph on the blood, gives expression to the following epigrams: "Malignant disease may bring down the blood count to 1,000,000 or lower, but in such cases leucocytosis is always present"; on another page: "In pernicious anæmia, the leucocyte count is very low and may fall below 1,000 cells per cubic millimetre." A few years ago, the preceding statements would have been regarded as the utterances of a doctrinaire, yet now clinicians everywhere accept them as truisms.

In the first patient, the blood count showed 1,000,000 erythrocytes with a hæmoglobin percentage of 40, or a color index of 2. The leucocyte count was reduced to one-third the normal. In the second patient, besides the presence of normo- and megaloblasts, the red cells were reduced to 800,000 per cubic millimetre, the hæmoglobin to thirty-five per cent., and the leucocytes to one-half the normal number.

Both patients were placed on increasing doses of Fowler's solution and bone marrow. The latter had to be discontinued at once owing to the gastric irritability which it provoked. The therapeutic test with arsenic only confirmed the evidence of the blood examination (marked reduction in red corpuscles, leucopenia, and high color index), and the improvement in both patients was immediate and progressive. The first patient returned to his work as a laborer, and when I last saw him he said, "I can work harder than I have for years." He took twenty drops of Fowler's solution three times a day for two weeks, and the number of his red corpuscles at the end of that time increased to 500,000 above the normal. The same marked improvement, though not so rapid, was noted in the second patient, and hydrochloric acid reappeared in the stomach contents.

The following conclusions may be formulated:

1. Arsenic is a true specific in pernicious anæmia, and is as certain in its immediate results as is mercury in syphilis, quinine in malaria, or iron in chlorosis. The specificity of arsenic is so great that in no case of grave anæmia are we justified in excluding the progressive pernicious variety, even though the blood examination is negative, without a heroic trial of arsenic. Like the other specifics, it produces relative cures and cannot be regarded as a prophylactic owing to the frequent relapses which occur. It may be given as Fowler's solution, beginning with three-minim doses well diluted after each meal, and increased by one or two minims daily according to the urgency of the case,

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[1] Medicine, December, 1895, and The Medical Standard, January, 1900.

until twenty-five or thirty minims are taken three times a day. A safer rule is to push it to the point of toleration and maintain it at this point until the blood examination shows the result desired. The appearance of its physiological effects (œdema and itching of the eyelids, gastro-intestinal irritation, etc.) is a signal for its temporary discontinuance. When arsenic cannot be given by the stomach, it may be administered subcutaneously or even by the rectum.

2. In association with arsenic, assimilable food and rest are indispensable adjuvants.

3. The use of intestinal antiseptics in this as well as in other diseases is a mere therapeutic refinement not sanctioned by bacteriological reasons, and they ought, therefore, not to be employed as a routine measure. In the Italian literature one finds some authentic evidence of the good effects from thymol, its administration being suggested by the theory that pernicious anæmia is caused by intestinal absorption of products which are destructive to the red blood corpuscles.

4. Iron is not only useless but is apt to create digestive disturbances.

5. Bone-marrow is said to be curative, but in my experience it induces nausea and aggravates existing gastro-intestinal troubles.

6. Gastric disturbances suggest stomach lavage. The character of the food ingested must be determined by the results of a chemical analysis of the stomach contents.

7. To counteract the great reduction in the quantity of blood (oligæmia) weak saline solutions may be given by the colon (enteroclysis) or preferably in the subcutaneous tissue (hypodermoclysis).

8. Relapses are best prevented by minute attention to dietetic and hygienic details.

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Contribution to the Knowledge of Some New Remedies.—Overlach describes the advantages of fortoin as: Its taste has not the biting sharpness of cotoin crystals; it is a stronger antiseptic. It is formaldehydcotoin or methylendicotoin. It is formed by the action of formaldehyde on cotoin. It consists of beautiful yellow crystals. The fusing-point lies between 211° and 213° C. It is easily soluble in chloroform, acetone, and glacial acetic acid, difficultly soluble in alcohol, ether, and benzol, insoluble in water, but very easily soluble in alkalies. It is an expensive remedy, but reliable after the failure of other measures.—*Centralblatt fur innere Medicin*, March 10, 1900.

Application of Forceps in the Dead Mother; Living Child. Remarks on Death in Labor and Delivery in the Upright Position on Account of Orthopnœa.—Alfred Egon Neumann reports the extraction of a living child from a dead mother. The child showed scarcely a trace of asphyxia, soon cried, and lived. The case of orthopnœa was that of a woman forty years old. There was general œdema; systolic and diastolic cardiac murmurs were present. Urine was spare in quantity, with one per cent. of albumin. After delivery, the patient was tapped, and then improvement began. On the ninth day there was still one-half per cent. of albumin, with no casts. The œdema had almost disappeared.—*Centralblatt für Gynäkologie*, March 10, 1900.

The Mechanism of the Action of the Anti-Diphtheritic Serum against the Toxin in the Animal Organism.—Nicola Pane believes that instead of exerting a chemical influence, as do some other serums, the anti-diphtheritic serum produces a relative and temporary immunity in the organism by exciting special defensive powers in the cells. This immunity is not essentially different from that caused by the toxin introduced into the body in non-lethal doses, except that the latter works more slowly and is much more lasting in its effects.—*La Riforma Medica*, March 15, 16, and 17, 1900.

On the Therapy of Epilepsy with the Flechsig Method.—Lad Haskovec states that the cases he describes show that the bromine therapy in connection with a properly regulated life has a good influence on the course of epilepsy. The combination of opium and bromine, potassium bromide, as Flechsig directed, give good results. Diet has a great influence and should be carefully regulated. The milk diet is considered very efficacious. More time is yet needed wholly to prove the benefits of Flechsig's method.—*Wiener klinische Rundschau*, February 25, 1900.

The Association of Paraldehyde with Chloroform.—Cosimo Noto believes, from the results obtained by experimentation, that the association of paraldehyde with chloroform to produce anæsthesia completely suppresses the period of chloroform excitement, prevents profuse secretion of saliva, and causes anæsthesia in a very short time and with a small dose of chloroform. The sleep is sound, respiration calm, heart regular, and blood pressure sufficiently strong. The sleep is much prolonged, even after the cessation of anæsthesia; the patient awaking some time after the operation is over, already revived and without suffering the effects of trauma.—*New Orleans Medical and Surgical Journal*, March, 1900.

A Case of Total Laryngectomy for Sarcoma; External Artificial Larynx.—N. Taptas records the case of a woman, aged forty-six years, who had suffered from hoarseness for three years, and who had worn for the eight months before being seen by him a tracheal tube. Pains in the neck were severe, and she was unable even to swallow liquids. A tumor was made out in the lower pharynx, but its relations to neighboring parts could not be determined. Examination caused vomiting, in the course of which the patient expectorated a small piece of the mass, which upon examination proved to be a sarcoma with round and fusiform cells. The rapid progress of the growth rendered a laryngectomy necessary, and this was successfully done. A novel form of artificial larynx was inserted, it being worn externally and supplied with air through the tracheal tube.—*Annales des Maladies de l'Oreille, du Larynx, etc.*, January, 1900.

Laryngeal Ictus and Asthma.—Moncorgé gives brief histories of nineteen cases which have come under his personal observation, and refers to similar cases published by others. Special study is made of thirteen cases which came to light upon interrogating three hundred and twenty patients of all ages with reference to this matter. All suffered from some form of cough. Among the three hundred and twenty, Moncorgé found one hundred and thirty-seven cases of true asthma furnishing twelve cases of ictus, while among the one hundred and eighty-three non-asthmatics only a single case of ictus appeared. The author believes that the prolonged congestion of the pharynx and larynx which occurs in asthmatics favors the onset of distinct laryngeal spasm. Moreover, asthmatics are predisposed to all forms of spasmodic seizure.—*Annales des Maladies de l'Oreille, du Larynx, etc.*, February, 1900.

On Malignant Œdema.—Alois Brabec reports the case of a man, twenty-five years old, with malignant œdema. This was clearly a case of sepsis through intoxication, for: (1) a local focus of infection was present; (2) the bacteriological blood findings were negative. (3) A dose of 0.5 c.c. of the œdema fluid could kill a mouse, while 0.1 c.c. had no effect. This is of practical value, for in a septic intoxication only an operative procedure will be effective—in this case exarticulation of the shoulder joint—while in a septic infection surgery seems without result.—*Wiener klinische Rundschau*, March 4, 1900.

The Action of Iron.—Guiseppe Poggi concludes from experimentation that while under normal conditions iron has a hæmoglobinogenetic action, in the pathological conditions created by chlorosis it is first of all a cytogenetic agent, and in some unfavorable cases that alone.—*Rivista Critica di Clinica Medica*, March 3, 1900.

Hemorrhagic Syphiloderma of Adults.—G. Picardi believes: (1) That in addition to the macular, papular, pustular, etc., forms of syphiloderma, there is a secondary hemorrhagic form, characterized by special clinical symptoms and histological structure; (2) that it is exhibited chiefly in situations where there have been previous circulatory disturbances; (3) that it is produced by a process of pericellular and connective-tissue infiltration from the vessels of the derma and subjacent tissue, resulting in extravasation of the blood with all its elements, either from oozing through the degenerated walls or by rupture of the capillaries. —*Il Policlinico*, March 1, 1900.

The Cure of Uterine Prolapse by the Mazzoni Process.—G. Parlavecchio describes this method, which consists in laparotomy, and then in lifting the uterus as high as possible and passing a strong silk thread into the uterine substance at the point of insertion of the round ligament of each side. The peritoneal wound and that of the rectus muscles having been reunited, the two loops of silk which have been brought up through the rectus muscles and their aponeuroses are drawn upon, and each is tied separately. The abdominal opening is then closed.—*La Clinica Ostetrica*, January, 1900.

Treatment of Keratitis Profunda.—Emil Guttmann sums up his ideas concerning this subject as follows: The mercurial treatment, except for small children, is without especial influence and is rather dangerous. Atropine is without influence on the processes in the cornea and should therefore be used as sparingly as possible. Irritating measures should be avoided throughout the inflammatory stage. On the other hand, the systematic application of cocaine as a non-irritating and, indeed, soothing remedy should be followed up, since its use is attended with favorable results in corneal processes.—*Wiener klinische Rundschau*, February 11, 1900.

An Uncommon Manifestation of Cholelithiasis.—P. Grocco calls attention to the cases in which very slight and long-continued fever or feverishness is apparently the only indication of disorder. The spleen is not enlarged, but the liver is usually enlarged and at some point sensitive to pressure. Urobilin is usually present, with polycholia. The author believes that this condition is frequently due to hepatic calculus from infection of the bile passages, and that it may be cured by treatment addressed directly to the liver, even when antiseptic treatment of the intestines has failed.—*Rivista Critica di Clinica Medica*, February 17, 1900.

The Heart in Life Insurance.—According to J. N. Upshur, functional murmurs should lead to a rating of postponement, but not unqualified rejection. Cases with murmur which fail to develop hypertrophy or displacement to the right may be safely taken, so also cases in which there has been an endocarditis in infancy or early childhood, but in which the growth of later years has led to a compensating hypertrophy so that there is no failure of the circulation. On the other hand, no risk is first-class when the sound of the valve fails in clearness or is muffled, because this indicates rigidity and loss of elasticity. Alcohol and tobacco, even though their use has been given up, frequently disqualify a man for insurance.—*Charlotte Medical Journal*, March, 1900.

Still Another Contribution to the Knowledge of Kakke in Sucklings.—Z. Hirota, after giving some statistics on the subject and reporting several cases of kakke, sums up his observations as follows: Sucklings are infected through the mother's milk; the infants suffer from severe symptoms of the disease, not only when the mother is affected by the lightest form, but also at such an early stage that the mother appears to be perfectly free from the affection. It is most important to note that a very constant symptom of kakke in the adult is the indican reaction; this can always be found in the urine of the mother, even when there is no other change from the normal condition.—*Centralblatt für innere Medicin*, March 17, 1900.

Coupling and Redoubling of the Second Sound in Mitral Stenosis.—Luigi Ferrannini says that the double sound heard at the base of the heart is a coupling of the second physiological sound, due to unequal pressure in the large arterial trunks, because of which the aortic semilunar valves do not close simultaneously with the pulmonary. The double sound at the apex is a redoubling because due to the addition of an entirely new sound, and not a part of another sound. The two phenomena are absolutely separate and distinct, and as such cannot be due to the same cause.—*La Riforma Medica*, March 10, 12, and 13, 1900.

Contribution to the Question of Operative Treatment of Neuralgia of the Trigeminal Nerve.—A. B. Tichonowitch, after reviewing various operative measures in the treatment of neuralgia of the trigeminal, states that the method of Quénu and Sebileau is in his opinion the best. It offers a perfectly free entrance to the Gasserian ganglion; the technique of the operation is comparatively simple; the extent of bone resection is limited; the course followed to reach the foramen ovale between the bone and the periosteum is without danger; there are no great vessels to be encountered; the tissues concerned are easily recognizable; the favorable opportunities for ligating the middle meningeal artery, and the rather small dimensions of the opening made in the bone, show this method to be the most advantageous.—*Centralblatt für Chirurgie*, March 24, 1900.

Hypertrophy and Dilatation of the Colon in an Infant.—Lyder Nicolaysen reports the case of an infant who suffered from constipation since shortly after birth, the abdomen becoming gradually distended. The child was sickly, and had frequent attacks of vomiting. When six months old, he presented a deplorable spectacle. The abdomen was enormously distended, measuring 70 cm. in circumference at the umbilicus; from the navel to the symphysis pubis it measured 15 cm., and from the navel to the ensiform process 27 cm. But little effect was produced by enemata, and at the age of twenty-one months the child died from a slight attack of bronchitis. At autopsy the large intestine was found to be greatly enlarged, measuring 26 cm. in circumference, and its walls were exceedingly thin. No obstruction could be found in any part of the intestine. Axel Johannessen reports three similar but less marked cases in the same journal.—*Norsk Magazin for Lægevidenskaben*, March, 1900.

MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE DIAGNOSIS OF SMALLPOX.

IN its early stages and in a modified form smallpox presents many points of similarity to various diseases and particularly in the latter form to chicken-pox. Its correct diagnosis is by no means at all times an easy matter, and many physicians among those who have had little or no practical experience in treating the disease, and whose knowledge as to its diagnostic features is chiefly derived from the text-books, are liable to be led astray by its similitude to chicken-pox. As a rule, too, the medical practitioner is conversant only with typical smallpox. When smallpox in a mild form is extremely prevalent, as it is at present in Illinois and many other States, the necessity for medical men to be able to distinguish with unerring accuracy between the above maladies will be clearly understood. Through a mistaken diagnosis an epidemic may be spread far and wide, not only causing much sickness and mortality, but entailing also financial and trade embarrassments of a serious nature.

Public Health Reports, March 23d, publishes a circular sent by the Illinois State board of health to the physicians of that State with regard to varicella in the adult. Among other apropos remarks are the following: "The occurrence of chicken-pox in adults is so rare as to have escaped the observation of many of those who have devoted years to the study of exanthematous diseases. That it does occasionally exist during adult life is not denied, but its appearance at this period is so uncommon as to excite comment. All cases of so-called chicken-pox in adults seen by this board during the present epidemic presented a well-defined variolous eruption." In support of the assertion that chicken-pox rarely attacks other than children, and that an epidemic eruptive disease affecting adults and children alike is not chicken-pox, many quotations from text-books of unquestionable authority are tendered. Dr. John MacCombie, in Allbutt's "Practice of Medicine," says: "A large proportion of cases that occur nowadays in a well-vaccinated community are of the modified form. In many instances so completely is the course of the eruption altered and the symptoms after the initial stage is over are so modified that it is often difficult to recognize the identity of the ordinary and modified diseases. In modified smallpox as a rule the whole of the eruption is out within twelve hours of the appearance of the first papulæ. In ordinary cases it is not abundant and may be macular at first or from the very beginning papular. In either case much of the eruption is vesicular within twelve to twenty-four hours, and the vesicles attain their full growth in about three days, while some of the papules abort without becoming vesicles. In size they are usually smaller than those of natural smallpox, less regularly circular, more conical, and very often not depressed in the centre, although many show a faint line of redness from the beginning. On the third and fourth days of eruption the vesicles are opaque, the lymph is cloudy, and in many patients they do not become pustules, but desiccate unruptured, inspissated lymph forming small brown, flat, and slightly raised prominences about the size of a small sago grain or less under the epidermis. If they do become pustules they attain the size of full pustulation within five or six days of the appearance of the eruption, and thereafter desiccate ruptured or unruptured, as the case may be. The crust or desiccated pustule falls off in the course of a week or less, exposing a flat, reddened, healed surface of epidermis where usually a little desquamation follows." The same author writes: "The diagnosis of chicken-pox must be determined by the distribution of the eruption and the character of the vesicles distributed on the trunk, thighs, and arms. In chicken-pox the eruption is most abundant on the trunk, less so on the face, still less so on the forearms and legs, and least of all on hands and feet. This circumstance attracts attention, and if the eruption be carefully examined, typical unilocular oval vesicles are invariably found on the abdomen, chest, sides of trunk or back, mixed very often with macules, papules, and small abortive vesicles. . . . On the extremities the similarity of the vesicles of chicken-pox to those of modified smallpox usually increases in direct ratio to the distance from the trunk. In many cases the vesicles on the forearms, legs, back of hand, and back and dorsum of foot are round and hard, small in size, not unlike the eruption of modified smallpox. But all cases of chicken-pox present typical vesicles on either the abdomen, chest, back, thighs, or arms."

From the foregoing description it will be gathered that in the case of an eruptive disease resembling smallpox or chicken-pox, if a careful examination be made as to the character and location of the vesicles a correct diagnosis should be arrived at without much difficulty. When, however, an epidemic of smallpox is abroad, all complaints of an eruptive nature should be viewed with suspicion, and if a physician feels in the least doubtful with regard to any particular case it will be better for him to err on the side of caution and to observe strict precautions, than by a mistaken diagnosis perhaps to menace the health and lives of a whole district.

Cocaine Effect upon the eye can be increased by instillation of a watery solution of suprarenal extract.

THE ETIOLOGY OF GENERAL PARALYSIS OF THE INSANE.

The view that both paretic dementia and tabes dorsalis are largely due to syphilis is receiving gradually increasing acceptance, although there are still wide differences of opinion as to the frequency of this etiological relation. In the present state of knowledge it would be a mistake to maintain that this association exists in all cases, and if it is admitted, as it must be, that other causative factors are operative, it can be readily seen that the proportion of each will vary widely, in accordance with numerous conditions. Further, it is scarcely contended that the two diseases of the nervous system named are truly syphilitic disorders, but rather that they are secondary degenerative results of the antecedent infection, and this assumption also renders it probable that other infectious processes may exert a like influence.

An interesting statistical contribution to the literature of this subject is made by Sérieux and Farnarier (*Revue de Médecine*, February 10, 1900, p. 97), who report the results of an analysis of 58 carefully investigated cases of paretic dementia, of which 46 occurred in men and 12 in women. Of this number 16 were rejected because the evidence was inadequate. The remaining 42 were divided into four groups: 1, those in which syphilis had certainly been present; 2, those in which, from the history and the physical signs, syphilis had probably been present; 3, those in which syphilis had probably not been present; and 4, those in which syphilis had certainly not been present. As a result of this analysis it was found that syphilis had been present with certainty in 21 cases, 50 per cent., and with probability in an additional 12 cases—28.6 per cent. Syphilis had probably been absent in 6 cases, 14.3 per cent., and certainly absent in 3 cases—7.1 per cent. Syphilis was found to be the sole etiological factor in 13 cases—31 per cent. Among other etiological factors were found the following: Neuropathic or psychopathic heredity in 14 cases—33.3 per cent.; alcoholism in 8 cases—19.1 per cent.; arthritism in 7 cases—16.7 per cent.; typhoid fever in 7 cases—16.7 per cent.; cranial traumatism in 4 cases—9.5 per cent.; variola in 2 cases—4.8 per cent.; carbon-monoxide poisoning in 1 case—2.4 per cent; furunculosis in 1 case—2.4 per cent.

It thus appears that syphilis is twice as frequent a cause of paretic dementia as typhoid fever, smallpox, and alcohol combined; two and one-half times as frequent a cause as neuropathic or psychopathic heredity, and eight times as frequent a cause as cranial traumatism. Neuropathic or psychopathic heredity is encountered in about one-third of the cases, but this figure is probably too small, as heredity appears to be the basis necessary for the development of general paralysis. The duration of the period of incubation was found to be in the mean fourteen or fifteen years, with six and thirty-two years as the extremes. This period includes the so-called period of invasion, that is, the period during which morbid phenomena are so little marked that restraint is not necessary. This period, so far as can be judged, may have a duration of two or three years, and the true period of incubation is thus reduced to about twelve years. The mean age at which restraint of general paralytics becomes necessary is in the neighborhood of forty years. Deducting fifteen years from the latent period (incubation and invasion), twenty-five years would be about the age of contagion.

Whatever may be the significance of syphilis as a cause of paralysis, it is not the sole cause. The action of syphilis is incidental and not specific, and it appears demonstrated that toxic substances of various kinds—chemical poisons (lead, alcohol), vegetable poisons (diseased rye), microbic poisons (syphilis), and perhaps also agents of auto-intoxication, are capable of causing meningo-encephalitis in predisposed individuals. This disease does not, therefore, merit the designation exclusively of a parasyphilitic or even a parainfectious, but the more general one of a paratoxic affection.

THE RELATIONS BETWEEN THE LYMPHATICS AND THE BLOOD-VESSELS.

It is commonly taught that the lymphatics discharge their contents into the venous system through the thoracic duct on the one hand and the right lymphatic duct on the other hand, at the junction of the jugular and subclavian veins on either side, and by inference it is implied that there is no other communication between the lymphatics and the blood-vessels. There is, however, evidence that such communication exists and perhaps not rarely. A contention to this effect was made by Lippi of Florence in 1825, and more recently MacAllister has also come to the support of the same view. Boddaert demonstrated experimentally in rabbits and by dissection the existence of communication between the lymphatics and the veins. Additional observations of a like character have been recorded by Leaf (*Lancet*, March 3, 1900, p. 606), who in several dissections has observed a communication in the inguinal region in the human subject between the lymphatics and the veins. In one instance the thoracic duct was double. One of the lower left intercostal veins terminated in the lesser azygos vein and was connected by a small communicating branch with the left half of the thoracic duct. In another instance a large lymphatic trunk terminated directly in the greater azygos vein, and an intercostal lymphatic terminated in the lowest intercostal vein on the right. Leaf believes that the communications between these two sets of vessels are not uncommon, and he is inclined to regard them as normal. He has frequently observed that some of the intercostal lymphatics pour their contents into some of the intercostal veins or into one or both azygos veins; or that some large lymphatic trunks in the neighborhood of the receptaculum chyli empty into the greater azygos vein. Sometimes blood apparently passes from a vein into a lymphatic, quickening the sluggish movements of the lymph-current. In some instances a communication was found also to exist between lymphatics and arteries and occasionally between lymphatics and arteries and veins. These facts may help to explain the pink or reddish color sometimes presented by lymph, and also some peculiarities connected with the dissemination of sarcoma and carcinoma. Thus, sarcoma, while usually spread by the veins, sometimes invades the lymphatic glands, and carcinoma, while usually invading the lymphatic glands, is sometimes spread by the veins.

News of the Week.

A Bureau of Materia Medica.—At the annual meeting of the Medical Society of the State of New York in January, a resolution was adopted to the effect that the interests of medical science require the establishment of a bureau of materia medica in order to institute disinterested investigation into the character and value of new drugs. And the society recommended to the Decennial Convention of 1900 for the revision of the United States Pharmacopœia, the creation of such a bureau by and under its authority, with the provision that it shall report annually upon the matters coming properly within the scope of its work.

An Impostor.—A medium-sized, corpulent man, dressed as a laborer, is visiting certain physicians with the statement that they have been proposed as lodge physicians. He is armed with a letter of introduction, obtained by false representation, from one reputable practitioner to another. Professing that neither of these physicians, for various reasons, can take the position, he offers it to his intended victim, from whom he asks for from $3 to $5 as a proposition fee to be forwarded to the physician-in-chief.

The New York Genito-Urinary Society.—A new medical society has been formed under this name, the membership in which will be confined to medical men engaged in active clinical work in connection with one branch or another of this specialty. Meetings will be held once a month, when cases will be reported, and at least one paper read. The officers for the first year are: *President*, Dr. Ramon Guitéras; *First Vice-President*, Dr. Winfield Ayres; *Second Vice-President*, Dr. Otis K. Newell; *Treasurer*, Dr. George W. Blanchard; *Secretary*, Dr. A. D. Mabie; *Corresponding Secretary and Stenographer*, Mr. Samuel Bennett, 161 Garfield Place, Brooklyn. The corresponding secretary will furnish information as to terms of membership, etc.

The Fourth International Congress of Dermatology and Syphilography will be held in Paris at the Hospital St. Louis, August 2d–9th. The subjects for discussion are: Dermatology: The parasitic origin of eczema (reporters, Kaposi, Unna, Jadassohn, Galloway, Brocq, assisted by Bodin and Veillon); the tuberculides (reporters, Boeck, Colcott Fox, Campana, G. Riehl, J. Dairer); the "pelades" (reporters, Malcom Morris, Lassar, Mibelli, Parloff, Sabourand); the leukoplakias (reporters, Behrend, Springle, Perrin). Syphilography and venereology: Syphilis and associated infections (reporters, Neisser, Bulkley, Ducrey, Hallopeau); the descendants of hereditary syphilitics (reporters, J. Hutchinson, Tarnowsky, Finger, Jullien); causes of generalized blennorrhagic infections (reporters, W. R. Taylor, Lesser, Tommasoli, Lane, Balzer). Those desiring to become members of the Congress should address Dr. G. Thibierges, 7 Rue de Surène, Paris, or the secretary for the United States, Dr. George T. Elliot, 36 East Thirty-fifth Street, New York. The membership fee is $5.

The Ohio State Medical Society.—The fifty-fifth annual meeting of this society will be held in Columbus on May 9th–11th, under the presidency of Dr. Rufus B. Hall, of Cincinnati.

Bequests to Hospitals.—By the will of the late George W. Miles, of Philadelphia, contingent bequests were made to the following institutions: Episcopal Hospital, St. Joseph's Hospital, Presbyterian Hospital, each $8,000; Maternity Hospital, Pennsylvania Hospital, Children's Hospital, Methodist Episcopal Hospital, Germantown Dispensary, Protestant Episcopal City Mission for the Home for Consumptives, Hahnemann College and Hospital, to each $5,000.

Philadelphia Neurological Society.—At a stated meeting held April 23d, Dr. F. Savary Pearce presented a case of peripheral facial palsy, with crossed hemiparesis. The patient was a colored man, who after exposure to cold developed disease of the middle ear and facial palsy on the left side, and some months later, with partial loss of consciousness, developed weakness upon the right side of the body, probably in consequence of hemorrhage into the left cerebral hemisphere. Dr. W. G. Shallcross presented a case of acromegaly, and also a case possibly of acromegaly in an early stage. Both patients were young men, deficient mentally, and inmates of the Pennsylvania Institution for Feeble-minded children. Dr. C. W. Burr exhibited a case of treadler's palsy occurring in an elderly man whose work compelled him to raise and depress many hundreds of times daily a treadle weighing nearly thirty pounds, and who thus developed an occupation neurosis. Dr. A. A. Eshner referred to an analogous condition observed in a motorman and resulting from the manipulation of a gong with the foot. Dr. Charles S. Potts exhibited a case of amyotrophic lateral sclerosis occurring in a man who had been employed in lead works, but who presented no blue line on the gums or other symptoms of lead poisoning. The nervous symptoms predominated on the right side, and were in part bulbar and in part spinal. Dr. C. W. Burr reported a case of general anæsthesia involving both general and special sensibility, only a slight degree of hearing being retained, while the motor sphere was unaffected, except indirectly through the sensory disturbance. The possibility of meningitis was suggested, as there had been acute attacks earlier in life that seemed to be of this nature. Dr. J. Hendrie Lloyd exhibited a specimen of large subdural hemorrhage over the motor region, causing hemiplegia and aphasia, derived from a case that during life suggested only intracerebral hemorrhage, and he referred to another case in which during life the condition was thought, from the symptoms, to be one of subdural hemorrhage, while after death no lesion whatever was found in the brain, and the symptoms were necessarily attributed to uræmia. Dr. F. X. Dercum reported a case of rhizomelic spondylosis. Dr. W. G. Spiller exhibited the brain from a case of hydrocephalus. The patient was an elderly woman, with enlargement of the head from birth, with a history of convulsions, but without paralysis, and with fair intelligence. The ventricles of the brain were greatly dilated and the cerebral structure was extremely attenuated, with adhesions between the occipital lobe of the brain and the cerebellum.

Dr. Josef Gruber, professor of otology at the University of Vienna, died on March 31st, at the age of seventy-three years.

The Administration of Solid Food to Infants under one year of age is forbidden by law in France, except it be upon the prescription of a legally qualified physician.

American Gynecological Society.—The twenty-fifth annual meeting of this society will be held in the lecture hall of the Columbian University, Washington, on May 1st–3d, under the presidency of Dr. George J. Engelmann, of Boston.

Dr. Robert Abbe Consulting Surgeon to Roosevelt Hospital.—At a meeting of the board of managers of Roosevelt Hospital held this week, Dr. Robert Abbe was unanimously elected consulting surgeon to the hospital in place of Dr. Robert F. Weir, transferred to the staff of attending surgeons. We congratulate Dr. Abbe on this well-merited honor.

American Neurological Association.—The twenty-sixth annual meeting of this society will be held in Washington, in conjunction with the Congress of American Physicians and Surgeons, on May 1st–3d, under the presidency of Dr. Edward D. Fisher, of New York. The sessions will be held at The Normandie.

Dr. Jacobi's Seventieth Birthday.—A number of the friends and professional associates of Dr. A. Jacobi, of this city, have constituted themselves a general committee for the purpose of arranging for the proper celebration of the seventieth birthday of Dr. Jacobi, in May. Under the auspices of the committee, a complimentary subscription dinner will be tendered Dr. Jacobi, at Delmonico's, Forty-fourth Street and Fifth Avenue, on Saturday, May 5th, in which the physicians of the city are invited to participate. The price of the dinner will be $10, including wine. An application blank may be had by addressing Dr. A. G. Gerster, P. O. Box 3,032, New York City.

The Hospital Ship "Missouri" is to be converted into a transport, having been found unsuitable for a hospital ship without very extensive alterations. The sick and wounded will hereafter be brought from the Philippines in the ordinary transports, sailing every two weeks. The *Missouri* was fitted out as a hospital ship at New York at great expense several months ago, and has since made a trip from this port to Manila, and thence to San Francisco. On the second half of the voyage she carried a large number of sick and wounded soldiers. Throughout the entire voyage there was constant friction between the medical officer in charge and the master and other officers of the vessel. Soon after her arrival at San Francisco the charges made by the officers against each other were officially investigated, with the result that the surgeon was sustained and the civilian officers were dismissed from the transport service.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending April 21, 1900: April 13th.—Medical Inspector G. E. H. Harmon detached from the *Baltimore* and ordered to the *Oregon*. Surgeon F. B. Stephenson detached from the *Oregon* and ordered to the *Baltimore*. April 16th (changes by cable from Asiatic station).—Passed Assistant Surgeon L. Morris to the *Baltimore*. April 17th.—Passed Assistant Surgeon S. G. Evans, order of April 13th modified; ordered to proceed home when detached from the *Marblehead* and to be ready for sea duty.

The Dry Tortugas Quarantine Station.—A controversy between the Treasury and Navy departments over the retention of the Marine-Hospital station on the island of Dry Tortugas, forty miles west of Key West, has been settled by the agreement of the Navy department to issue an order permitting the quarantine station to remain where it is until the expiration of the quarantine season against ships from Cuba next autumn. The authority of the Navy department was recently extended over Dry Tortugas, and the Marine-Hospital service, which has used the place for a quarantine station for many years, was directed to vacate.

Proposed Taxation of Medical Practitioners in Turkey.—According to the *Moniteur Oriental* the Turkish government has hit upon an ingenious device for checking unqualified practice and at the same time levying a tax on the legitimate practitioner. It is proposed to make the use of prescription books bearing a government stamp compulsory on all medical practitioners. It is estimated that this would yield to the treasury a revenue of 300,000 or 400,000 piastres a year, while quacks would be hindered in their depredations by the fact that in each prescription book the name of the doctor using it and the number of his diploma must be inscribed. The proposal has been referred to the directing committee of military schools. Similar plans have been suggested more than once before, and have been rejected, and it is thought unlikely that the present proposal will be more successful.—*The British Medical Journal.*

The Plague.—The deaths from the bubonic plague in India during the week ending April 18th aggregated more than 4,000, which is slightly less than in the preceding week.—The disease appeared some three weeks ago in the Javanrood district in Persia, near the Turkish border, 200 deaths having occurred. Cases have also been reported in several places on the Red Sea.—A despatch from Manila, dated April 21st, states that a number of sudden deaths of Filipinos and Chinamen in Quiapo Market have led to an investigation, showing that fifteen cases of the plague, fourteen of which were fatal, have occurred within a week. The market is located in the centre of the city. Some of the plague victims were stricken and died within an hour. After all the market people had assembled the health officers threw a guard around the buildings and will keep the inmates quarantined there for a fortnight. They will then burn the market. The plague elsewhere in the city has been suppressed, not a single case having been reported from the Chinese district for ten days. The total number of deaths is 185—119 Chinamen and 66 Filipinos.

Women in the Boer Army.—It is said that a number of women in male attire have been discovered among the captured Boers and among the dead on the battlefield.

The Famine in India is reported to be steadily increasing, especially in the districts of Bombay and Rajputana. Five and a half millions of people are now on the relief lists.

The Hospital Ship "Maine" has arrived at Southampton with many wounded soldiers from South Africa. The patients were taken to Netley, and the ship will return to the Cape as speedily as possible.

Treatment of Tetanus in the French Army.—By a recent order of the French army medical service medical officers are directed to use injections of antitetanus serum in large and repeated doses in all cases of pronounced tetanus. In justification of the order is a statement that experience has shown that such injections have a favorable effect in many cases.

A Case of Counter Prescribing.—A man went into a Bowery drug-store last Sunday and asked for something to relieve a headache. The clerk, for some unexplained reason, gave him a bottle of tincture of larkspur. The man with a headache took a tablespoonful of the tincture, and was next heard of in the hospital with gastritis.

A Large Gift to Mt. Sinai Hospital.—A gift of $200,000 has been made to Mt. Sinai for the purpose of erecting the pavilion for private patients on the new site at Fifth Avenue and One Hundredth Street. The money is given by Mr. Meyer Guggenheim and his seven sons in memory of their deceased wife and mother. This gift leaves only about $400,000 still to be raised in order to erect all of the nine buildings constituting the new hospital.

Stealing the Livery of Heaven.—The United States consul at Pretoria has informed the State department that members of the ambulance corps sent from Chicago and other places by American sympathizers with the Boers to attend the Boer sick and wounded have taken up arms against the British. The State department will probably complain to the Transvaal government against permitting these American citizens to serve in the Boer army, on the ground that they were permitted to leave the United States with the understanding that they were to serve as neutrals in humane work. All these men took an oath, before leaving this country, that they would not join the combatants on either side, and it was on this representation and because of the indorsement of Miss Clara Barton that they were permitted by the Portuguese authorities to pass through the Delagoa Bay territory. Dr. MacNamara, one of the physicians who went with the corps from Chicago, is reported to be at Lourenço Marquez on his return home, disgusted with the treachery of his companions. Despite this abuse of the Red Cross name, it is reported from Chicago that another ambulance corps will be fitted out and sent to the scene of war. The promoters are now working hard, and an expedition of fifty men, it is said, will be sent to the Transvaal, fully equipped, within a month. According to a despatch to *The Daily Mail*, of London, these are not the only men who have gone to the Transvaal under the pretence of healing wounds and then have set out to inflict them, for all the ambulance corps which have been sent from the continent of Europe have repudiated the Red Cross as soon as they reached Pretoria.

The Death Rate in Philadelphia continues unusually high. For the week ending April 21st there were reported to the bureau of health 739 deaths, 48 more than for the preceding week, and 294 more than for the corresponding week of the previous year. Not less than 123 of these deaths were due to pneumonia (and 10 besides are attributed to congestion of the lungs and 5 to pleurisy); 84 deaths resulted from pulmonary tuberculosis, 56 from disease of the heart, 36 from nephritis (together with 23 attributed to uræmia), 34 from convulsions, 31 from influenza, 25 from apoplexy, 24 from measles, 21 from inflammation of stomach and bowels and senility each.

College of Physicians of Philadelphia.—At a special meeting held in conjunction with the Philadelphia Neurological Society on April 20th, a discussion was held on "The Fifth Nerve in its Neurological and Cervical Aspects," and the following papers were read: "Peripheral Resection of the Fifth Nerve," by Dr. W. W. Keen and Dr. W. G. Spiller. "Pathological Report on Two of the Gasserian Ganglia Removed by Dr. Cushing," by Dr. W. G. Spiller. "Microscopic Studies of Gasserian Ganglia," by Dr. L. F. Barker, of Baltimore. "The Natural History of Tic Douloureux, with Some Observations on Treatment," by Dr. C. L. Dana, of New York. "On a Method of Total Extirpation of the Gasserian Ganglion by an Infra-Meningeal Route, through the Temporal Fossa, with a Report of Four Cases," by Dr. H. W. Cushing, of Baltimore. "Method of Exposing the Gasserian Ganglion; Removal of the Superior Maxillary Nerve," by Dr. G. G. Davis. "Endothelioma of the Gasserian Ganglion; Two Successive Resections of the Ganglion: First, by the Extradural (Hartley-Krause) Operation; and, secondly, by an Intradural Operation." Clinical Report by Dr. F. X. Dercum; Surgical Report by Dr. W. W. Keen; Pathological Report by Dr. W. G. Spiller. "Contribution to the Surgery of the Fifth

Nerve," by Dr. Robert Abbe, of New York. "Contribution to the Surgery of the Fifth Nerve," by Dr. L. McL. Tiffany, of Baltimore.

Obituary Notes.—DR. JOHN JOSEPH CRANE, of this city, died on April 18th, at the age of forty-nine years. He was born in Elizabeth, N. J., and was a graduate in arts of Princeton in 1873, and in medicine of the College of Physicians and Surgeons, New York, in 1876. Upon receiving his degree he became the resident physician of Roosevelt Hospital. From Roosevelt Hospital he went to Elgin, Ill., and became the first assistant physician in the insane asylum there. He remained in Elgin for several years, and then returned to this city and entered upon practice.

DR. EDWARD FRANK GRANT died from smallpox on his coffee plantation near Mettalalteyuca, Pueblo, Mexico, on April 5th, at the age of forty-five years. He was a native of this State, but soon after graduation went to Lodi, Cal., and later purchased a plantation in Mexico. The disease which killed him was contracted while visiting a peon living on a neighboring ranch.

DR. JOHN HABIRSHAW died at his home in this city on April 20th, at the age of forty-six years. He was a graduate of the College of Physicians and Surgeons in 1877.

DR. ALVIN B. ALLYN, a homœopathic physician of Chardon, Ohio, died in Cleveland on April 20th of injuries received by being shut up in a folding bed. He had been under treatment for some time for nervous prostration. He was a graduate of the medical department of the University of Michigan in 1879.

DR. WILLIAM F. ROBINSON died at Philadelphia on April 15th at the age of sixty-three years. He was born in Boston, but was educated in the schools of Philadelphia, being graduated from the medical department of the University of Pennsylvania. He practised medicine for ten years in Hatboro, Montgomery County, and in 1873 established the *Hatboro Free Spirit*, of which he was the editor until his death. He was for six years State quarantine physician at the lazaretto, and for eight years connected with the bureau of health. For four years he was surgeon to the Bucks County regiment, the One Hundred and Fourth Pennsylvania volunteers.

Night Sweats.—In the hyperidrosis of phthisis we may employ white agaric in dose of 0.25 to 0.30 cgm.; sulphate of atropine, one or three granules each containing a quarter of a milligram, at intervals of two hours during the evening. Ergot is also used. Camphoric acid in cachets of 1 gm., two or three times a day; tribasic phosphate of lime 4 gm. in two doses a half-hour apart in the middle of the day; tannin in doses of 0.30 to 0.50 cgm.; zinc oxide same dose; fluid extract of hydrastis canadensis, gtt. xxx. at bedtime. Best of all is the tellurate of sodium. It should be prescribed in average daily dose of from 2½ to 3 cgm. for three or four days consecutively. A daily quantity of 5 cgm. should not be exceeded. It may be given in alcoholic solution or preferably in pill form.—ERNEST BARIÉ, *Journal des Praticiens*, February 17th.

Progress of Medical Science.

The Boston Med. and Surg. Journal, April 19, 1900.

Treatment of Cancer of the Cervix of the Uterus Complicated by Pregnancy.—George Ben Johnston says that when the cancer appears before the termination of the fourth month of pregnancy and is limited to the cervix, the sole consideration must be the welfare of the mother, and hysterectomy must be performed, usually per vaginam. When the disease has extended to the vagina and possibly neighboring structures, rendering the condition inoperable, the efforts should be entirely in behalf of the child; the mother must be sustained until the end of term if possible, or until the child is viable. Delivery by the natural channel is fraught with such formidable dangers—laceration, hemorrhage, infection with peritonitis—that Cæsarean section should always be resorted to as less perilous. When the disease is discovered after the fourth month and remains limited to the cervix, immediate ablation of the uterus is demanded if the disease is progressing with rapidity; if slowly, postponement until the completion of the seventh month or later, when a Cæsarean section may save both mother and child, is to be advised.

Intermenstrual Dysmenorrhœa.—Malcolm Storer reports twenty cases of pain which appeared with regularity usually from the twelfth to the sixteenth day after the beginning of the last menstruation, lasting from two to four days, paroxysmal in character, or constant with exacerbation. There was no menstrual discharge, but leucorrhœa. The author offers the following theory in explanation of the phenomenon: The intermenstrual pain coming about the fourteenth day from the beginning of menstruation, the nineteenth after the climax of Stephenson's wave, occurs just about the time the pressure line has reached its lowest point. Cannot then the intermenstrual wave, if one exists, be one of preparation rather than of subsidence, a nervous explosion, so to say, as if nature were waking up with a more or less violent effort to make ready for the coming activity, whether menstrual or ovarian?

A Hair Ball in the Stomach.—John Homans describes a case in which a mass of hair, nine inches long by two and a half inches wide, was removed from the stomach of a young woman who had for twelve years swallowed the hair combings. The patient recovered. This was in London, in 1866.

The Practical Value of the White Blood Count in Surgical Cases.—J. C. Hubbard says that from our present knowledge of the causes and variations of leucocytosis we cannot yet make any deductions which are simple enough to be of any great use to the surgeon at the bedside.

Third International Congress of Obstetrics and Gynæcology Held at Amsterdam.—By George J. Engelmann.

Gunshot Wounds of the Abdomen, with Multiple Wounds of the Intestines.—By Howard A. Lothrop.

Journal of the American Med. Ass'n, April 21, 1900.

Affections of the Kidney in Relation to Pregnancy.—J. Clarence Webster reviews different theories regarding the changes in the kidneys during pregnancy, advanced by the principal workers in this difficult field, and says it must be admitted that much is to be said in favor of each; that it is probable that something of the truth is contained in all of them, and that in most cases no single factor is causal, but rather a combination of various factors, these varying greatly in different cases. The most important of these is undoubtedly the toxic element. As to treatment, the writer says it is to be carried out on lines followed in the non-pregnant state. The strictest watchfulness on the part of the physician is necessary. As to the question whether the pregnancy shall continue, it is difficult to decide. Certain symptoms, however, point imperatively to the induction of premature delivery, in the interests of the mother, viz., visual disturbances and continued headache, pulmonary or other marked œdema, marked cardiac disturbance, frequent nose-bleedings, continued increase in the casts and albumin in the urine, and uræmia.

Castor Oil in the Treatment of Neuralgia.—Harold M. Moyer reports several cases of neuralgia which he has treated with castor oil with good results. The results with acute neuralgias were, as might be expected, better than with the chronic, although even in the latter only one failure is recorded, when a patient with a neuralgia of the third division of the nerve on one side continued the treatment for two or three weeks with no improvement in the symptoms. The oil is administered in the morning before breakfast, and the dose is from one to two ounces. The most efficient means of administration is in ale, preferably Dogshead or Bass', which contains a large quantity of gas. When first given it acts freely on the bowels, but if continued daily its cathartic effect rapidly diminishes. The author does not think that the value of this oil in neuralgias is due to its cathartic properties, but thinks it probable that substances are present in it which have not been fully identified, which substances may have some effect on the sensory nerves.

Thyroid Extract in Juvenile Obesity.—I. N. Love reports four cases of juvenile obesity which he has treated with the thyroid extract, especially that of a boy, aged eight years, who weighed before treatment one hundred and thirty-one pounds. In connection with proper purgation, diet, and exercise he was ordered one-half of a five-grain tablet of thyroid extract three times a day, with a gradual increase until one tablet was taken four times a day. After fourteen months' treatment this boy now weighs one hundred and six pounds, the chief feature of his case being that he has developed muscle to a considerable degree. The writer has found strychnine, in doses ranging from gr. $\frac{1}{150}$ to gr. $\frac{1}{50}$, a most excellent drug to be taken with the thyroid in order to prevent depression and unpleasant effects.

Primary Tuberculosis of the Kidney.—In this case, reported by Dudley Tait, lumbar nephrectomy was performed with subsequent total resection of the ureter, followed by complete recovery. The points of interest in the case are: (1) The perirenal tuberculous infiltration, a rare and troublesome condition, complicating both the operation and the subsequent treatment; (2) the absence of vesical lesions, causing this case to be a strong evidence in favor of the reflex theory advanced by Le Dentu and most of the English authors, Newman, Roberts, and Morris.

Cerebral Cyst.—This case is reported by Van Buren Knott to illustrate the following point: Every operation on the brain must be considered as largely exploratory, and promises of a definite result cannot be made. Nevertheless, such operations properly performed will do no harm, and whenever in any given case the symptoms point to a lesion, the localization of which seems probable, the patient should be given the chance of relief which may follow a properly conducted operation.

Septic Conditions in Some Acute Infectious Disorders in Children.—By A. C. Cotton.

Suggestions on the Rights and Liabilities of Surgeons.—By T. J. Mahoney.

Resection in Case of Ununited Fracture of the Femur.—By I. P. Klingensmith.

Evolution of the Animal Cell.—By Joseph Smith.

Successful Pylorectomy.—By H. O. Walker.

The Smegma Bacillus.—By Oscar A. Dahms.

Ureterectomy.—By J. Wesley Bovée.

Medical News, April 21, 1900.

Pain as a Pathognomonic Symptom of Ectopic Pregnancy.—Henry C. Coe, after citing several cases, concludes that pain alone, when not accompanied by a clear history of menstrual irregularity, symptoms of pregnancy, and the presence of a tumor at the side of the uterus or in Douglas' pouch, known to be of recent development, is pathognomonic of extra-uterine pregnancy only under certain conditions, viz., the pain is of a sharp colicky character, distinctly localized on one side, attended with faintness more or less marked, and is usually followed by intervals of hours or days of complete remission. The pulse is accelerated, but there is no rise of temperature as in inflammatory conditions.

Tuberculous Disease of the Urinary Apparatus.—J. M. Gile states that this condition is of considerable frequency. Its course is as variable as that of the same disease when affecting other organs, and may prove rapidly fatal or run an indolent course. For certain diagnosis we must depend on the bacteriologist, but even this will not definitely localize the trouble. The hereditary character is more marked than in pulmonary tuberculosis. The age incidence, from the writer's cases, is markedly in young adult life rather than in middle age, while the location is merely a matter of circumstance.

Lateral Sinus Thrombosis and Acute Leptomeningitis Complicating Acute Suppurative Otitis Media.—By Wendell C. Phillips.

A Case of Probable Accidental Inoculation with the Malarial Parasite.—By William H. Katzenbach.

The Curability and Treatment of Early Phthisis.—By W. F. Hazelton.

Philadelphia Medical Journal, April 21, 1900.

Appendicular Abscess Rupturing into the Sac of a Reducible Inguinal Hernia.—Orville Horwitz reports this case in which the sac was opened and drained, the result being a permanent cure of the hernia. The same writer reports a case of intussusception of the bowel which was relieved by operation: a relapse occurred, another operation was performed, and the patient died three days later. A third case was one of chronic hæmatocele of the tunica vaginalis testis, associated with an encysted omental hernia, resembling malignant disease of the testicle.

Early Operation in Appendicitis by the Country Practitioner.—R. H. Harper reports a case of appendicitis in a boy, aged thirteen years, who had just recovered from an attack of typhoid fever. The operation was performed with the child on a kitchen table; the assistants were two women and a man; the towels and instruments were sterilized with boiling water. By an oversight the silk was not sterilized, and there were stitch-abscesses along the upper half of the incision, but with this exception the result was all that could be desired.

Infection through the Tonsils, Especially in Connection with Acute Articular Rheumatism.—By Frederick A. Packard.

Two Cases of Fracture of the Shaft of the Radius.—By W. B. Lowman.

Selections from the Lane Lectures.—By T. Clifford Allbutt.

New York Medical Journal, April 21, 1900.

Cancer of the Stomach in the Young.—W. Osler and T. McCrae collate the records of cases of this nature, dividing them into classes based on the first three decades of life. Six cases only are on record below ten years. Thirteen are recorded during the second decade. The authors record six additional cases occurring between the ages of twenty and thirty. An analysis of the various symptoms is given, and the article closes with the following conclusions quoted from Mathieu: (1) Cancer of the stomach below the age of thirty has generally a rapid progress in some months, and often ends suddenly by incidents more or less abrupt. (2) Early cancer is not latent; it is often overlooked.

A Consideration of the Neuro-Muscular Elements in Hip-Joint Disease, with Especial Reference to the Question of the Abolition of Protective Treatment.—By N. M. Shaffer.

Hepatic Abscess.—J. F. Richardson reports a case in a man aged twenty-four years. The abscess ruptured into a bronchus, but the patient eventually recovered.

The Present Status of the Widal Reaction as a Diagnostic Test in Typhoid Fever.—By A. E. Guerard.

Some Practical Remarks on Clinical Examination of the Blood.—By W. N. Berkeley.

Mysticism among the Negroes.—By F. J. Carroll.

British Medical Journal, April 14, 1900.

Amputation without Anæsthesia.—D. Mackinder reports the case of a delicate woman of the pallid, nervous temperament who objected to chloroform and submitted to an amputation of the breast without an anæsthetic of any sort. She did not make a sound, but simply compressed her lips, and said "Thank you!" when all was over. Another case was that of a large, athletic man whose finger was amputated in consequence of an injury. He refused to take an anæsthetic, and kept laughing and joking throughout the operation. J. Campbell Hall also reports the case of a large, stout woman, seventy years of age, whose right leg was amputated above the knee for gangrene some twenty years ago. She took no anæsthetic then. Recently gangrene appeared in the left leg, and amputation between the lower and middle thirds of the thigh was performed, this time also without anæsthesia, the patient never uttering a sound or moving in the least. She made an excellent recovery.

The Seat of Pain in Biliary Colic.—J. H. Keay says that, from a distressing personal experience and from observation of other sufferers, he is convinced that the usual description of the pain given in the text-books is incorrect. In his own case, he says, long before an acute attack there are pains in the back, often mistaken for lumbago, but when the calculus is fairly lodged in the duct, the pain begins about the tenth or eleventh dorsal vertebra, and gradually passes round, giving place to excruciating pains in the right and often the left hypochondrium, middle or lower abdomen, frequently above the right nipple, but practically never in the right shoulder. Immediately before the pain subsides, when probably the stone is just entering the duodenum, a peculiar gliding sensation is sometimes felt about two inches to the right of the tenth or twelfth dorsal vertebra.

Non-Diabetic Glycosuria.—Robert Saundby discusses the various conditions under which sugar may appear in the urine in the absence of true diabetes mellitus. In examining for sugar, if the copper is reduced on the first test, he makes sure that it is sugar and not some other reducing agent (such as glycuronic acid, chloral, etc.) by filtering the urine seven or eight times through animal charcoal. This removes all of the reducing agents except sugar. The various forms of non-diabetic glycosuria which he reviews are alimentary or physiological, alcoholic, hepatic (many of which are really alcoholic), gastric, neurasthenic, and senile.

Notes on a Case of Bright's Disease Complicated with Gangrene.—By Alexander D. H. Leadman.

Swelling of the Eyelids with Intermittent Albuminuria in Children.—By Theodore Fisher.

A Case of Glandular Fever Associated with Erythema Nodosum.—By Bertram Thornton.

Some Cirrhoses of the Liver.—By W. B. Cheadle.

Diphtherial Stomatitis.—By E. F. Trevelyan.

The Lancet, April 14, 1900.

Some Cirrhoses of the Liver.—In this lecture W. B. Cheadle considers the subject of treatment. Absolute abstention from alcohol and all stimulating ingesta is the first requisite. Diet should be restricted to milk, eggs, simple proteids, bread, and fresh fruit and vegetables. Predigested foods are necessary in some instances. Mild laxatives, together with iron or other tonics, are all of service. Mercury and the iodides are indicated, of course, in syphilitic cases, and, owing to the possibility of diagnostic error, should be tried even in the alcoholic cases. When there is cardiac weakness, digitalis will give us the best results. For the ascites diuretics and tapping are advised, but after the latter is done the patients should be kept under close observation for a long period.

The Typhoid Bacillus and Typhoid Fever.—P. Horton-Smith devotes this lecture to a consideration of the Widal test, speaking of its discovery, technique, nature of the agglutinating substance, limitations of the test, etc. He considers the agglutins to belong to the ferment class. Under the head of treatment, he considers preventive inoculation, and highly extols the use of urotropin, which practically does away with the danger of spreading infection by means of the urine. Results of certain bacteriological experiments are given to prove the claims made in this direction.

A Case of Spontaneous Rupture of the Heart and Hemorrhage into the Pons Varolii.—P. T. Goodman reports this condition occurring in a woman who had indulged in spirits, though not addicted to their use. She complained of loss of power on the right side, and became comatose, dying in five hours. Rupture was found on the anterior surface of the left ventricle, with hemorrhage in the left pons.

Intestinal Obstruction Caused by Meckel's Diverticulum and Relieved by Operation.—By H. J. Mackay.

Gunshot Wound of Head; Perforation of the Brain; Recovery.—By D. Durran.

Experiments on Intestinal Suture.—By W. Edmunds and E. C. Stabb.

Plague Viewed from Several Aspects.—By W. J. Simpson.

Deutsche medicinische Wochenschrift, April 5, 1900.

Two Practically Important Cases of Hysteria.—The first of the cases reported under this title by Ernst Fuerst was that of a woman thirty-six years old, who had suffered for several weeks from vomiting and pains simulating those due to an impacted gall-stone. The case was diagnosed as one of hysteria, but in order to relieve the bilious vomiting it was decided to wash out the stomach. The sound seemed to enter readily, but no fluid could be made to pass through it, and all attempts to withdraw it were unavailing, as it was firmly held by a spasmodic stricture of the œsophagus. It was only when the patient was profoundly narcotized that the tube could be drawn out. Under careful treatment the patient fully recovered. The second case was that of a man who had suffered a fracture of two ribs and who subsequently presented symptoms leading to a suspicion of tuberculosis. The tuberculin test was applied several times, and each time a characteristic febrile reaction followed. Hysteria being suspected, an injection of water was made and the same reaction was produced, and then a simple puncture with the needle of the syringe was made in the back, but not a drop of fluid was expressed, yet the reaction followed as before.

The Serum Diagnosis of Tuberculosis.—Ernst Bendix has applied the agglutination test in thirty-six cases of tuberculosis and obtained the reaction in all but two. Various dilutions were employed, in one case as high as 1 : 50. In both the cases in which the reaction failed the disease was far advanced, and in one of those there was even a minus value, the serum reducing the agglutination power when added to other agglutinating sera, there seeming to be an "anti-agglutinin" in this patient's blood. If one might reason from two cases only, it would seem as though the Gruber-Widal serum reaction was not only of diagnostic value in tuberculosis, but that one might draw certain conclusions regarding the course of the disease; that is to say, that a serum of high agglutination value would indicate in general the presence of a less active tuberculous process than one of less power.

Two Cases of Syphilis with Peculiar Features.—The first of the cases reported by Heinrich Köbner was that of a healthy-looking man, who had a sharply circumscribed, round, slightly raised, bluish, hard infiltration on the anterior surface of the thigh. A scar was visible in its centre. The patient said he had had a boil which was incised. The femoral and inguinal glands were enlarged. There was a very painful, soft, elastic periostosis on the right parietal bone. No eruption was visible. The diagnosis of syphilis was disputed, but subsequent events proved its correctness. Infection had been occasioned probably by the scalpel used in incising the furuncle. The second case was one of constitutional syphilis following a non-indurated initial lesion, which had been diagnosed and treated as a soft chancre.

Syphilis of the Lingual Tonsil and its Relation to Smooth Atrophy of the Follicular Glands of the Tongue.—By W. Lublinski.

Agglutination of the Red Blood Corpuscles.—By G. M. Malkoff.

Treatment of Uterine Hemorrhages.—By H. Ostermann.

Berliner klinische Wochenschrift, April 2, 1900.

Experimental Contribution upon the Effect and After-Effect of the Thyroid Poison.—M. Porges calls attention to a peculiar form of glycosuria which may follow the administration of the thyroid preparations and which is followed by disturbances in the carbonic-acid metabolism. Experiments were made by feeding the thyroid substance to a dog together with other diet, the bodily excreta being carefully estimated before, during, and after the thyroid feeding. From his experience with animals Porges believes that there is a very great variation in susceptibility to the effects of the thyroid extract, and that this accounts for the conflicting results obtained with it as a therapeutic agent.

A New Method of Employing the Silver Compounds in Histology.—Salge and Stoeltzer claim that staining-results in histological technics can be made far more striking if with the use of the silver preparations there is introduced the employment of that class of substances which in photography are called developers. Their method, the description of which must be read in the original, is in brief to immerse the specimen in a silver solution and then transfer it to the "developer," and they enumerate the various solutions which have served them for this purpose in good stead.

The Pyogenic Origin of Chorea Rheumatica and of Rheumatic Processes.—S. Mircoli believes that many cases of rheumatism are directly referable to streptococci, while others may be ascribed to staphylococci, diplococci, and gonococci. In seventeen cases of chorea which he has studied the infection was referable to the staphylococcus in fourteen and to the diplococcus lanceolatus in three. From animal experimentation he finds the same effects upon the heart and serous membranes as are afforded by clinical rheumatic manifestations.

The Treatment of Tuberculosis in the Nineteenth Century.—By Bäumler.

Wiener klinische Rundschau, March 25, 1900.

Psychical Deafness.—Ferdinand Alt, in the beginning of his article, mentions the fact that the term "psychological deafness" was first used by Heller (who is not a physician, but a pedagogue) to designate a condition of seeming deaf-mutism in weak-minded subjects or idiots, that may, however, be cured in many instances. Alt takes exception to the promiscuous use of the term, demonstrating that, for instance, the loss of intellectual perception of sound is by no means identical with psychical deafness. He tries to establish certain points of differentiation and generalization on the basis of the various phenomena observed in connection with this subject.

The Treatment of Eczema in Childhood.—J. H. Rille gives a very extensive description of the most important methods of treatment to be employed in the various types of this disease. In children he has found the use of salicylic-lanolin salve, one-half to one per cent., to be most efficient and reliable. With reference to prophylaxis, he states that vaccination should be omitted, if possible, in patients with eczema, especially if the latter be present on the face, as cases of generalized vaccine, leaving numerous disfiguring marks, have been observed as a result of vaccination.

Wiener klinische Wochenchrift, March 29, 1900.

The Hæmamœba of Löwit in the Blood of Leukæmics.—Wilhelm Türk in a "preliminary report" refers to the demonstration by Löwit at the last Congress for Internal Medicine at Karlsbad, of preparations of the "hæmamœba leukæmiæ magna," and declares that these protozoa do not represent parasitic formations, but so-called "mast-cell granulations." He calls special attention to the fact that Löwit in his experiments with rabbits did not succeed in producing the anatomical and histological picture of a leukæmia, but bases his claim of having transferred the disease to rabbits upon the presence of a chronic recurrent leucocytosis and the authenticity of his hæmamœba. Recognizing the statement above made, that Löwit's "amœbæ" are not parasites, his argumentation would, of course, be without ground, for a chronic recurrent leucocytosis is not identical with leukæmia.

Contribution to the Knowledge of the Semeiotics of the Secondary Pulmonary Sound.—Adolf Hecht gives a very extensive account of his experiments with Bettelheim-Gärtner's stetho-phonometer. He found this instrument to be especially useful in determining the relative strength of cardiac tones, and considers the relation of the second pulmonary to the second aortic tone of greatest value. While he believes that one single examination can be of but little utility, he is convinced that systematic observation enables us to draw important conclusions as to the course of circulatory, respiratory, or abdominal diseases. He also claims that exact physiological studies regarding changes in the lesser circulation are possible, and that many of the facts obtained as a result of experimental research may thus be confirmed in the human subject.

A Case of Intra-Abdominal Torsion of the Omentum.—J. Hochenegg reports a highly interesting case, which is probably the only one of its kind ever published. It is that of a man, forty-one years of age, with congenital hernia, who suddenly developed symptoms of abdominal inflammation, pointing to appendicitis with sacculated exudate. However, the operation revealed a threefold torsion of the omentum, the particularly remarkable features being that the twisting of the pedicle had occurred entirely intra-abdominally, the sac being empty, and that the omentum was not adherent to any of the neighboring organs. The patient made an excellent recovery.

Münchener medicinische Wochenschrift, April 3, 1900.

Dormiol.—Peters has used dormiol for the past nine months in various conditions. It consists of one molecule of chloral, combined with one molecule of amyleuchydrate, and is an oily, colorless fluid, of a specific gravity of 1.24, a camphor odor, and a cooling taste. It has been used in organic and functional nervous diseases, and in other affections in which insomnia is a prominent symptom. It is given in ten-per-cent. watery solution or in gelatin capsules. It is agreeable to the taste, and no bad effects are noted on the heart, kidney, bladder, etc. In eighty-four per cent. of the cases a deep sleep was produced. It is especially useful in functional neuroses. The initial dose is gr. viiss., increasing to gr. xv.

Causes of Climacteric Hemorrhages.—Theilhaber says that in many instances we find carcinoma of the vaginal portion of the cervix uteri, of the mucous membrane of the cervix, or less frequently of the body of the uterus; still less frequently polypi and sarcoma of the uterus are found. Inflammatory conditions of the adnexa are rare in advanced age. "Hyperplasia uteri præclimacterica" is a source of these hemorrhages. Apoplexy of the uterine vessels, analogous to hemorrhagic infarcts, is occasionally a source of climacteric hemorrhage.

Embolism of the Mesenteric Arteries.—Ott states that, though embolism of the mesenteric arteries is rare, it is still more frequent than generally supposed. Two cases, with a typical history, course, and recovery, are reported. The necessary symptoms for a diagnosis are a source of the embolus, intestinal hemorrhage, reduction of body temperature, colicky abdominal pains, tympanitic distention, and rigidity of the abdomen, the presence of some exudate in the abdominal cavity, and the pre-existence or coexistence of other emboli.

Tannopin (Tannon) as an Intestinal Astringent.—Eugen Doernberger recommends as an intestinal astringent, especially for children, tannopin, which is a condensation product of tannin and urotropin. The dose for children is gr. viiss. three times daily, for adults gr. xv. three times a day. The dose must be regulated for the individual case. It is especially applicable to children, since it is tasteless; its greatest disadvantage is the expense. Successful cases are tabulated.

Determination of Bile Pigment in the Fæces with Special Reference to Schmidt's Test.—By Schorlemmer.

The Influence of Ichthalbin on Metabolism and the Intestinal Function in Children.—By Rolly and Saam.

A Journey in the Famine Districts of Central and East Russia.—By Lehmann.

Epileptic Equivalents.—By Ernst Schultze.

French Journals.

Action of Salicylate of Sodium upon Nutrition and in Particular upon the Secretion of Bile.—A report taken from the Société de Médecine et de Chirurgie Pratiques, the author's name not being given, contains fourteen conclusions, among which are: That under the influence of the drug a slight diminution in diuresis is noted, and an increase in the coloring matters, uric acid, and acidity of the urine. The biliary secretion is increased, as are also the phosphoric acid and fixed matters. The property of the drug in increasing the activity of the biliary function, and the known property of the bile in retarding products of fermentation in the intestine even when it contains no salicylate of sodium, together with the other properties of the drug, make its application of great interest in pathology.—*Journal de Médecine de Paris*, April 8, 1900.

A Case of Chyliform Ascites.—L. Z. Kahn records a case which came to autopsy in which the abdomen of a woman, aged sixty-six years, was distended with a milky fluid. Stomach cancer was found extending to the peritoneum. There was no solution of continuity of the lymphatic channels to account for chylous ascites. Chylous ascites, chyliform ascites, and milky ascites form together a group presenting an exterior appearance only to bind them together. They may be encountered in all affections with ascites in which they present always the same clinical characters. They have therefore no diagnostic value. There has never been a cure in any one of these forms.—*Le Bulletin Médical*, April 7, 1900.

Modern Conceptions of Neuron and Nerve Plexus.—A. Sicard discusses the ancient reticular theories, the cellular or neuron theory, and recent reticular and fibrillary theories. He concludes that the neuron theory should stand because it is founded on positive anatomical observations. No one has yet shown that the appearances are deceptive or result from faulty technique. Anatomical objections have been refuted. Physiology opposes nothing tenable against the theory. Other conclusions are also given. The article is illustrated.—*La Presse Médicale*, April 7, 1900.

Nasal Obstruction in the New-Born.—Leopold Cauveau considers the various causes for difficult breathing in infants: Superficial lesions at the nasal orifices; acute coryza; coryza in the eruptive fevers; pseudo-membranous coryzas; those produced by foreign bodies; syphilitic coryza; adenoid vegetations; retro-pharyngeal abscess; and congenital occlusions. The distinction between that due to syphilis and the other forms is of much importance.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, April 8, 1900.

Hypogastric Meatus.—X. Delore gives an account of an operation by suprapubic section and establishment of permanent fistula in a case of cancer of the prostate, with survival for eleven months in comparative comfort. The patient died of a pneumonia during the evolution of a generalization of the cancerous process. In most cases operation for cancer of the prostate can be but palliative. Hypogastric meatus meets most of the requirements.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, April 5, 1900.

Treatment of Acne.—D. Leistikow, basing his views upon the pathological conditions present, gives rules for rapid and slower cure of acne in its various clinical forms. Formulæ recommended by well-known dermatologists are given, as well as prescriptions for acne varioliformis.—*La Médecine Moderne*, April 4, 1900.

Archives of Pediatrics, April, 1900.

The Treatment of Whooping-Cough without Drugs.—N. R. Norton writes of (1) the administration of carbonic acid gas by rectum, and (2) the use of O'Dwyer's laryngeal tube. The treatment by gas was given three times daily, two or three hours after meals. In infants, the treatment lasted five minutes each time; in the "runabouts," ten minutes. Ephraim explains the effect as the result of the extra oxygen that reaches the air vesicles, there to be exchanged for the extra amount of carbonic acid gas. Of one hundred and fifty children thus treated, one hundred and forty-three were apparently decidedly benefited. As to the laryngeal tube, O'Dwyer held its use to be justifiable, provided the tube was of hard-rubber, in grave cases of whooping-cough accompanied by frequent and severe vomiting, with consequent loss of flesh and strength. By this means the spasm of the glottis is absolutely relieved.

Drug Values as Observed in the Management of Seven Hundred and Fifty-two Cases of Whooping-Cough.—Charles Gilmore Kerley reviews the effects of a number of drugs, and concludes that: (1) Every case of whooping-cough may be ameliorated either by modifying the severity or diminishing the number of paroxysms. In many cases both effects may be obtained. (2) Remedies sedative in character, with fresh air, give the best results. (3) If the remedy is to be of service, its effects will be noticed within twenty-four hours—always within forty-eight. (4) The best results are obtained when the antipyrin and bromide are commenced at the height of the paroxysmal stage and then pushed. (5) The effect of these remedies may be lost in a prolonged case, requiring a change of treatment. (6) Children may have whooping-cough and never whoop.

A Case of Congenital Goitre and Diaphragmatic Hernia.—Isaac A. Abt reports an interesting case of this kind, with illustrations. Congenital goitre is comparatively rare. It has been observed particularly in mountainous regions, where the condition is endemic. This affection occurs also in animals. Congenital diaphragmatic hernia is of comparative infrequency. In most cases, it is the result of arrest of development. Its recognition during life is extremely difficult, and consequently the condition is apt to be overlooked. The greatest danger to these children is to be expected in the first few days of life or during the act of birth.

Hypertrophic Pyloric Stenosis in Infancy.—Eric Pritchard, after reporting twenty-four cases, concludes: (1) That the hypertrophy is secondary to over-action of the sphincter, and the stenosis chiefly due to spasm; (2) that the stenosis, as measured "post mortem," is but an accurate gauge of its organic degree during life; (3) that over-action and inco-ordinated contractions of the sphincter may be due to some fault in the nervous mechanism; (4) that injudicious feeding, either quantitatively or qualitatively, may be a contributory factor of the nervous inco-ordination.

A Note upon Kernig's Sign in Infants.—Frederick A. Packard calls attention to the possible error that might arise from attaching too much importance to this sign in infants, although it is of undoubted value in the diagnosis of meningitis in the adult and in older children. He reports three cases, all of which were proved by autopsy to have had meningitis, and in all of which this sign was absent during life. These cases were aged sixteen months, sixteen months, and four months respectively.

The Medical Chronicle, April, 1900.

The Treatment of Necrosis of the Frontal Bone.—Arthur H. Burgess dresses the ulcer with hydrochloric acid of a strength sufficiently great to dissolve the lime salts contained in the exposed bone at its base, *i.e.*, ten per cent. This is applied on a double fold of lint, cut to the shape of the necrosed area, and covered with a layer of gutta-percha tissue; over this is placed lint smeared with boracic ointment, a pad of absorbent wool, and a bandage. This is left on for twenty-four hours, then removed, and the ulcer washed with boracic acid, and pepsin in the powdered form dusted lightly over the surface. The lint, impregnated with a 0.2 per cent. solution of hydrochloric acid, is applied as before. The dressing is removed next day, and replaced by the strong acid dressing, and so on alternately. By this means the bone is slowly dissolved, the necrosed parts are cast off, and a healthy granulating surface is left. The boracic-acid dressing is used, cicatrization proceeds, and the ulcer becomes covered with epithelium.

Salol and Petroleum in the Treatment of Infantile Diarrhœa.—W. E. Fothergill and John Penny made careful observations in cases of bottle-fed infants. Unsatisfactory results were obtained in eight; the remaining sixty children recovered on salol or on petroleum; twenty-eight children recovered from their diarrhœa on salol alone; thirty-one recovered rapidly and completely without any treatment beyond the administration of petroleum emulsion. One dose of salol every day combined with three or four doses of petroleum has proved very useful in many subacute and chronic cases. Bismuth may, of course, be used at the same time. Calomel and hydrarg. cum creta act better when followed by petroleum than when taken in conjunction with mixtures of a more classic nature. The observations reported teach that the various forms of infantile diarrhœa can usually be successfully treated without the use of opium in any form, and also without astringents.

A Case of Aneurismal Varix and Injury to the Median Nerve at the Elbow.—J. E. Platt describes a case of varix, due to the lodging of a piece of steel in the brachial artery, with division of the median nerve for the outer three-fourths of its extent. The brachial, radial, and ulnar arteries were tied on each side of the communication with the vein. The ends of the nerve were freshened and brought into accurate approximation by fine silk sutures. The median basilic vein was ligated. After division of a motor nerve, even if the cut ends be accurately sutured shortly after the accident, a considerable time is necessary for the functions of the muscles supplied by it to be fully restored. The time necessary is more prolonged when the nerve is injured nearer to the trunk. Under the most favorable conditions it takes from three to six months for complete recovery of muscular power after section of the median or ulnar nerve at the wrist, and in certain cases may take as much as twelve months. Sensation may return very early.

Two Cases of Tumor of the Bladder.—F. A. Southam reports these cases, which are good illustrations of the fact that for a long period a painless hæmaturia is often the only symptom given by a papilloma of the bladder. In epithelioma pain and irritability of the bladder are always early symptoms, often preceding the onset of hæmaturia. Though recurrent attacks of painless hæmaturia may be the only symptom for months, or even for years, in cases of papilloma, sooner or later cystitis is set up, being often excited by retention of blood clots in the interior of the viscus, and the straining efforts which attend the attempts to expel them; then there are superadded pain and all the other symptoms of cystitis.

Practice and Precept in Children's Diseases.—By T. C. Railton.

Bulletin of Johns Hopkins Hospital, March, 1900.

Notes on an Improved Method of Removing the Cancerous Uterus by the Vagina.—Howard A. Kelly states that glandular metastases, which play such an important part in the extension of mammary cancer, are relatively unimportant, and, as a rule, only observed in the latest stages of uterine cancer. The latter growth extends progressively through the tissues from its cervical focus, and the great aim of the operation for its extirpation is to give the diseased cervix the widest possible berth, instead of being, as before supposed, the removal of the uterus plus the extirpation of the pelvic glands. The enucleation is begun on the vaginal side, far below the limits of the invasion. The writer emphasizes the importance of catheterizing the ureters as a preliminary to the radical operation. The method of enucleation is carefully described, and after its accomplishment the anterior and posterior peritoneal surfaces are drawn down, attached to the vagina, and again sutured in the middle line. This leaves only two small openings into the pelvis, which are loosely stuffed with gauze.

A Preliminary Report on the Surgical Treatment of Complicated Fibroid Tumors of the Womb, with a Description of the Two Methods of Operating.—Howard A. Kelly describes his method of operating in the first of these cases as follows: Two long-jawed pedicle forceps were used, one on either side. One of the open jaws of the forceps was thrust through the capsule of the tumor at about the level of the round ligament from the front of the broad ligament until the point appeared on the posterior surface of the tumor behind the broad ligament. The forceps was then clamped powerfully down on the uterine and ovarian vessels, entirely controlling the circulation. The uterus was bisected and the incision was continued down into the tumor as far as the vesical peritoneum, which was freed and pushed down, when the tumor was completely bisected. The right and left halves were then enucleated. The two halves of the uterus were enucleated separately, the bed of the tumor was closed by buried sutures, and the vesical peritoneum was drawn over and attached to the posterior peritoneum, concealing the wound.

The Pathological Findings in a Case of General Cutaneous and Sensory Anæsthesia without Psychical Implication.—Henry J. Berkley, after reviewing this case, states that the fundamental pathological basis for the nervous phenomena of this case is as follows: (1) A hyaline-fibrous degeneration of the arterial system existed, not confined to the central nervous regions, but equally evident in the roots of the spinal nerves and in the skin tissues. This varied in degree from slight thickening of the muscular layer to complete closure of the lumen from hypertrophy of the middle coat of the vessel walls. The maximum alteration was in the vessels of the lower dorsal cord, the meninges of the bulb and cord, and in certain of the root bundles of the cerebro-spinal nerves. (2) As a consequence of the vascular lesions, there were degenerations of an atrophic order in the nerve cells of the gray horns of the cord, particularly in Clarke's column and the medulla oblongata.

Observations upon the Neural Anatomy of the Inguinal Region Relative to the Performance of Herniotomy under Local Anæsthesia.—Harvey Cushing, after carefully reviewing this subject, sums up the advantages of the local anæsthetic. There is an avoidance of unpleasant or dangerous post-etherization sequelæ. There is no vomiting or retching. Urinary disturbances are much less apt to occur, and catheterization is rarely necessary. The diet may practically be continued as before the operation. There is no backache. The dressings may be applied originally to suit the comfort of the patient, and there is no subsequent disarrangement of them. Above all an advantage is gained in being able to operate with comparative safety in patients who would incur immediate risk in submitting to general anæsthesia. The disadvantages seem trivial: the operation is longer, and there is some distraction to the surgeon.

Congenital Malformations of the Heart as Illustrated by the Specimens in the Pathological Museum of the Johns Hopkins Hospital.—By W. G. MacCallum.

Pediatrics, April 15, 1900.

Some Reasons Why Tuberculosis Spreads More Rapidly among Cattle than in the Human Race.—Walter W. Gardiner shows by diagram of stable, etc., how an infected cow becomes a source of infection to other cows through the water pot and fodder trough. One tuberculous cow in a modern barn may during a winter infect a whole herd. The prevalent lines of breeding followed generation after generation detracts from the vitality and power of resisting disease. The disease develops most rapidly at a temperature of 101°–103° F. The normal temperature of the cow is 101°, and when in a warm stable and grain-fed it may reach 102°, or the temperature at which tubercle bacilli will thrive best. Generations of in-breeding are factors which favors the cow's greater susceptibility.

Nephritis in Childhood.—Moncorvo goes over the literature and dwells especially upon the nephritis which occurs in the course of malaria. Scarlatinal nephritis is rarely found in the pathological reports of Rio de Janeiro, because scarlatina occurs so infrequently there. Malarial nephritis has hitherto attracted but little attention. The author called attention to it in 1895. In thirty-five recent cases twenty-six coexisted with malaria. Examples are related showing that in the young malaria plays the same part as does scarlatina in cold and temperate climes. They are usually benign, terminating favorably. The œdema is often in the nature of true anasarca.

The Care of Premature and Feeble Infants.—By S. W. Ransom.

Annals of Gynecology and Pediatry, March, 1900.

The Correlation of Sexual Function with Insanity and Crime.—H. Macnaughton-Jones concludes that the correlation of insanity and disordered sexual functions, arising out of affections of the generative organs, is a factor to be taken into serious consideration in the treatment of women mentally afflicted. When there is ground for the suspicion that some abnormal condition of the genital organs exists which is causing the mental condition, examination, under an anæsthetic if necessary, should be made. The special dangers of the climacteric period and the symptoms indicative of threatening mania must be noted. Women who have been previously insane are predisposed to a relapse by the development of disease in their sexual organs, especially to temporary recurrence of insanity after operation on these organs.

Some Remarks on the Operative Treatment of Uterine Fibroids.—W. J. Gow writes that in his series of forty-seven cases there has been one death. He believes that abdominal hysterectomy, properly performed, is not so dangerous an operation as it is generally thought to be, and, further, that the subperitoneal treatment of the stump gives as good or better results than any other plan. The writer has not in one of these cases done an oöphorectomy. Drainage was employed only on one occasion. The lessened mortality of abdominal hysterectomy enables the surgeon to save patients not merely from death but from invalidism.

Some Pathological and Clinical Phases of Gall Stones.—A. H. Cordier states that cholelithiasis is of frequent occurrence, and usually gives rise to manifest symptoms, either severe or obscure. Cholesterin, as a gall-stone-producing agent, must be present in an abnormal quantity, and is in great measure a product of the destruction of the epithelium of the biliary ducts and gall bladder. Bilirubin calcium forms the nucleus of the majority of stones. Jaundice, ptomain poisoning, and suppuration are late symptoms of cholelithiasis. Dyspeptic symptoms and loss of weight are some of the remote results.

A Case of Bilharzia Hæmatobia.—Edwin Walker describes the case of a woman in whose bladder this parasite was found. The urine was pale, specific gravity 1.001–1.006, reaction neutral, and containing but little urea. In this fluid were the ova and embryos of the parasite. The treatment consisted of santonin gr. v. three times a day, and bicarbonate of potassium in large doses. The ova disappeared in a few weeks, but since some blood has been passed at times. The parasites have been found in most parts of Africa.

A Case of Porro's Operation.—Milo B. Ward cites a case whose special points of interest are: The absence of any history of rupture of the amniotic sac; the oblique and fixed position of the uterus, preventing the possibility of uterine contraction; no symptoms of labor were present, but constant backache; the gangrenous condition of the endometrium with entire destruction of the placenta, yet no marked disturbance of the patient's health; the patient's excellent recovery.

Monatsschrift für Geburtsh. und Gynäk., April, 1900.

Contribution to the Knowledge of Placental Tumors.—G. W. van der Feltz reports two cases, on the basis of which, in connection with a most careful study of the literature, he comes to the conclusion that the term "neoplasm" generally applied to these placental anomalies is a misnomer. He claims that these so-called placental tumors do not answer the requirements of a neoplasm, and seems to furnish ample proof for his assertion. It is his opinion that the anomalies in question are but transformed villi with a more or less pronounced increase of connective tissue; and that hence there is no justification for the terms myxoma, fibroma, etc.

Contribution to the Knowledge of the Serous Infiltration of the Para-Uterine Connective Tissue and its Extension into the Region of the Subserous Cavity in the Living.—E. Ehrendorfer describes a very interesting case of extensive subperitoneal infiltration which he believes to be the only one reported in the literature. He states that while he, and no doubt others likewise, have frequently observed a pretty thorough serous infiltration of the parametric protoplasms, when extirpating fibromyomata, he has never seen so intense and extensive a subperitoneal serous effusion in abdominal tumors.

Primary Tumor Formations of the Nipple and Mammary Areola.—A. O. Lindfors publishes most valuable statistics, comprising thirty-seven cases of primary tumors of the mammilla and areola, collected in the literature. Ten of these refer to the areola, twenty-seven to the papilla mammæ; seven occurred in men, thirty in women. He states that only the myomata and pedunculated tumors can be classed as absolutely benign; the other forms are already malignant at the beginning or become so sooner or later. As regards recurrence after the operation, he has been unable to obtain sufficient data.

Vaginal Operations in Cases of Extra-Uterine Pregnancy.—Max Madlener reports two cases. The first one, in which posterior elytrotomy was done, shows that a child carried to full term may be removed from its fœtal envelope through the vagina. The second case was one of tubal pregnancy in which an anterior colpotomy was performed. Although both operations were successful, the author declares that he will never again undertake colpotomy in cases in which extensive adhesions are to be expected. He believes that the field for this operation is a very limited one.

Concerning the New Building to be Erected for the Imperial Clinical Institute for Obstetrics and Gynæcology, at St. Petersburg.—By v. Ott.

The Orthopædic Results of the Alexander-Adams Operation.—By B. Kroenig and J. Feuchtwanger.

Reviews and Notices.

GENERAL AND LOCAL ANÆSTHESIA. By AIMÉ PAUL HEINECK. Pp. 124. Chicago: G. P. Engelhard & Co. 1900.

THIS monograph should be read by all who are engaged in administering anæsthetics. It treats the subject in a most thorough and concise manner, enumerating the dangers and the causes thereof, with the treatment and prophylaxis employed for each. Most of the space is devoted to chloroform, ether, and cocaine, with a brief yet sufficient description of the infiltration method of anæsthesia.

THE MODERN TREATMENT OF WOUNDS. By JOHN E. SUMMERS, JR. 149 pages. Omaha: Medical Publishing Co. 1899.

TO one who would inform himself briefly, yet accurately and well, upon the latest principles of surgical technique, and the therapeutic procedures which are practised in wounds of the special regions, a book like the one before us will always be acceptable. The author has presented the subject-matter very well. Exception might be taken to his general use in infected wounds of pure carbolic acid followed by its neutralizant alcohol; for whereas this procedure has certainly been followed by excellent results in some cases, yet we must never forget that it destroys the tissue cells as well as the bacteria, and so diminishes the resistant power of the affected part. The book is well printed and contains a few good illustrations.

IMPERATIVE SURGERY. By HOWARD LILIENTHAL, M.D. 8vo, 412 pages. Illustrated. New York: The Macmillan Co. 1900.

THE author has intended this book for the use of the general practitioner and recent graduates in medicine, and deals only with the diagnosis and treatment of conditions which demand immediate operative measures. The opening chapters, which are given up to antiseptic and aseptic surgery in general, including a description of how to prepare for an operation in a dwelling-house, are particularly good, and will be of especial interest to all physicians who have not had the benefits of a general surgical training. In the chapters devoted to regional surgery, the author, by mentioning but one good type of operation for each pathological condition, has removed from the shoulders of those who do not devote themselves to surgery, and who are therefore hardly capable of selecting the best method to be practised, the onerous duty of deciding which operative procedure to employ. It may be said in general that the symptoms and diagnosis of the special surgical diseases are concisely pictured, the indications calling for "imperative surgery" clearly outlined, and the methods of operating briefly and yet minutely described. A complete index is appended. The book is richly and excellently illustrated, from entirely original photographs and drawings. The author has certainly supplied to those who practise surgery only when absolutely necessary a valuable work, and both he and the publishers are to be heartily congratulated on the manner in which the book has been prepared.

MANUEL PRATIQUE D'HYGIÈNE À L'USAGE DES MÉDECINS ET DES ÉTUDIANTS. Par le DR. GUIRAUD, Professeur d'hygiène à la faculté de médecine de l'Université de Toulouse. Deuxième édition, revue et augmenté. Paris: G. Steinheil. 1899.

THIS is a very excellent handbook for the use of practitioners and students of medicine and for those interested in the problems of hygiene. Its scope is broader than that usually embraced by a work of the kind, for it not only has for its object the conservation of health, but also the improvement of the general conditions of the individual and of the community. The work contains the applications of the latest discoveries and experiments in chemistry and physiology to the body of man, and in maintaining it in sanitary relation to his environment. The effects of the soil, the atmosphere, and the climate are discussed in connection with disease and healthful and unhealthful occupations. Clothing, ventilation, dwellings, the care of the body, and exercise are treated broadly and thoroughly from the several standpoints of age, race, custom, locality, profession, and occupation. The conditions of human life in its modern transformation are sensibly dealt with; the problems of overcrowded cities, the complex social relations, the development of new industries, and the struggle for existence are all recognized as factors in the health of the race. Perhaps the most valuable and up-to-date chapters of the book treat of the affections which until recent times have so often been termed "the scourge of the Lord," the infectious diseases that sweep over whole countries. The methods of preventing these murderous plagues are clearly and concisely shown, by pointing out the sources of infection, the practical means of disinfection, and the laws of sanitation that must be observed to check the various diseases. The work comes to us as a fat, compact, well-printed, badly bound volume of about eight hundred pages, in the cheap paper covers that our foreign works don to make the sea voyage; but it is worthy of a place on the shelves of every one who would attempt to solve the many questions that are constantly confronting the student of municipal sanitation.

L'APPENDICITE, FORMES ET TRAITEMENT. Par A. BROCA, Professeur Agrégé à la Faculté de Médecine de Paris, etc. Avec 8 Figures dans le Texte. Les Actualités Médicales. Paris: Librairie J. B. Baillière et Fils. 1900.

THIS is an interesting little monograph upon the subject of appendicitis, in which the author's conclusions are drawn mostly from his own experience, so that some of them are a little different from what is supposed to be the consensus on the subject at present. This is, however, not necessarily a drawback in a work on any subject. The various forms of appendicitis are clearly described, and a discussion of the modes of treatment leads the author to his conclusion that timely surgery alone is proper, though he states that this does not mean immediate operation in every case. The description of operations in the quiescent period is certainly incomplete without reference to the work of American surgeons in this field.

SYSTEM OF DISEASES OF THE EYE. By American, British, Dutch, French, German, and Spanish authors. Edited by WILLIAM F. NORRIS, A.M., M.D., and CHARLES A. OLIVER, A.M., M.D., of Philadelphia, Pa., U.S.A. Volume IV.: Motor Apparatus, Cornea, Lens, Refraction, Medical Ophthalmology. With 51 full-page plates and 211 text illustrations. Philadelphia and London: J. B. Lippincott Co. 1900.

THIS volume, like the others of this system, is, on the whole, most excellent. It contains sixteen articles by authors of different nationalities. The translations are exceptionally good, apparently fully presenting the ideas that were expressed in the original manuscripts. The first article is by Edmund Landolt, M.D., on "The Anomalies of the Motor Apparatus of the Eyes." It occupies one hundred and sixty-seven pages, and is very creditable. The second article, which treats of "Diseases of the Cornea," is one of the weak parts of the volume. The chapter on diseases of the crystalline lens, that follows, is comprehensive and up to date in every particular. A discussion of ametropia occupies the next chapter: it consists of an exposition of the views of the author on the subject, evidencing careful observation and study. Much that is speculative, argumentative, and advisory is found here. The article on "Ocular Lesions dependent upon Diseases of the Circulatory System" is exhaustive and of much value. "Eye-Diseases and Eye Symptoms in their Relation to Organic Diseases of the Brain and Spinal Cord" forms the title of a very carefully written article, which could be produced only after extensive research and profound consideration of the subject. The articles entitled "Ocular Lesions dependent upon Disorders of the Secretory and Excretory Organs," "Ocular Lesions in Variola," etc., and the "Ocular Lesions of Influenza, Dysentery," etc., are all excellent, treating of the subjects in a clear, succinct manner. The article on "The Ocular Manifestations of Hysteria" is somewhat unsatisfactory. "Eye Affections due to Graves' Disease and Herpes Zoster," a contribution by Jonathan Hutchinson, Jr., is brief and as complete as the space permits. "Motor Changes in the Ocular Apparatus Associated with Functional Neuroses" is the title of the next article; it consists of a narration of cases observed by the author, and an expression of individual views. The name of the author, George E. de Schweinitz, M.D., is a sufficient guarantee of the excellence of the article on "Toxic Amblyopias" which follows; exhaustive, clear, concise, it is one of the gems of the collection. Following this article are those entitled "The Entozoa of the Human Eye," "Simulated Blindness," and "The Ocular Signs of Death." All are of merit. The contributors have won enviable reputations in the fields of research which they here represent; however, some of the articles are not of the exhaustive character that one would expect to see in a system of diseases of the eye which purports to cover the whole subject with the greatest completeness. Evidence of crowding, which cannot be eliminated in a work the extent of which is fixed at the outset, is apparent here.

The Lute and Lays. By Charles Stuart Welles, M.D. New York: The Macmillan Company. London: George Bell & Sons. 1899.

A collection of about sixty short but pleasing poems, or "songs" as the author calls them, composed in and some about America. The presswork is characteristic of the house.

The Retrospect of Medicine; a half-yearly journal. Edited by James Braithwaite and E. F. Trevelyan. Vol. 120, January, 1900. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited.

This semi-annual review of medicine and surgery continues to present in an attractive way much of the progress made in different lands, but chiefly abstracted from English and American sources.

The International Medical Annual Synoptical Index to Remedies and Diseases, for the twelve years 1887 to 1899. New York: E. B. Treat & Co. 1900.

The aim has been to present an index of facts likely to be wanted for reference in everyday practice. Even to those who do not possess the twelve volumes here systematically indexed with reference to drugs and diseases, it will be of use to those looking up any given subject, covering as it does a very wide range of literature and giving the important points in regard to new remedies. There is a supplementary index for cross references.

A Practical Treatise on the Disorder of the Sexual Organs of Men. By Bukk G. Carleton, M.D., Genito-Urinary Surgeon and Specialist to the Metropolitan Hospital and Polyclinic; Consulting Genito-Urinary Surgeon to the Hahnemann Hospital, etc., New York. Revised and enlarged edition. New York: Boericke & Runyon Co. 1900.

The work as it now stands is twice the size of the original edition. There have been added anomalies, injuries, and non-venereal diseases of the male genital organs. The latest special methods of treatment have received recognition. It is justly stated that surgical treatment is often required before the selected remedy will remove the morbific phenomena, and modes of procedure are brought up to date. The author is to be congratulated upon the early exhaustion of his first edition.

A Practical Treatise on Diseases of the Skin, for the use of students and practitioners. By James Nevins Hyde, A.M., M.D., Professor of Skin, Genito-Urinary, and Venereal Diseases, Rush Medical College, and Frank Hugh Montgomery, M.D., Assistant Professor of Skin, Genito-Urinary, and Venereal Diseases, Rush Medical College, Chicago. Fifth and revised edition. Philadelphia and New York: Lea Brothers & Co.

The outside cover, the two names upon the title-page, the increased size, and especially the new monochrome and colored plates would cause one almost to think a new book lay before him. Opening to the frontispiece, however, one feels at once at home with his old friend Nævus Lipomatodes of the hairy back and pendulous buttock. Other friends are recognized as the pages fall away from the thumb. It is perhaps natural that the authors should feel a reluctance to part with time-honored pictures, but the leprous gentleman on page 701 and the specific lady on page 655 have reached an age when they should be put on the retired list. The new illustrations are of a much higher order of excellence than many of the old, and add decidedly to the interest of this new edition. In the matter of pathology there is an appreciable improvement in many chapters, reflecting most of the recent investigations, while scarcely a new discovery in dermatology up to the date of issue has been overlooked. Among these may be mentioned especially blastomycetic dermatitis and porokeratosis. Many chapters have been wholly rewritten or revised and brought well up to date. There are twelve new full plates and two engravings. The work has proven justly popular.

A Manual of Surgery. By Charles Stonham, F.R.C.S. Eng., Senior Surgeon to Westminster Hospital, Lecturer on Surgery and Clinical Surgery, and Teacher of Operative Surgery, Westminster Hospital. 3 vols. 12mo. New York: The Macmillan Co. London: Macmillan & Co. 1900.

The volumes are amplified much beyond the scope of ordinary manuals, but are not complete enough for what is generally recognized as fulfilling the conditions of an elaborate treatise. They may be said to occupy, however, a very desirable middle ground especially adapted to the requirements of the student and general practitioner. Under the different divisions of general surgery, injuries, and regional surgery a vast and varied field is covered, comprising all the essential facts which are of practical value to the busy worker in different lines who has neither time nor opportunity for consulting larger works. The style is necessarily concise, which is itself a great recommendation, and the illustrations are numerous and carefully selected. All the topics are treated from the teacher's standpoint and are thoroughly up to date.

A Manual of the Practice of Medicine, prepared especially for Students. By A. A. Stevens, A.M., M.D., Professor of Pathology in the Woman's Medical College of Pennsylvania; Lecturer on Terminology and Instructor in Physical Diagnosis in the University of Pennsylvania; Physician to St. Agnes' Hospital and to the Out-Patient Department of the Episcopal Hospital, etc. Fifth edition, revised and enlarged. Illustrated. Philadelphia: W. B. Saunders. 1898.

The fact that this work has gone through five editions speaks for its popularity, and for students it certainly is most useful, giving concrete descriptions of nearly all diseases, etiology, pathology, symptomatology, diagnosis, prognosis, and treatment This, the fifth-edition, has been thoroughly revised and many of the articles have been rewritten. Among the new subjects are: Acute Cholecystitis, Tuberculosis of the Kidney, Gastroptosis, Enteroptosis, and Chronic Cerebral Leptomeningitis. The work is published in a handy form, with a flexible leather cover, and makes an excellent vade mecum.

The Vagina and Perineum, and how to Mend Them. By Byron Robinson, M.D. 134 pages. Chicago: The Clinic Publishing Co.

The *raison d'être* of a medical book should either be the presentation of a new subject, or of an old one in an original manner, and in either case the facts should be stated by the author accurately and tersely. The book before us lacks most of these essentials, and the really important part, viz., the anatomy and function of the pelvic fasciæ, is obscured by too frequent repetitions. Altogether had the author devoted one-eighth the space he has to this volume, and been more accurate in his descriptions, the object he had in view, which was to point out the importance of the pelvic fasciæ in perineal lacerations and in their repair, would have been better accomplished. The book contains numerous illustrations of the muscular and fascial structures of the pelvis, and of the operative procedures which have been designed for their repair after laceration.

International Text-Book of Surgery. By American and British Authors. Edited by J. Collins Warren, M.D., LL.D., Boston, Mass., and A. Pearce Gould, M.S.F.R.C.S., London, Eng.: Vol. II., Regional Surgery. 8vo, 1044 pages. Philadelphia: W. B. Saunders. 1900.

This is a work without introduction or other pretension of excellence, and which comes to us on its own intrinsic merits. Of the latter it has very many. The arrangement of subjects is excellent, and their treatment by the different authors is equally so. The work is divided into thirty-three chapters, which comprise all the conceivable subjects liable to come under the notice of surgeon or general practitioner. What is especially to be commended is the painstaking endeavor of each writer to make his subject clear and to the point. To this end particularly is the technique of operations lucidly described in all necessary detail. This is the case above all with the chapters on abdominal surgery, wherein are treated the surgical diseases of intestines—including, of course, appendicitis and the operations upon the bile ducts. These as well as other portions of the work are suitably illustrated, so that the merest tyro can gain a clear idea of the indications in a given set of cases. And withal the work is up to date in a very remarkable degree, many of the latest operations in the different regional parts of the body being given in full detail. There is not a chapter in the work from which the reader may not learn something new—at least such was the case with the reviewer, which fact may excuse him from the charge of any partiality when he unqualifiedly recommends the work to all in need of a first-class guide.

OPERATIONS-VADEMECUM FÜR DEN PRAKTISCHEN ARZT. Von DR. EDMUND LESER, Professor an der Universität Halle. Mit 144 Abbildungen. Berlin: Verlag von S. Karger. 1900.

As its title indicates, this is a handbook of surgery for the practitioner who is not specially a surgeon. There is no attempt made to cover the whole field of operative surgery, but only those operations are described the performance of which may be required when there is no specialist at hand. There are many good illustrations, and the different procedures are tersely described. The author recommends ether as the anæsthetic of choice, and does not mention any of the modern operations for the removal of the diseased but quiescent appendix.

PROGRESSIVE MEDICINE: A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D. Volume IV., December, 1899. Philadelphia and New York: Lea Brothers & Co. 1899.

THIS last volume of the year takes in diseases of the digestive tract, genito-urinary diseases of the male, syphilis, fractures, surgery of the extremities, orthopedics, diseases of the kidneys, physiology, anatomy, hygiene, and practical therapeutics. The contributors or sub-editors are H. B. Baker, W. T. Belfield, J. C. Bloodgood, J. R. Bradford, A. P. Brubaker, F. H. Gerrish, C. G. Stockton, and E. Q. Thornton. The work of the various editors has resulted in covering pretty well the field of more recent advances in the departments here presented. Non-scientific writers are not wholly ignored, and we find a description of Delhi boil taken from Kipling's "The Day's Work." The press-work has been done in an excellent manner.

OPERATIVE SURGERY. By JOSEPH D. BRYANT, M.D., Professor of the Principles and Practice of Surgery, etc., University and Bellevue Hospital Medical College; Visiting Surgeon to Bellevue and St. Vincent's Hospitals, etc. Volume I.: General Principles, Anæsthetics, Antiseptics, Control of Hemorrhage, Treatment of Operation Wounds, Ligature of Arteries; Operations upon Veins, Capillaries, Nervous System, Tendons, Ligaments, Fasciæ, Muscles, Bursæ, and Bones; Amputations; Deformities; Plastic Surgery. Illustrated. New York: D. Appleton & Co. 1899.

THE third edition of this well-known book is practically a new work, for it is rewritten, remodelled, and divided into two volumes, of which the present is the first. There are interesting and lucid preliminary chapters on the preparation of room and patient, on the choice of the anæsthetic, and on the instruments and apparatus in general use in the operating-room. The pre-eminence of ether as the safest anæsthetic is upheld by the author's statistics. The chapter devoted to the ligature of arteries contains many excellent plates illustrating the anatomy of the vessels, and, in addition to a discussion of the operations themselves, there are many useful historical references. There are clear descriptions of the operations for the relief of various forms of neuralgia, and again many good illustrations. The operation which in this book and elsewhere is called the Hartley-Krause operation should be called simply the Hartley operation, if priority counts for anything. The various operations upon the bones receive a large share of attention, and the surgery of the cranial bones is given special consideration both in the text and in the illustrations. The photographic plates, here and elsewhere, of the instruments used at various operations form a useful addition to the more customary illustrations. The subject of amputations is treated in a satisfactory manner, and the descriptions and illustrations are of great didactic value. The last chapter, on plastic surgery, contains among other things a description of the forms of support which have been used in restoring the saddle-shaped deformity of the nose, with the very just comment that one can never be certain that such supports will remain in place more than a limited time without causing trouble. The book is much improved over its former editions, and when complete will be one of the best on the subject. The bookmaker's work has been very well done.

Clinical Department.

THORACIC ANEURISM: TWO CASES INVOLVING THE DESCENDING ARCH OF THE AORTA; WITH AN AUTOPSY.[1]

By STEPHEN SMITH BURT, A.M., M.D.,

NEW YORK.

DURING my present service in New York Post-Graduate Hospital, and within the same month, there have been two cases of thoracic aneurism which seem sufficiently important and interesting to warrant my placing them upon record, and bringing them to the attention of the Hospital Graduates' Club. It is well known that the diagnosis of a thoracic aneurism may be a simple matter, a difficult matter, or an impossibility, according to the existing circumstances. From the smallness of its size and the position which it occupies, the rupture of a minute sacculated aneurism may be its first manifestation. And unless a fairly large dilatation of this nature impinges somewhere upon the surface of the chest, its less evident pressure symptoms are in danger of remaining unrecognized. Moreover, even when an aneurismal tumor is within reach, the amount of laminated fibrin deposited in its cavity may so modify the typical physical signs of aneurism as to render a differential diagnosis a somewhat difficult problem. On the other hand, wherever upon the surface of the thorax there is a pulsating tumor which is not the heart, but which is beating with as much force as, or with greater force than, that organ, and withal of the same rhythm, whether or not there is a bruit, in all probability it is a thoracic aneurism. Meanwhile, in the more obscure cases, the extreme rarity of a non-aneurismal thoracic tumor is a fact which I am convinced it is the part of wisdom always to take into consideration. Aneurisms of the thoracic aorta are much more common than those of the abdominal aorta. Aneurisms of the descending portion of the arch of the aorta are rare as compared with the ascending or even the transverse. Those familiar with the investigations of Sibson know that out of 880 aortic aneurisms, he found 703 were of the thoracic aorta, and the remainder of the abdominal and its branches. Of these but 72 were of the descending portion of the arch. There were 120 of the transverse, and 193 belonging to the ascending aorta; ascending and transverse aorta conjointly, 112; transverse and descending portion of the arch, 20; descending thoracic aorta below the arch, 71; whole arch, 28; sinuses of Valsalva, 87. The two cases brought to your notice this evening were situated in the descending portion of the arch of the aorta, but they differed materially in their physical signs and their symptoms. Rupture is the most common termination of an aneurism. Pressure upon the trachea by an aneurism of the descending arch is quite exceptional. In one of the following cases death was due to exactly this condition; in the other it was due to a rupture with hemorrhage, probably into the left bronchus.

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[1] Read at the meeting of the Hospital Graduates' Club, January 25, 1900.

Case I.—Thomas D——, age thirty-four years, single, occupation clerk, came under my observation December 1, 1899. Family history: His father was living and in good health; his mother died of some heart trouble; four brothers and one sister were all dead; the causes of death were unknown. Previous history: He had rheumatism when sixteen years of age, and the grippe ten years ago; he had pain in the chest one year ago. Present history: About ten weeks ago he was taken with pains in his chest under his left shoulder blade, which were most severe when breathing; he has had poor appetite for the past several weeks; he sleeps poorly; he complains of pain also in the left shoulder, which extends down the left arm.

Physical examination gave the following: The apex beat of the heart was below and to left of the normal position. The impulse was strong. Respiratory movements of the left side were restricted. Pulsation was synchronous with the heart, and of nearly equal force. at the upper left side of the chest above the third rib in front. On palpation there was absence of vocal fremitus over the left side of the chest in front and behind. There was no thrill over the area of pulsation, and no "tracheal tugging." There was no increase in the semi-circumference of the left side. On percussion, flatness was found over the lower two-thirds of the left side of the chest; there was dulness at the upper part behind. There was a triangular area of exaggerated resonance with base in the upper left axillary region, and apex extending forward between the flatness below and the area of pulsation above. Dulness, with decided resistance, was found from near the right edge of the sternum across the anterior surface of the chest to the left above the level of the third rib. Auscultation showed absence of vesicular respiration in the left side of the chest. There was a loud systolic murmur, rough in quality, with the point of greatest intensity at the second right intercostal space, extending across to the left through the area of pulsation. There was accentuation of the aortic second sound, not, however, transmitted far from its source. My diagnosis was obstruction at the aortic valve, aneurism of the descending arch of the aorta, with probable occlusion of the left bronchus, complicated by pleurisy.

There were no evidences of pressure upon the trachea, œsophagus, left recurrent laryngeal nerve, sympathetic nerve, left common carotid, left subclavian artery, or left innominate vein. Chemical and microscopical examination of the urine was negative. The sputa were examined for tubercle bacilli; none was present. Temperature was normal from the day of entrance, August 30th, to within three days of death. The pulse varied from 80 to 100; respiration, from 20 to 30 per minute. There was no record of hæmoptysis. There was neither tuberculous nor cancerous cachexia. His general condition was good. His complaint was chiefly a pain in the left chest and likewise down the left arm. The area of dulness, in which were the pulsation and systolic murmur, was distinct from the region of flatness lower down, there being an interval of hyper-resonance between.

The treatment was rest and iodide of potassium gr. x., increased gradually to gr. xx. three times a day. The patient died December 20, 1899, of a sudden and very profuse hemorrhage, probably from rupture of the aneurismal sac into the left bronchus. Permission for an autopsy was refused.

Case II.—Edward T——, age thirty-seven years, colored, married, occupation porter, was admitted to hospital December 6, 1899. His family history was good. At the age of twelve years he had had frequent attacks of malaria. At eighteen he had had rheumatic pains in the knees and hips. Twelve years ago he had had pneumonia. He has never had syphilis. There was no history of alcoholism. One year ago he had a sharp pain in the left side lasting one week. Since then he has had repeated attacks of pain in the chest, shoulders, and back, and has been unable to work. At night he has a feeling of oppression in the chest, and for the past week a choking sensation in the throat.

Analysis of the urine gave the following: Reaction acid; specific gravity 1.030; color dark amber; transparency clear; chemical reaction, no sugar, small ring of albumin; on microscopical examination, no casts, pus cells very numerous, epithelium, a few squamous and round bladder cells.

The temperature was normal; pulse, 88; respiration, 24, on admission to the hospital. There was no œdema of the extremities. The voice was hoarse; no aphonia. There was cough, hoarse but not metallic in quality. The larynx was reported normal upon examination. There was no complaint of dysphagia.

A physical examination showed: The apex beat of the heart was in normal position. There was no visible pulsation elsewhere in the chest. There was no localized bulging; the superficial veins of the chest and both arms were distended. There were a spongy elastic swelling at the base of the neck and angular curvature of the spine in the upper dorsal region, with especial prominence of the spinous process of the third dorsal vertebra. No inequality of the pupils and no unilateral sweating of the face were present. Palpation showed decided pain upon pressure over the second, third, and fourth dorsal vertebræ. The apex beat was normal in force and position; pulsation was equal in strength and rhythm in the radial arteries; there were no palpable pulsation or shock in the chest outside the precordial region, no thrill, and no tugging at the trachea. On percussion, dulness was found with marked resistance, extending from one inch to the right of the sternum, across and for three inches to the left of that bone, and from the level of insertion of the third ribs in this area upward. Abnormal dulness from the third dorsal spine upon both sides behind, and marked vesiculo-tympanitic resonance from the third dorsal spine on both sides downward, were noted. Auscultation showed sonorous breathing over the entire chest and trachea, with point of greatest intensity at the lower end of the trachea and the left bronchus; vesicular respiration was either diminished in intensity or masked by the sonorous breathing; no cardiac murmurs, no thrill, no murmur over the area of dulness, nor intensification of either heart sound; there was neither systolic nor diastolic shock over the tumor or the trachea. Upon a subsequent examination slight pulsation was detected on palpation and on auscultation over the area of dulness on the left side in front, which entirely disappeared the day following.

My diagnosis was aneurism of the descending portion of the arch of the aorta, pressing upon the vertebræ behind and the lower end of the trachea and the left bronchus in front. The location of the tumor was determined by the evidences of pressure upon the vertebræ behind and the trachea and bronchus in front, and by the absence of any signs of pressure on the left recurrent laryngeal nerve, the sympathetic nerve, or of involvement of the left subclavian artery. The nature of the tumor was a question not so easily answered, owing to the absence of many distinctive evidences. Nevertheless, the vigorous frame and well-nourished condition; the peculiar shifting character of the pain except in the back; the paroxysmal expiratory dyspnœa; the fact that non-aneurismal tumors are more apt to be located in the anterior mediastinum, and that pain is more common with aneurism than with growths in the mediastinum, while the reverse holds in regard to fever and emaciation; the entire lack of evidence of cancer elsewhere; the absence of a characteristic expectoration; the absence of glandular enlargement; the age, sex, and occupation of the patient; the history of the case together with the observation of the course of the disease; the results of medication (the pain on pressure entirely disappearing from the vertebræ under the iodide of potassium); and repeated physical explorations—led me irresistibly to the conclusion of aneurism.

Treatment consisted chiefly of rest in bed, and iodide of potassium gr. xv. three times a day, with now and then, as required, morphine hypodermically.

The daily notes show that the temperature remained about normal; the pulse varied between 80 and 100, the respirations between 20 and 30 per minute. There was never a complaint of difficulty in swallowing; however, the appetite was poor, and he ate little solid food. His bowels were constipated. There was no record at any time of hemorrhage. There never was any paraplegia. He had dyspnœa with a hoarse cough which was not metallic in quality, and a slight mucous expectoration. He was less uncomfortable when lying on the back, yet there was at all times great restlessness. He complained of a feeling of fulness and oppression in the chest. He had frequent paroxysms of pain and dyspnœa, but above all toward the end a distressing dyspnœa, and finally asphyxia, which terminated in death on December 29, 1899, twenty-three days from his entrance to the hospital.

The autopsy was performed by Dr. H. A. Gribbon, a member of the house staff, in the presence of Dr. J. F. Siler, also of the house staff, and myself.

Autopsy on the body of Edward T—— (colored) January 3, 1900: General condition, well nourished. There was marked kyphosis in the upper dorsal region. The lungs, liver, spleen, and kidneys were moderately congested. The heart and stomach were normal. The brain was not examined. There was a large sacculated aneurism in the descending portion of the arch of the aorta, beginning about three-quarters of an inch beyond the origin of the left subclavian artery, and situated behind the trachea and filling the upper quarter of the left thoracic cavity, together with the posterior mediastinum, and extending about three inches into the upper part of the right thoracic cavity. The tumor pressed forward against the lower part of the trachea and the left bronchus, but was not adherent. It likewise compressed the vena cava superior and the venæ innominatæ. The walls of the aneurism were adherent on the posterior aspect to the spinal column, and on the right side somewhat anteriorly to the œsophagus. The œsophagus, with canal still patent, seemed to have been carried forward and outward on the right side of the tumor, to which it was closely adherent for about four inches. The aneurism was filled with a dense laminated fibrous clot, leaving free the channel of the aorta. The aneurismal tumor was of an irregular ovoid shape, with a long diameter of from six to eight inches. The bodies of the second, third, and fourth vertebræ were extensively eroded. The erosion of the third opened into the spinal canal. The inter-articular discs were not affected by the erosion to any degree. The borders of the second, third, and fourth ribs were roughened near the spine, and slightly eroded.

MUMPS VERSUS RHEUMATISM.

By E. W. HEDGES, M.D.,
PLAINFIELD, N. J.

One year ago there came to my office a young man suffering from gonorrhœa. This innocent infection proved most obstinate and resisted every mode of treatment. Two months later, in April, 1899, he developed a well-marked attack of rheumatism in his right foot. The ankle joint was not involved, but the top and sides of the foot were swollen and very painful. This, like the urethritis, was not amenable to treatment, and for three months the two diseases vied with one another in their power to annoy.

Some time in July the pain and swelling left the right foot and took up their home in the left foot, which in turn became tender, painful, and swollen. This continued until December 20th. Not a single day was the patient without pain and swelling. He could not walk a block without suffering, and was frequently kept awake nights by pain in his foot, meantime running the gamut of all the anti-rheumatic remedies without avail.

About the middle of November the clap stopped. The last remedy used was an injection of 1 : 4,000 bichloride solution, but whether that had anything to do with the cessation of the discharge I do not know. On December 20th he retired with the usual pain and swelling in his foot. He awoke with both parotids big and painful, but with his foot absolutely well. The mumps ran the usual uneventful course of about a week, but from its first appearance to the present time (two months) he has had no vestige of rheumatism anywhere in his body. The mumps appeared at a time when the disease was epidemic in the city, and hundreds of young and old were affected by it.

The interesting questions come up, Was the mumps merely metastatic from the rheumatism, or was it regular epidemic parotitis, and if so, is there some antagonism between the toxin of the diplobacillus of mumps and the rheumatic poison, whatever that may be? Mumps certainly cannot confer a lasting immunity to rheumatism, for we can all recall cases of the latter disease in patients who have had mumps earlier in life; but may it not have some temporary antidotal power, just as the diphtheria antitoxin has? I am aware that "one swallow does not make a summer," and that arguments based on one case are not weighty, so I send this brief history hoping that others of your readers may have had one or more cases of mumps develop in the course of articular rheumatism, and that they may be willing to give their testimony for or against this hypothesis of antidotal effect.

TRANSPOSITION OF VITAL ORGANS.

By S. J. SOMBERGER, M.D.,
CORTLAND, N. Y.

On February 5, 1900, Mr. W——, aged twenty-three years, came to my office to be examined for life insurance. I found the heart with its base situated about in the normal position, but with its apex inclined toward the right side, the apex beat being at about the same point on the right side as we usually find it on the left. The liver dulness is absent on the right side, and its place is occupied by normal lung resonance. In the nipple line the lung extends down to about the costal border. The liver dulness is found to the left of the median line and slightly lower than the usual position. The right testis hangs lower than the left. This seems to be a case of complete transposition of organs. The man appears in perfect health.

Society Reports.

THE PRACTITIONERS' SOCIETY.

One Hundred and Fifty-fourth Regular Meeting, held Friday, March 2, 1900.

A. ALEXANDER SMITH, M.D., PRESIDENT, IN THE CHAIR.

A Case of Bradycardia.—This was presented by DR. E. G. JANEWAY. The patient was a young man, a soldier by occupation, whose usual pulse-rate, for several years past, had ranged from 30 to 36 per minute. It sometimes dropped as low as 20 and occasionally rose to 60. No satisfactory cause for the bradycardia could be elicited. When the patient was eight years old, he had an attack of diphtheria, from which he apparently made an uneventful recovery. He had never had rheumatism or scarlet fever. He had never smoked. The heart was large; its action was slow and forcible. A faint aortic and mitral systolic murmur could be made out. There was no suspicion of arterial sclerosis. There was no acceleration of the pulse upon exertion. Occasionally a faint accessory pulsation could be detected at the wrist. At the age of twenty, on entrance to the army, the pulse was 100; at twenty-one it was 90 when nervously excited; at twenty-two it was 84; and at twenty-three it had become 38, slow and strong, without disease intervening. The patient stated that when his pulse rose to 60 per minute, as it occasionally did, it might maintain that rate for several hours or only for a few minutes, and during those periods he felt comfortable. When it dropped back to its usual rate, however, he felt very uncomfortable on account of the long intermissions. When the beat occurred, there was apparently a rush of blood to the head, giving rise to headache and dizziness. When the beats fell as low as 20 per minute, syncope might result. Numerous cardiac stimulants had been tried without effect: some of them made the heart beat harder, but no faster. Application of mustard to the neck, with the idea of stimulating the sympathetic, had also been unsuccessfully tried. Inspection of the chest and palpation made out a slight pulsation of the heart between the stronger beats. At times two such beats, one extremely feeble, could be detected. The cardiogram prepared by Dr. T. C. Janeway showed the same. The carotid tracing exhibited this to a less degree. The sphygmogram of the radial showed no extra beat as a rule.

Dr. Janeway, in reply to a question, said he thought there was some thickening of the aortic valves, a slight leakage at the mitral, and perhaps myocarditis.

DR. GEORGE L. PEABODY referred to a case of bradycardia which was reported to the society some years ago by Dr. Ball. The patient was an elderly lady in whom the slow pulse persisted for years, and during that time she failed in general health and had attacks of syncope. She was over eighty years old, and gradually senile symptoms developed until she failed to recognize even members of her own family. Without any special treatment, the heart's action improved, the pulse rate increased to 60 and 70, and this was followed by a clearing up of her mental symptoms and she again became bright and cheerful. Dr. Peabody said that usually the slow pulse was associated with arterial sclerosis of the coronary vessels, but that when we remembered how common this lesion was and how rare was this symptom, the association between the two was hardly apparent.

The president, DR. A. ALEXANDER SMITH, reported a case of bradycardia seen in consultation in which the pulse rate fell as low as sixteen beats per minute. The patient was a man seventy-three years old, with arterial sclerosis and, apparently, myocarditis. He had a systolic murmur at the apex and a very rough systolic murmur at the base. He had always led an exceedingly active life. About a week ago he visited the office of a physician who lived near by, and while there he had a convulsive attack and lost consciousness. When he returned to consciousness he was somewhat delirious, and there was a partial loss of power on the left side of the body which soon cleared up. He was carried to his own house and put to bed, and remained delirious for several days. He was able, however, to impart the information that for the past five years he had known that his pulse rate was slow—about 40 per minute, and occasionally dropping to 38 and 36. He was suffering from interstitial nephritis, which had developed to a moderate degree, and there was some arterial sclerosis. The heart and pulse beats were entirely synchronous. Since his attack in his physician's office a week ago, the patient, in addition to his delirium, had been extremely irritable. Several times his pulse had fallen as low as 16 beats per minute, and then gradually gone up to 28 or 30.

A Case of Suffocating Laryngeal Papilloma.—This case was presented by DR. ROBERT ABBE. The patient was a girl thirteen years old, who was first brought to him at the Post-Graduate Hospital in 1892, suffering from an obstructive condition of the larynx which had rendered her cyanotic and comatose. The trachea was at once opened, and the child's condition immediately improved. The larynx was found to be filled with papillomata. Subsequently, Dr. Abbe made a vertical section of the larynx and removed at least a teaspoonful of these growths. The child made a good recovery, and the wound was allowed to close. In two months there was a recurrence; the larynx was again opened, a complete laryngotomy being done, and a considerable mass of papillomatous tissue removed. The actual cautery was then applied to the base of the growths, and everything that was likely to produce a recurrence was apparently destroyed. In spite of these precautions, a second recurrence took place within a few months. The larynx was again split and the papillomatous growths were removed. Monochloracetic acid was then applied to the base of the growths, and the child was allowed to breathe for a time through the tracheotomy tube. Again a recurrence took place, and again the growths were removed and the site from which they sprang was cauterized—this time with carbolic acid. The tracheotomy tube, which had been left in only for brief periods after the previous operations, was now left undisturbed for six years. It was removed last year, and up to the present time there had been no signs of a further recurrence. The child was in good health, but her voice was necessarily impaired by the fact that some of the growths involved part of the vocal cords; she was only able to speak in a whisper. Previous to the last operation, the tracheotomy tube was replaced for a time by an intubation tube, but the child did not derive much benefit from it. The idea in leaving the tracheotomy tube in place for so long a time was to give rest to the larynx. Cases were on record, Dr. Abbe said, in which the prolonged use of a tracheotomy tube had apparently prevented the recurrence of papilloma in the larynx.

DR. BEVERLEY ROBINSON said the rest afforded to the larynx by the prolonged use of a tracheotomy tube probably modified the tissues of the interior of the larynx. This was the explanation given in those cases in which a cure had apparently been effected by this means.

A Case of Extensive "Hairy Mole."—DR. ABBE showed this case. The patient was a boy three years old, with a hairy mole which covered a considerable portion of the left side of the face. It embraced the entire cheek, most of the nose, both eyelids, the temple, and half of the forehead. The skin of the lesion was hypertrophied, deeply pigmented, and covered with a growth long of hair. The child's mother attributed the deformity to a maternal impression received during the third month of her pregnancy, when a boy, in play, brought a dead rat to her, and whirling it round his head struck her with it. Dr. Abbe said that on account of the disagreeable appearance of the deformity in this case, the parents were very anxious to have something done, and he thought that even a surgical scar would be preferable. He intended to shave off the pigmented layers of the skin, going down as deeply as was found necessary, and then to apply skin grafts by Thiersch's method.

Dr. Charles Stedman Bull said that any operation upon the external surface of the lids, even by Thiersch's graft method, would probably tend to produce an ectropion, particularly of the lower lid. Cauterization of the lesion would be even more apt to produce ectropion than skin-grafting. Dr. Bull said he did not think there was the slightest danger to the eye itself from any proposed operation on the lids.

Pneumothorax Occurring in Persons with Apparently Healthy Lungs.—This paper by Dr. Walter B. James detailed the history of three cases in which the symptom occurred after severe exertion and without any demonstrable lung lesion. In all recovery took place in comparatively short periods.

Dr. Janeway said he had met with five cases like those described by Dr. James. One of the cases, which he saw last summer, was that of a young man, who, after rapidly running up five flights of stairs, was taken with a severe pain in the chest. The pain was thought to be due to heart trouble. Dr. Janeway saw him two days later and found a pneumothorax, from which the patient made a good recovery in about a month. In another case, that of a young man eighteen years old, the perforation of the lung also occurred after a good deal of exertion. In that instance, Dr. Janeway said, he suspected that a small nodule or emphysematous bleb had given way. Occasionally, around a fibroid nodule, there might be a compensatory emphysema which might give way. In all of the cases which had come under the speaker's observation, complete recovery took place: in none did fluid occur, and in only one did he suspect a coexisting phthisis. Even in phthisis we might have a pneumothorax without the presence of fluid. The condition of pneumothorax was a comparatively rare one, and the prognosis was good. In one of his cases the patient was a woman who suffered from bronchitis and emphysema, and during a severe fit of coughing a pneumothorax developed. She made a good recovery.

Dr. H. M. Biggs said he had seen two cases of pneumothorax in hospital practice. Both patients made a good recovery in a short time. The speaker said his impression had always been that while in these cases there might not be any demonstrable lesion in the lung, the perforations took place at some point of the lung where the resistance had been diminished by some pathological process.

Dr. Beverley Robinson said he had seen one case of this kind, and had attributed the perforation of the lung either to the presence of a tubercle on the surface or to the bursting of an emphysematous vesicle.

Dr. Peabody narrated the following case, which occurred during his student days in Vienna. The patient was a little girl who swallowed some caustic potash, producing a stricture of the œsophagus which was being dilated by sounds. The passage of these instruments gave rise to severe coughing fits. In the course of time she learned to pass these sounds herself. During one of her coughing-spells induced by the passage of the sound there was a sudden collapse of the lung. From this she recovered, but the accident happened again some months later and caused her death, in syncope. In the diagnosis of pneumothorax, Dr. Peabody said, he would suggest the use of the hypodermic needle as a corroborative sign, just as it was employed in pleurisy with effusion. In the second case reported by Dr. James, Dr. Peabody said the chest could not have been filled with air because the heart was not displaced. It could have been only partially filled.

Dr. James said that in neither of his two cases were there any symptoms or evidences of tuberculosis. In the first case there was not even a suspicion of it. In the second case the disease might possibly develop later.

Dr. Robert F. Weir said he wished to say a word about the cohesion of the lung to the chest wall. Many years ago he witnessed some experiments made by Dr. A. H. Smith on animals, and they demonstrated very clearly that when the opening in the chest wall was made over one of the lobes of the lung, cohesion continued, but if, on the contrary, the opening involved one of the clefts between the lobes, immediate collapse of the lung took place. This observation he had since corroborated in several cases in which in operative procedure the pleural cavity had been moderately opened. Dr. Weir said that in certain cases of pneumothorax, in which there were symptoms of overdistention, it was perfectly proper to relieve the pressure by opening the chest cavity. It might occasionally be necessary to do this in order to save life. The speaker recalled one such case, in which, while removing some enlarged glands from the deeper tissues of the neck, he accidentally opened the pleural cavity without knowing it. The patient began to breathe heavily and was almost moribund before the cause of his condition was made out. The chest was then punctured, with a great outrush of air, but the patient was too far gone and succumbed. A second analogous case had since then come under his care in which similarly the neck wound acted valvularly, allowing air to be sucked in but none to escape. Here a chest incision was made and the patient recovered. Dr. Weir said it was also considered justifiable to open the chest wall for the arrest of a persisting and dangerous traumatic pulmonary hemorrhage. The lung collapse in this instance brought about pressure on the damaged vessels.

Dr. Janeway said experimentation had shown that under pressure air could be forced through the pleura and even through the veins. After such experiments, air bubbles had been found in the pleural cavity and in the left heart. This had been suggested as one of the causes of sudden death.

Dr. Biggs said that some years ago he reported a number of cases in which exploratory puncture of the chest had been followed by pneumothorax, and in some instances by death. In one case a double pneumothorax followed exploratory punctures: this was proved at autopsy. In two cases which he saw at autopsy, the needle-puncture of the lungs could apparently be seen.

A Case of Diabetes in a Child with an Unusual Family History.—This case was reported by Dr. A. Alexander Smith. The patient was a well-nourished boy, twelve years old, who was born in Colorado, at an elevation of five thousand feet above tide-water, and had always lived there. His parents were alive and apparently in good health. The boy was brought to New York last November by his mother, a very intelligent woman, who stated that his urine had been known to contain sugar for at least the past four years. She also said that she had lost one child, about four and one-half years old, of diabetes, the disease proving fatal in two years: also another child, a daughter, aged seven years, of the same disease, lasting in that case three years. She then found, upon investigating the family history, that her husband's father had had diabetes for fourteen years, and that his sister—a great-aunt of the boy who was brought to New York—had suffered from diabetes when she was sixty-five years old. The boy's father had apparently escaped the disease. There was also a rather uncertain history of diabetes in one of the mother's ancestors, namely, a sister of the mother's grandmother. An examination of the boy's urine upon his arrival here showed the presence of considerable sugar. Without any medication and with only a partial restriction of his diet the sugar steadily decreased in amount, and after a few weeks it disappeared entirely. Dr. Smith said he attributed the improvement to the change of residence, and he advised the child's mother not to take him back to the high altitude where his disease had developed. The family to which this boy belongs, Dr. Smith said, were not Hebrews. The frequency of diabetes in that race was well known. The speaker said he was familiar with one Hebrew family, three members of which were suffering from this disease. He suggested the possibility of some causative relation between the high altitude and the development of diabetes in some instances. The influence of the altitude on the nervous system might possibly be a factor in the production of the disease.

Dr. J. W. Brannan said that during a four years' residence in Colorado, at an elevation of six thousand feet, he examined many specimens of urine, and while there were numerous cases of albuminuria, he could not at the moment recall a single case in which the urine contained sugar. He remembered, however, one case of diabetes insipidus which came under his observation in Colorado in 1880. The case was that of a physician who had two uncles in an eastern State who were sufferers from diabetes mellitus. The patient himself had simple polyuria, accompanied with excessive thirst. He had a phthisical history and was also rheumatic, and recently some rather obscure mental symptoms had developed.

Dr. Robinson said he had a patient whose urine contained sugar when he was in the city, but when he went to the country and was free from business worry, the glycosuria entirely disappeared.

Dr. Janeway said he did not think the altitude had anything to do with the diabetes in the case reported by Dr. Smith.

Dr. Smith said this boy's mother had noticed some time ago that when he was taken to a lower altitude than that of his home, the quantity of sugar in the urine diminished.

Skiagram of Œsophageal Stricture.—This was exhibited by Dr. Robert Abbe, in connection with the following case. The patient was a married lady, who, since she was sixteen years old, had suffered from great difficulty of swallowing. The obstruction was so pronounced that she almost died from inanition. Her trouble was due to a congenital stricture of the œsophagus at the level or the diaphragm, and just above this there was a pocket or diverticulum into which the food which she swallowed would pass. A gastrotomy revealed a minute, atrophied stomach, and extending upward a short tube which represented the lower portion of the œsophagus.

A Case of Chyluria.—Dr. Francis P. Kinnicutt exhibited (through Dr. Weir) a specimen of urine from a case of chyluria or hæmato-chyluria. It had the appearance of milk of a good quality. The patient was a woman who was admitted to the Presbyterian Hospital suffering from a lobar pneumonia which ran a mild course, and from which she made a perfect recovery. The chyluria appeared ten days after convalescence was established. The patient presented no other symptoms of any kind, and physical examination at present was absolutely negative. The urine was free from casts, contained blood discs, and no more albumin than was accounted for by the blood. It also contained a moderate number of leucocytes and fat in a molecular form. From time to time she passed urine entirely free from blood. The patient's blood had been examined a number of times, the specimens being taken both at night and during the day, and none contained the filaria sanguinis hominis. Dr. Kinnicutt said that these cases of non-parasitic chyluria were of very rare occurrence.

A Case of Sudden Death.—This case was reported by Dr. J. W. Brannan. The patient was a laborer, forty-nine years old, who had been an inmate of Bellevue Hospital more or less constantly since October, 1898. His family history was negative. Personally, he was a hard drinker and smoker; he had rheumatism twenty years ago, but denied syphilis. He never had had any cardiac symptoms. About one year previous to his admission to the hospital he began to suffer from shortness of breath, and his feet became swollen at night. The shortness of breath gradually became more pronounced, and he grew weaker. When he entered the hospital, his symptoms were limited to the heart and kidneys. He was decidedly cyanotic; the heart's action was irregular and intermittent. The apex beat was in the sixth intercostal space, outside the nipple line. There was a soft, blowing systolic murmur, transmitted to the left. The urine contained albumin and casts. Under the administration of cardiac stimulants his condition improved and the murmur disappeared, occasionally reappearing without any assignable reason. Later on it disappeared permanently and was replaced by a pre-systolic murmur which was also inconstant. The patient then left the hospital for a time, and was readmitted about a month later. He was then troubled with a severe bronchitis. There were no signs of any valvular lesion. The bronchitis gradually improved, but three days ago, while he was resting quietly in bed, he suddenly died without any apparent cause. The autopsy showed a large heart, with dilated cavities and thickened walls. The heart muscle was pale and flabby. There was no affection of the coronary arteries, excepting that they were somewhat thickened. They were pervious throughout. The mitral valve was constricted, admitting but one finger. Otherwise the heart was normal. It weighed between eighteen and nineteen ounces. An examination of the brain showed a chronic leptomeningitis on both sides, but nothing else. There was no embolism. The kidneys showed the lesions of a chronic diffuse nephritis. Their surfaces were roughened and the capsules adherent. Each weighed between seven and eight ounces, about one-half as much again as the normal kidney. Dr. Brannan said he could assign no satisfactory cause for the sudden death in this case, unless it could be attributed to acute dilatation of the heart. The cavities were large and filled with blood. The post-mortem specimens in this case, which Dr. Brannan exhibited, had not yet been subjected to a microscopical examination. In reply to a question by Dr. Janeway, the speaker said that the patient was receiving no medication whatever at the time of his death. The case was one of a type not infrequently seen in the class of patients admitted to Bellevue Hospital. The man had lived a life of hard work, exposure, and strong drink, and the time came when the heart simply gave out, though not at the moment under any unusual strain.

Cardiac Dropsy.—Calomel, gr. $\frac{1}{5}$, should be given every two hours for four or five days; then combined with small doses of digitalis leaves, gr. $\frac{1}{4}$ to gr. $\frac{1}{3}$.—Finkelstein.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

MIDWIVES BILL—RUPTURE OF ŒSOPHAGUS—SARCOMA OF GASTRO-HEPATIC OMENTUM — CHEMISTRY OF GOUT — DISINFECTING WATERWORKS — DEATHS OF DRS. MIVART, JACKSON OF UGANDA, DICKSON, AND GUNNING.

LONDON, April 6, 1900

THE midwives bill is by no means dead. It is giving signs of even more vigorous life. It will probably not come before the House of Commons again until after the Easter recess, but then a determined attempt to force it through will be made. Many members of the profession have lately waked from their apathy and begun to realize the danger. Accordingly they are blaming the Medical Council and the corporations for giving it a qualified sanction. The promoters have eliminated the safeguards and shamelessly told the committee that these bodies support the bill. They are trying to prevent penalties and to protect all the ignorant women who have called themselves midwives—in fact to establish them as independent practitioners. If they succeed we may look for great injury to the public, and there are dangers which ought not to be forgotten in trusting this class of women with midwifery practice.

The meeting to protest against the bill was held on Wednesday, when Mr. George Brown presided. He showed that the bill would authorize only the incompetent, whereas the opponents desired that all women allowed to practise should be educated and qualified. Resolutions condemning the bill were unanimously passed. The meeting then rapidly thinned—the number falling from nearly one hundred to seventeen or eighteen, or certainly under twenty. A resolution was brought forward asking Dr. Glover to resign his seat on the Medical Council and appeal to his constituents to re-elect him. Mr. Brown before this had vacated the chair, and Dr. Toogood took his place. There was some difference of opinion as to whether this would be in order, and whether it would be advisable considering that so large a majority had left before the subject was broached. Eventually the resolution was carried. You should understand that it is solely on account of the position he has all along held on the midwives question that Dr. Glover has given umbrage to a large and increasing section of his constituents. In every other way he retains their confidence, and he is universally esteemed.

Rupture of the œsophagus is so rare that only sixteen cases seem to have been recorded as such, though others have almost certainly been related under different names. A case was described at the Medico-Chirurgical Society by Messrs. Bowles and Turner in a woman aged sixty-two years, who in vomiting was suddenly seized with collapse and severe epigastric pains. Vomiting ceased; emphysema of the neck came on, extending to the face, and she sank in twenty-two hours. The post-mortem left no doubt that the rent occurred before death; it was longitudinal and one and one-half inches long. Some remarks were made on the diagnosis of this lesion and its possible treatment by surgery. Drainage of the posterior mediastinum and suture of the rent were suggested. Some similar cases were mentioned, including two in the Pathological Transactions, which were attributed to post-mortem softening, but which were very likely rupture. The clinical history has to be considered. In this case it was said the pulse was only 50, but the arterial tension was maintained in spite of collapse. It was thought irritation of the vagi might explain this. Dr. Rolleston remarked that the rupture was always in the lower third, although the weakest part was at the junction with the pharynx, and he suggested this might be because the lower third is composed of smooth muscular fibre only. He thought rupture was often preceded by a small ulceration which was concealed by the rent. Mr. Turner had made some experiments, and could not think ulceration necessary; he was surprised how easily rupture was produced, and it was always longitudinal and in the lower third. A case was also related at the Academy of Medicine in Ireland, by Professor McWeeney, who showed the specimen. A workman aged forty years, an alcoholic, after retching violently, was seized with extensive emphysema of the face and neck and died in a few hours. At the post-mortem the rent was found one-half inch long just above the diaphragm.

Mr. Pearce Gould showed a man aged thirty-eight years, from whom he had removed a spindle-celled sarcoma of the gastro-hepatic omentum four and one-half years ago. The tumor weight twenty-one pounds, and was also shown with some sections. He had found only one other such case. The chief clinical feature of tumors of the small omentum is the pushing down of the stomach and so obscuring its resonance, which may reappear below. There is also great elongation and displacement of important structures without such definite grave symptoms as might be expected.

There were two papers on gout at the Medical Society's meeting. The first was by Dr. Luff, who corrected a misapprehension in some quarters of an article of his which called in question the solvent action of certain drugs, but did not deny their utility. Dr. Luff is an able chemist; he was a teacher of chemistry before he was a medical student, and naturally brings his special knowledge to work on clinical material now that he is a hospital physician. His present paper is on the bearing of the gelatinous form of sodium biurate on gout. He holds, as did Roberts, that the deposition of quadriurate, at first gelatinous in form, becomes crystalline and almost insoluble, thus setting up a gouty paroxysm. If the change from gelatinous to crystalline form can be delayed, the gouty attack can be postponed. Now the conversion is accelerated by sodium bicarbonate but delayed by potassium bicarbonate, which also retards the process after it has started. Lithium does not delay the initial change, though it retards it when started. Piperazin does not delay the initial conversion, though it slightly retards it when started. Lysidin delays the initial conversion, but when once started has no effect. Thus it would seem that the potassium salt is best, and the lithia next, while piperazin and lysidin are inferior; and these results accord with Dr. Luff's clinical experience. Not that he would gauge the value of alkaline salts solely by their solvent action on deposits of sodium biurate, or by their inhibitory action on the conversion of gelatinous into crystalline forms of biurate. He admits they may be useful by stimulating metabolism, acting on the stomach, liver, and kidneys and reducing the acidity of the urine. An important fact which Dr. Luff claims to have established is that the higher the alkalinity of the blood from sodium bicarbonate the more rapid and the more complete is the conversion of the soluble gelatinous into the comparatively insoluble crystalline biurate. He holds that the alkalinity of the blood in gouty patients is higher than normal. In the blood of healthy adults he found an average of 0.185 per cent. of sodium carbonate, and in the gouty this rose to 0.217 per cent., an increase of nearly one-third. It would seem therefore that we must dismiss the notion of an "acid dyscrasia." The inference from all the experiments is that increased alkalinity determines the gouty paroxysm.

The second paper was by Dr. Bain, of Harrogate. He related observations made to determine the variations in nitrogenous elimination in a case of gout under ordinary conditions, and the effect of diet and drugs. After sodium salicylate a slight increase of uric acid was noted, but under guaiacum there was a marked increase of this acid, and vegetable diet also increased it. Iodide of potassium increased both uric acid and urea. Referring to Minkowski's experiments it was suggested that one or more of the alloxur bases might be concerned in the evolution of gout; for one of these bases, adenin, had been followed by violent action of the heart, vomiting, increased blood pressure, while the urine contained leucocytes, albumin, casts, and epithelial cells. Post-mortem crystals of biurate were found in the renal tubules. Uric acid does not produce such effects and possibly may be relegated to a secondary place as a cause of gout.

Dr. Sims Woodhead and Mr. J. W. Ware described to the Society of Engineers on Monday the plan they had adopted to disinfect the water-mains at Maidstone after the typhoid epidemic three years ago. On a Saturday night the water-service was shut off except from a small portion reserved to be treated separately. Chloride of lime was mixed with the water in the reservoirs and forced through the mains until the flow from the house taps became milky. Then the mains were emptied with five engines, the reservoirs thoroughly cleansed, and pure water was then sent through the whole service. The work occupied twelve hours, the mains being sixteen and three-quarter miles long, with a capacity of one hundred and eight thousand gallons.

Dr. St. George Mivart died on Sunday, aged seventy-two years. His "Genesis of Species" controverted Darwinian views, and he kept a close hold on the attention of a large section of scientists by his biological and other contributions to literature. He joined the Roman Catholic Church in 1884, but his independence of view in treating scientific questions offended the priestly party, and about two months ago Cardinal Vaughan peremptorily ordered him to sign a confession of faith. On his declining to obey the cardinal served his clergy with orders to refuse the sacraments to the aged invalid scientist, who thus suffered all the persecution that the Roman Church can inflict on her adherents in this age and country.

Dr. Dickson, who has been physician to the British embassy at Constantinople since 1856, died on Tuesday, the 27th inst., at an advanced age.

Dr. H. C. Jackson, of the Uganda service, succumbed to fever on February 16th in his thirtieth year. He had achieved a considerable position by his work in the Protectorate.

The death is also announced of His Excellency R. H. Gunning, M.D., LL.D., Edinburgh, Grand Dignitary of the Order of the Rose of Brazil. He founded eleven Victoria Jubilee prizes in Edinburgh University and the Cullen scholarship of the College of Physicians. Of late years he was quite blind, but bore his affliction bravely and took the greatest interest in scientific progress and current news. He died on the 22d ult., aged eighty-one years.

Hernia in Children.—Operation is advised (1) in children over four years of age in whom a truss has been given a fair trial without marked improvement. (2) In cases complicated with fluid in the hernial sac (reducible hydrocele); in all cases of femoral hernia, since this form of hernia offers little or no hope of cure through mechanical treatment. The practice of operating upon infants under one year of age or even two or three years is, I believe, open to serious criticism.—W. B. Coley.

LETTER FROM CONSTANTINOPLE.

(From our Special Correspondent.)

TURKISH MEDICAL SCHOOLS — REFORM IN PUBLIC HEALTH ADMINISTRATION—DEATH OF DR. DICKSON.

There are three medical teaching establishments in Turkey, one at Constantinople, "The Imperial Faculty of Medicine," Turkish; and two at Beyroot in Syria, American and French. Recently a delegation from the Imperial Faculty of Medicine of Constantinople was sent to Beyroot to assist at examinations for the doctorate of the French school. This delegation was presided over by Haireddin Pacha, and it is understood that his excellency, on his return, has presented a report in favor of establishing an Ottoman school of medicine at Damascus or Beyroot (probably Damascus), for the consideration of the minister of public instruction.

The medical teaching at the American college is simply an outcome of the general progress of the course of education, and is admitted to be good. It has sent forth some fairly well-trained men, who, though holding the diploma of the school, must pass an examination at the Imperial Faculty of Medicine before being permitted to practise; as must also all foreigners. The French Medical College is of more recent date, and doubtless the teaching is on a level with that of the American. This projected medical school at Damascus may possibly be associated with certain other projects of reform being carried out in the medical service of the empire, if it be not inspired by jealousy and as a set-off against the other schools. Otherwise there would appear to be an overlapping of medical institutions.

The medical school of Constantinople was established in the reign of Sultan Mahmoud, 1838 or 1840, under Austrian administration, and for several years was successful in turning out a class of medical practitioners superior to the barber-surgeons of the day. Difficulties, however, arose about the teaching. Confusion of tongues and want of text-books in the Turkish language, religious feelings, which discouraged dissection of the dead, had to be taken into consideration. Hence, for a time, the scheme for improved medical teaching languished, though it was continued on the improved basis until the present day.

Like most Turkish institutions, the school had a brilliant short period, then a lapse of indifferent régime, reformation, reconstruction, and so on periodically; depending upon the amount of imperial support and the solicitude of the army direction. Although the school may not have given the results expected by its founders, yet it has provided a better class of army and navy doctors, which was the original intention.

Located at first in Galata-Serail, it was liberally provided with library, museums, horticultural garden, amphitheatre, and anatomical cabinet, and being the first scientific institution of the country, it became an object of great solicitude to the sovereign. In 1848 Galata-Serail was burned down and all its scientific riches perished. The school took refuge in a building in the Golden Horn, and for a period of seventeen years was almost forgotten, though its work was continued. Then again a revival, and progress, until the time it was transformed into a faculty, with very considerable powers. During the past ten or twelve years there has been a steady improvement in the teaching of the faculty, and as many of the students were sent to the higher continental schools of medicine a certain number of good class surgeons and physicians have been produced.

It is now proposed further to extend and improve the medical teaching, especially in relation to the army and navy, and an extensive and imposing army medical school, with modern improvements and appliances, is in course of construction (nearly finished) at Haidar Pacha on the Asiatic shores of the Bosporus. To this will be added a bacteriological institute, an antirabic establishment, etc. The reforming process has been entrusted to Dr. Rieder Pacha, a German officer in the Turkish service. It includes a course of German, botany, chemistry, physics, and natural history, and apparently it is intended to use German as the medium of teaching, for in the instructions it is stated, "As there exist many works on medicine in German, the administration of the military schools is enjoined to give particular care to the study of that language." The pupils of the faculty of medicine will, after two years, attend the Haidar Pacha school. The scheme presupposes a preparatory school, which already exists and is included in the reforms.

It will be interesting to watch the progress of the new departure, in which his imperial majesty the Sultan takes deep interest, as indeed he does in all matters of education. There will be certain difficulties to overcome, as of old. The selection of a foreign language as the medium of teaching is an important one, as former experience has shown, and one cannot but think that the natives of a country would be better taught in their own tongue, and so be more in touch with their teachers.

In matters of public health also, Turkey is in a spasm of reform; new regulations of the Council of State, sanctioned by Imperial *iradé*, have been promulgated with regard to the examination of foods, drinks, chemical and pharmaceutical specialties. A chemical laboratory is to be established at the custom house, at which five chemists and two doctors are ordered to be on service. Of the twenty-four articles of the regulation, those applicable to drugs may be quoted: "The following specialties, the use of which are recognized as hurtful, *i.e.*, cocaine and its compounds, sulphonal, anti-tuberculous serum of Dr. Koch, picrotoxin of Gneiss—that is to say, specialties prepared from haschish—are prohibited. The entry of articles such as chlorate of potassium, nitrate of sodium, nitrate of potassium, chlorate of sodium, and picrates, is forbidden, and they will be confiscated.

"The following drugs comprised among the articles prohibited, but of which the use in medicine is obligatory, such as chlorates of potassium and sodium, etc., will be furnished through the agency of the grand master of artillery at their original prices, and in quantities fixed by the Imperial School of Medicine for each pharmacy and each *ahtar* (druggist).

"However, the entry of pastilles of chlorate of potassium and other analogous preparations, in form of specialties, which cannot be employed for the preparation of explosives, is permitted."

It is also proposed to create a bacteriological establishment at the international health board, with a highly paid professor—a somewhat costly scientific luxury—the purpose of which is not very evident. These and other regulations of municipal hygiene of the most elaborate character are the order of the day. But—and alas!—they are likely to be paper plausibilities, inasmuch as they are costly in practice, and money is not now an abundant article in Turkey.

A notable presence in the medical profession has passed away. Dr. E. D. Dickson, physician to the British embassy, and British delegate at the Ottoman health council, died yesterday. A highly educated and courteous gentleman of the old school, an accomplished physician, an excellent linguist in Eastern and Western tongues, a charming raconteur, he was esteemed by all classes. He had reached the ripe age of eighty-seven years. He was well known for his genial courtesy to his American colleagues who visited Constantinople.

THE USE OF ARSENIC, ETC., IN CANCEROUS AND OTHER MALIGNANT NEOPLASMS.

To the Editor of the Medical Record.

Sir: In a recent article by my friend and colleague, Dr. A. R. Robinson, of New York, appearing in the Medical Record of March 31, 1900, entitled, "Observations on the Treatment of Cancer," I am prominently mentioned as favoring the internal use of arsenic in all cases of cancer—an assertion which, while it does not misstate facts, it being unqualified, leaves my position open to the inference that I rely upon the internal use of this remedy alone, to the exclusion of other and more radical primary surgical procedures. So far is this from being so, that I wish to say right here, that I can unhesitatingly indorse the author's valuable paper in its premises, tenor, and conclusions (all of the latter save one), and in his criticisms on those who are inclined to rely on the knife, and that alone, for relief or cure of those maladies. I will also add that as a medical contemporary of the doctor I believe I have as long, as earnestly, though probably not so ably as himself, used, advocated, and defended the employment of escharotics in the treatment of these malignant tumors, as my colleagues of the American and New York dermatological societies can testify, in the many years of my membership.

It may be as well to say now that the caustic I have used most and which is my chief reliance at present is the acid nitrate of mercury (fifty-per-cent. solution). I employ it for the exact reasons which Dr. Robinson claims for his arsenical pastes, viz., first, as to its having in my belief a certain elective, destructive activity on the pathological tissue, far beyond the sphere of its escharotic action; and also, second, to my mind a greater facility in handling; and third, its easy management by those having any experience as to its rapidity and extent of destruction of tissue, etc.

As a preliminary to application of this caustic I use either knife, or curved scissors, or curette to take away the redundant mass of the tumor or fungating ulcer, etc.; usually, however, much preferring the curette energetically employed. Then after mopping the tissues needing it with a twisted pledget of cotton dipped in the fluid once, twice, or many times, according to circumstances, I allow it to remain any length of time from five to thirty minutes; this is where experience and frequency of this operative method naturally come in; after such time I neutralize with bicarbonate of sodium, leaving a layer of that salt on as a dressing. Nothing further then remains to be done except to await the falling of the blackened dry eschar, occurring at any time from eight to fifteen days, which leaves ordinarily an almost healed or quickly healing surface to be treated as any other open wound.

I think Dr. Robinson will excuse me if I here make a transcript of his conclusions, six in number, given at the finish of his valuable paper, the whole of which, excepting absolutely No. 1, I look upon as aphorisms. My experience and reasons as stated allow me at least to question the accuracy of the first:

"Conclusions.—1. At present we know of no drug, animal extract, serum, or toxin, which, given internally by any avenue of the body, can be relied upon for the cure of cancer of any part of the system.

"2. That the statement that the knife is the only reliable agent in the treatment of cancer is not correct.

"3. That certain caustics judiciously chosen and properly applied may attack deposits of the growth inaccessible to the knife, and in these cases should be employed even if the knife is necessary to prepare the way for their use.

"4. That in some cases both the knife and caustics should be used, and in some other cases curettage, followed by a caustic, is the proper procedure.

"5. That the majority of cases of cutaneous cancer can be removed with the greatest certainty and with least deformity by caustics, provided the patients are seen before the lymphatic glands are invaded.

"6. That the knife should be used when the lymphatic glands are invaded, and also in some other cases of external cancer."

The doctor's destructive agent is, as will be noted, an arsenical preparation, and he speaks (p. 538) "of its specially selective antagonistic action on the epithelia in this disease." I believe this proposition he states as being unquestionably a fact; but how, then, is he to escape the rational inference that arsenic administered internally would not have in a certain degree the same, though perhaps lessened and modified, action? I do, as aforesaid, so believe, and in the short bibliography of my own papers annexed would point to proof of its action not alone on epithelial structures, but also on those of the kako-plastic, nonviable fibrous neoplasms we call sarcomas. I am not unmindful either of the destructive action of inflammation on these errant and aberrant cells, and believe it to be great and beneficial, therein excelling the knife; but must insist that the preparation I use acts in much the same way as his, and I think with at least equal power, as it is not only absorbed from the raw surface to which it is applied, but finds its way along the lymph channels of the adjacent skin. It is a common occurrence with me to see slight ptyalism result under my method of treatment in wounds of less than a fifty-cent piece in area, and this is sometimes quite severe in cases of a larger circumference —a thing itself, however, that never causes me the least anxiety, and, from the very nature of things, it quickly subsides.

I begin to give arsenic, usually Fowler's solution (sometimes one-fifth of the quantity given will be Donovan's), the second or third day after operation; I do not want to bother the patient too much at the time. The pain of the operation is generally severe at first, but can be modified and subdued by the usual means (too long and commonplace to treat of here), but my method, as it seems to me, has this advantage over the arsenical pastes, that the pain in my procedure is greatest at first contact, then gradually lessens, which I think is entirely the reverse in the use of the pastes; at least it has been so in my employment of them.

One more criticism of this paper which I so much admire, and I have done; and that is this. When I have cooked the seat of the affected tissues sufficiently I can leave the patient, knowing that beyond a resultant irritant inflammation of that and the near surrounding tissues, which inflammation, by the way, I have never found dangerous, I have finished. It does not seem to be so with these pastes, however beneficently they may act otherwise. This fact may be due to idiosyncrasy, peculiar susceptibility of tissue, or what not; but the fact remains that in using the same paste, one which will in one patient hardly cause anything but a superficial eschar will in another case cause gangrene of tissue of the highest grade, and therefore needs, as the doctor says, careful and diligent watching.

One bad result of an arsenical application will always remain in my mind; it was applied by a past master of this form of treatment, and one I know to be very successful ordinarily; it caused excessive destruction of tissue in a most unfortunate location, and yet the patient had obeyed instructions *au pied de la lettre*, the excessive and increasing agony only leading to removal of the applied plaster an hour or little more before instruction to do so. I have also seen pastes apparently penetrate unbroken and seemingly at least sound epithelium, almost or quite as readily as tissues that were evidently disorganized.

The second, third, and fourth clauses in Dr. Robinson's conclusions I believe to be eminently sound and true, at least in proper hands; as to the fifth I am equally certain. There are many points he brings out in support which I will not touch upon; but to one, not usually considered, I must refer, agreeing with him as I do—and that is, that the occurrence of a fair amount of granulation tissue after a procedure like his and mine tends to improve the cosmetic effect by rendering the depression less marked; and that ordinarily about the face in particular the resultant effect is extremely good. It is astonishing often to see the slight scar deformity where one would have expected under any procedure to have had great disfigurement. As to clause No. 6, I here again agree with him in gender, number, and case. Certain tumors, perhaps most of those of the lips, penis, and ears, may and can be most efficiently treated by the knife, or combination of methods.

I may add in conclusion that I operate and have done so in hospital and private practice fairly frequently; my cases must, I think, run into the hundreds now. Since commencing this paper two or three days ago I have operated three times on epitheliomas of the face, in the persons of two men and one woman; the woman and one man are aged about sixty years respectively, the other man about eighty. The woman's lesion was on the forehead, that of the younger man on the left ala of the nose. In neither of these cases do I have any fear of recurrence at any future time. They will be put upon the usual internal treatment. In the case of the older man I am decidedly of the opinion that while the disease will probably not recur at the site of that particular point operated upon, appearance may be looked for at others. He was operated on once before, and his is a curious and interesting case from other points of view. He has been under my observation now nearly a year, and I consider him to have not only a cancerous but a general diathetic degenerate condition; that he is in fact a senile degenerate. On his first appearance at the hospital his face and forehead were found to be studded with large excrescences of verrucæ latæ seborrhœicæ, that common sign of senile degeneration of skin; there was also an epithelioma on the cheek, the object of the first operation; and besides these he had two or three subcutaneous tumors, as large as horse-chestnuts, on and over the right shoulder blade and on the ridge of the shoulder itself. These lumps were all to a small extent movable under the skin, and were pronounced by all medical men who examined him as being in all probability sarcomatous tumors. They interfered with his freedom of arm motion and were painful to touch. He was put under large and increasing dosage of arsenic. Under that treatment these tumors in a few weeks completely disappeared, and have not since recurred. His movements, save for age-stiffness, are as free as they have ever been; his face has cleared up greatly, and complexion freshened. No history of syphilis, no subjective or objective symptoms were obtainable. I think it extremely likely that in this particular case other manifestations of malignant predisposition will occur; as I have stated, he is the subject of senile degeneration as to the tissues, and nothing but the results of this state can be expected.

I have had other cases of multiple sarcoma in which some of the tumors have been by competent authorities examined after excision, so that no possible doubt could exist as to their nature, in which the same treatment has been used with equally good and very much more surprising results. I will not further speak of it here, but reference will be found noted at the foot of page 746, to which publications I would refer any one interested in the subject.[1] Köbner's and Funk's writings, and perhaps experience, antedate my own in this connection with sarcoma. I do not claim originality by any means; several of the older writers have recorded experiences in connection with epitheliomatous growths with similar treatment and favorable result; and I am inclined to think still, in spite of the dictum of the doctor and others, that its usefulness will at some day in the near future be recognized. As to reasons for its inhibitory and relatively curative action I am past theorizing. I simply recognize, as I think, the fact and let it end there (there is a temptation to quote Goethe here, but I will resist). Certainly, however, arsenic has great power in some of the keratoses and affections of the epithelial strata of the skin; this is a well-recognized fact in dermatology, as it is a fact also that some skins are more recalcitrant and less affected by it than others. Another claim that it has great action also on the fibrous tissues, at least in those in which a morbid state is present, cannot, I think, well be controverted. In what peculiar way or means it furnishes its power, whether by formation or antagonism of varying toxins, etc., I have not the remotest idea; my only comprehension lies in observation of a clinical fact. The same may be said about mercurials and their action on the economy. I do not believe any one can give me absolute and unqualified instruction thereon. From Rokitansky to Koch, and later, I have seen pathology twirled like a shuttlecock, and am content to wait, but not to expect during my life a final decision on many of these moot points.

At the commencement of this explanatory paper I had not intended to make it so long, and perhaps diffuse, but I cannot now resist the inclination and opportunity of adding a few words in general advocacy of the caustic agent I employ, and place such reliance on, in other affections of the skin—to wit, "acid nitrate of mercury." In leucoplasic growths on the lips, buccal mucous membranes, etc., I use it with great advantage, as can be certified by members of the New York Dermatological Society. My method in these cases is first to protect the normal mucous membranes and mouth *in toto*, by packing with absorbent cotton, then applying the solution in full strength to the parts affected, and, when I am satisfied that sufficient escharotic action is obtained, neutralizing as usual with bicarbonate of sodium in substance and solution.

In cases of the little teleangiectases (so-called spider cancers) of the face and other parts of the body, I find that the point of a toothpick dipped into the solution, and pricked into the centre of the arborescent lesion, is, from the adhesive inflammation it causes, much more effective than, we will say, the touching with the galvano-cautery point so often employed in these cases.

One last word. In an able review of the modern varieties of treatment of lupus, by Dr. McLeod,[2] entitled "Observations on Some of the More Recent Methods of Treating Lupus Vulgaris," he mentions and extols Dr. Unna's latest mode, consisting of soaking a number of small wooden pegs in a mixture of the solutions of acid nitrate of mercury and carbolic acid, boring these into the nodules of the lupus growths, then cutting the ends off just above the niveau of skin, and allowing the rest to remain. Now, for the life of me, I cannot understand wherein the advantage lies of making a human being a sort of hedgehog, instead of curetting at once and applying the remedy more directly, which has been my ordinary method for many years, and a fairly successful one; so much so that I can hardly understand the jeremiads of many better men over their acknowledged almost total failure in the treatment of this class of cases.

I am bound as freely to admit that recurrence more often happens in them than in any of the other classes mentioned; as to the reasons for this, whether owing to the extent and greater diffusion of lesion, the almost consequent lighter curettage and application, etc., I confess that I am not altogether clear, but success certainly is very frequent.

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HOSPITAL SURGICAL SERVICE CONDUCTED BY A SINGLE CHIEF.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In a fitting encomium of the services rendered by Dr. McBurney to the Roosevelt Hospital, in the editorial pages of your issue of April 14, 1899, attention is directed to the demonstration he has afforded of the practicability and feasibility of a large hospital surgical service being conducted by a single chief.

I would like to call attention to a similar demonstration, afforded by Dr. A. G. Gerster, at the Mount Sinai Hospital of this city, where for three years, from December 1, 1896, to December 1, 1899, he, with the aid of two adjunct surgeons (Drs. Lilienthal and Van Arsdale) conducted and directed a most active surgical service of seventy beds.

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THE STATIC INDUCED CURRENT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have examined the references kindly furnished by Dr. E. L. Squire in your issue of March 31, 1900, concerning the above subject, and find that they have not the slightest relation to it. I have carefully read the quotation from Beck's Murray, "A System of Materia Medica and Pharmacy," published in 1828, vol. ii., p. 240, and find (as appears by Dr. Squire's quotation) merely the usual classical description of the medical applications of statical electricity, with no allusion to currents of any sort. The reference therefore, however interesting, has no bearing upon the discussion in question, and I am at a loss to account for its being adduced on any reasonable basis.

Dr. Squire's second reference is to "Braithwaite's Retrospect," 1845, part xi., p. 33. The article (really on pages 29 and 30) is taken from the *Medico-Chirurgical Review*, vol. i., p. 319, published in 1845. This *Medico-Chirurgical Review* article in turn is based upon an article by MM. Longet and Ch. Matteucci, "Upon the Connection between the Direction of the Electric Current and the Muscular Contractions Excited by that Current" (translation), published in the *Comptes rendus de l'Académie des Sciences* of September 9, 1844, and upon the electrophysiological work of C. Matteucci. Turning to the above and to "Leçons sur les Phénomènes Physiques des Corps Vivants, par C. Matteucci," p. 255, published in Paris, 1847, we at last get at the true reference, which is (translated): "A current which circulates by jerks in an animal during a certain time produces tetanic convulsions; the direct current, if continued sufficiently long, produces, on the contrary, paralysis."

At this point our researches come to a sudden termination, not with an electric, but with a moral shock, for in reading over the articles referred to we find that Matteucci's investigations relate only to interrupted galvanic currents and not even remotely to statical electricity. And we find that the writer in the *Medico-Chirurgical Review* quoted does not use the term "static induced current," which in Dr. Squire's quotation is included within his quotation marks as if the original writer had so used it. It is, therefore, evident that Dr. Squire's juxtaposition of quotations, at one point referring to the common statical electrizations and at another to the common galvanic electrizations, and at no point referring to the static induced or any similar current, is more ingenious than it is ingenuous.

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[1] "Remarks on, and Queries as to Relative Frequency of Pathological Changes in Moles and Other Tumors on Face and Head." Journal of Cutaneous and Genito-Urinary Diseases, vol. v., January, 1887. —"Multiple Sarcomata: History of a Case Showing Modification and Amelioration of Symptoms under Large Doses of Arsenic." The American Journal of the Medical Sciences, October, 1892.—Remarks in Transactions of the American Dermatological Association, Twenty-third Annual Meeting, 1899.

[2] British Journal of Dermatology, vol. xi., 1899, p. 341.

It goes without saying that an interrupted galvanic current produces, and always did produce, tetanic contractions, but what I said, before any one else said it, was that currents were derived from electrostatical machines by setting up a spark gap, independent of the patient but in the same circuit. I have yet seen no reason, nor can I believe any impartial observer sees any, to cause me to withdraw this claim.

William J. Morton, M.D.

April 10, 1900.

Medical Items.

Bloodletting versus Leeches.—In an article on the treatment of pneumonia in the *Revista Ibero-Americana de Ciencias Médicas* for December, 1899, Dr. Rubio says that a more marked and more prolonged anæmic condition follows the loss of blood by leeches than by phlebotomy. The abstraction of thirty-two or more ounces by phlebotomy produces less pallor and causes less weakness than does the loss of eight ounces of blood sucked by leeches. This difference is especially marked in children. He explains the anæmia following the application of leeches by the presence of a blood poison in the leech in consequence of which the blood remaining in the body is vitiated. Professional leech catchers, men who wade barelegged into places where leeches breed, rapidly acquire a peculiar cachectic appearance, which is not due to the loss of blood, for they remove the animals immediately they attach themselves, before an appreciable amount of blood has been lost.

Hospital Train for South Africa.—A hospital train for South Africa is being built at Birmingham, England. The following is a description of the train given in an English weekly journal: "After several unsuccessful attempts to purchase and adapt carriages which were being built for the South African Railway, and were required for army purposes, the central British Red Cross committee voted a sum of money for the building and equipping of a complete hospital train. The borough of Windsor having contributed a sum of £6,100 ($30,500) to which Princess Christian added £650 ($3,250), the balance of a Red Cross fund which was invested in her Royal Highness's name after the Soudan campaign of 1885, and several other donations having been made, including £200 ($1,000) from the Worcester committee and one of £50 ($250) from Canada, it was only natural that the wish expressed by the Royal borough that the train should be named 'Princess Christian,' should be carried out. The train consists of seven bogie 'corridor' carriages, each about thirty-six feet in length and eight feet in width, the passage through the centre being continuous. No. 1 is divided into three compartments for linen and other stores, for two invalid officers, and for two nurses respectively. The second carriage is also divided into three compartments—namely, for two medical officers, a dining-room, and a surgery. Nos. 3, 4, 5, and 6 are each constructed to carry eighteen invalids and four hospital orderlies, It is here that the greatest difficulty was experienced. owing to the line being of narrow gauge and the space being consequently so very limited. The beds have been necessarily placed in three tiers, and any person accustomed to the lifting and moving of invalids can understand how difficult it is to place a helpless patient sideways on a bed closed on all sides but one, from a gangway two feet six inches in width, in which there is only room for one bearer at the head of the stretcher and one at the foot. This difficulty has been overcome by an arrangement of pulleys in the roof which enables each bed with a patient on it to be raised to the proper level by one man, while the hands of the two bearers are thus left free to guide and fix it in position. Each carriage is provided with a stove, a lavatory, and necessary storing lockers. No. 7 contains the kitchen and pantry, including berths for two cooks and a compartment between for the guard. There are perfect hygienic appliances for cooking, several large cisterns containing cold-water storage, two large filters, refrigerator, and in fact everything necessary for ninety-seven persons, even if they had to live on the train for two or three weeks. Many little luxuries have been added by Princess Christian and all the members of the Royal family, including the Queen, who has sent some thick, warm blankets."

The Frisch Bacilli in Nasal and Oral Mucous Membranes.—Simoni (*Centralblatt für Bakteriologie*, Nos. 18, 19, 1899) declares that he has long had doubts, after studying recent literature on the subject, whether rhinoscleroma is contagious or not, and whether the Frisch bacillus is really the specific etiological factor of this disease which it has been claimed to be. He has found in the secretions of ozæna encapsulated bacilli which could be isolated and which were identical with those seen in rhinoscleroma. He now cites an extended experience of seventy-six cases, of which fifty-eight were human beings, all suffering from nose affections, while the remaining eighteen were animals with acute and chronic catarrhal nasal conditions. From these cases and from the nasal mucus of healthy persons, the author made gelatin and agar cultures. After thorough and painstaking investigation he comes to the conclusion that the Frisch bacillus and the Friedländer pneumobacillus are merely varieties of the same species widely distributed in nature, the extremes of which may be seen in the Frisch bacillus on the one hand and the Löwenberg-Abel bacillus (Bacillus mucosus) on the other. Besides this, Simoni proves that these bacilli are found in the nasal mucous membrane at the site of minor injuries, and are almost always present in the mucous membrane of animals. He also declares that Frisch bacillus is a frequent and innocent guest of both the nasal and laryngeal cavities.

Leeches and Bedbugs as Germ-Carriers.—In his experiments, Mühling (*Centralblatt für Bakteriologie*, No. 20, 1899) used the bacillus of anthrax and proved the existence of an internal infection of anthrax in bedbugs which had fed on the blood of mice likewise affected. Furthermore, a horde of bacteria settled on bugs which had been allowed to wander over the remains of mice infected with anthrax. The infected bugs had present in their intestinal canal virulent anthrax bacilli which finally passed away unchanged in the fæces. Mühling does not state that he experimented further with the view of ascertaining whether or not any virulence remained with these bacilli voided in the fæces. The bugs, however, were not visibly affected by the bacillus anthracis, which fact the author proves by stating that he kept such a bug alive and under observation for six weeks. The bite of such an infected bedbug upon a mouse was without result. However, if, while sucking at the wound, the bug was crushed with a sterile glass rod, and rubbed therewith over the surface of the wound, thereby insuring the freeing of the intestinal contents and simultaneously of the contained anthrax bacilli, there was obtained in every single case as a result the infection of the mouse. The author believes that the bedbug only sucks blood from its victim, and that no germs can escape from it to its host in the process (?). Leeches are very similar to bedbugs in these respects. Thus, they do not succumb to anthrax. Mühling declares that he kept such an infected leech living for three months. On the other hand, however, the anthrax germs, after having been taken up by the leech, die in that animal's intestinal canal after so short a period as a single day. The author did not satisfy himself as to the reason for this. Mühling concludes that even though it should accidentally happen that the germs attached to the external surface of the leech find their way into the wound, they would be sucked up by the leech in the process of blood-transfer, and therefore that parasite could be used therapeutically without any danger of infecting its host, on both man and animal.

Osteopathy has at last invaded the metropolis. The first practitioner to make himself known here is out in a circular telling of the many things he is capable of accomplishing. It begins: "I, as an osteopathist, do not advocate the use of drugs." He appeals to the medical profession to send him cases. The strange part of it is that some of its members will. However, he would get them anyway.

Old Specula.—The *Bulletin d'Oculistique* relates a story answering the query, "What becomes of the old speculum?" A physician happening to enter the kitchen in a country hotel saw a brightly polished bivalve hanging among the cooking utensils, and upon inquiry learned that it was used by the cook for moulding sausages. The proprietor had bought it at an auction of second-hand household effects.

Alcoholism in the United States Army.—During the calendar year 1898, 707 cases of alcoholism were reported as having been under medical treatment in the regular army. Ten of the cases had a fatal ending. These cases gave for the year an admission rate of 15.16 per thousand of strength. This rate compares favorably with the rate in 1897, 27.86, and the mean annual rate of the previous decade, 36.90. These rates do not represent the amount of intemperance existing in the army or in any of its parts, but as they are all calculated from similar data, to wit, the number of cases in which medical assistance was invoked to avert danger, they are useful for purposes of comparison. The rates of admission in 1898 were highest during the first three months of the year, when the troops were in garrison under conditions of peace. They were lowest during the period of active field service, May to August inclusive. In Cuba drunkenness was measured by an annual admission rate of only 0.52 per thousand of strength, while in Puerto Rico a rate of 18.65 was associated with 2.07 deaths in every thousand men. In the Philippines the facility with which alcoholic liquors could be procured resulted in a rate of 21.70, but this rate was somewhat exceeded in the artillery arm of the service in garrison in the United States. During the past year as in previous years the colored troops had a lower rate, 4.81, than the white troops, 15.96.—*Report of the Surgeon-General of the United States Army.*

Good Stomach, one of the Sioux Indians now exhibiting in Paris, will have to change his name. French brandy proved too strong for his gastric digestion, and he was arrested the other day for going on the warpath in the French capital.

Gonorrhœa of the Stomach.—Dr. J. H. Oyster, of Paola, Kan., writes to the *Medical World* for the best treatment in gonorrhœa of the stomach. He has a patient so affected for five years, due to extension from the mouth.

"La Fécondité."—The *Gazette Médicale de Paris* takes exception to the statements made by Monsieur Zola in his recent novel relative to the part played by reputable surgeons in the depopulation of France. It is admitted that many women have their generative organs unnecessarily mutilated, and that many do so by choice, so as not to bear children; but the *Gazette* claims that all this criminal work is done by unscrupulous members of the profession, who are generally known and also generally detested.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended April 20, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Alabama, Mobile	April 7th to 14th	1	
District of Columbia, Washington	April 7th to 14th	1	
Florida, Jacksonville	April 7th to 14th	1	
Illinois, Chicago	April 7th to 14th	1	
Indiana, Evansville	April 7th to 14th	4	
Kansas, Wichita	April 1st to 14th	19	
Kentucky, Covington	April 7th to 14th	9	
Lexington	April 7th to 14th	3	
Louisiana, New Orleans	April 7th to 14th	51	19
Maine, Portland	April 7th to 14th	1	
Maryland, Baltimore	April 7th to 14th	1	
Michigan, Detroit	April 7th to 14th	1	
Minnesota, Minneapolis	April 1st to 14th	20	
Nebraska, Omaha	April 7th to 14th	4	
New York, New York	April 7th to 14th	1	1
Ohio, Cleveland	April 7th to 14th	11	2
South Carolina, Greenville	April 7th to 14th	2	
Utah, Salt Lake City	April 1st to 14th	3	
Virginia, Portsmouth	April 7th to 14th	1	
Washington, Spokane	April 7th to 14th	3	
SMALLPOX—FOREIGN.			
Austria, Prague	March 17th to 24th	4	
Belgium, Antwerp	March 24th to 31st	2	2
Ghent	March 24th to 31st		2
Brazil, Rio de Janeiro	February 23d to March 2d		15
Canada, Quebec, Bonaventure Co	April 5th to 12th	25	
Colombia, Barranquilla	March 24th to 31st	5	5
Egypt, Cairo	March 11th to 18th	8	
England, Liverpool	March 24th to 31st	21	1
London	March 17th to 31st	8	1
Gibraltar	March 26th to April 1st	3	1
Greece, Athens	March 24th to 31st	10	6
India, Bombay	March 6th to 13th		222
Kurrachee	March 4th to 11th	17	6
Italy, Palermo	March 17th to 24th		1
Mexico, City of Mexico	March 18th to April 1st	40	22
Vera Cruz	April 1st to 7th		3
Russia, Moscow	March 10th to 17th	9	2
Riga	January 1st to 31st		38
St. Petersburg	March 3d to 10th	20	8
Warsaw	March 10th to 17th		1
Spain, Corunna	March 24th to 31st		1
Madrid	March 16th to 24th		6
Valencia	March 24th to 31st	3	3
Straits Settlements, Singapore	February 10th to March 3d		14
YELLOW FEVER.			
Brazil, Rio de Janeiro	February 23d to March 2d		18
Colombia, Barranquilla	March 24th to 31st	1	1
Panama	March 27th to April 10th	3	
Cuba, Havana	March 1st to April 17th	2	4
CHOLERA.			
India, Bombay	March 6th to 13th		10
PLAGUE—INSULAR POSSESSIONS UNITED STATES.			
Philippines, Manila	February 24th to March 3d		7
PLAGUE—FOREIGN.			
India, Bombay	March 6th to 13th		736
Kurrachee	March 4th to 11th	90	63
Japan, Formosa, Tamsui	January 1st to February 28th	09	82
Osaka	April 16th	Present.	
Paraguay, Asuncion	February 8th to 15th		6
Persia, Djiraoro	March 29th	Present.	

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Original Articles.

PERFORATING DUODENAL ULCERS.[1]

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THE interest that has been lately directed toward the surgical treatment of gastric perforations has also been turned to the operative relief of the allied round or peptic ulcer of the duodenum. This affection is much rarer than the ulcer of the stomach, is much more difficult to diagnosticate properly, and is more apt to be confounded with other more distant surgical lesions, such as appendicitis, etc.

Site.—Its site is in the upper part of the duodenum, and according to Morot[2] and Vonwyl[3] it is always situated within one and one-half inches of the plyorus; but Schwartz[4] gives one case in which the perforation existed on a level with or a little below the ampulla of Vater, and thus allowed a free escape of bile into the peritoneal cavity. The figures given by recent authorities show that in the two hundred and sixty-two collected cases of Collin,[5] the perforation occurred two hundred and forty-two times within two inches of the pylorus, in the descending portion fourteen times, in front of the aorta three times, and in the ascending portion three times. Or, expressing the same a little differently, one hundred and sixty-two of the two hundred and sixty-two cases were situated at 2–4 mm. from the pylorus; seventy-five close to it; four encroached on the pylorus itself, and two extended through the pylorus to the duodenum and to the stomach. Perry and Shaw[6] found, in one hundred and forty-one cases of duodenal ulcer, one hundred and twenty-three in the first part of the duodenum, sixteen in the second part, and only two in the third part.

Number.—These ulcerations are usually single. Collin says that one ulcer was found in eighty per cent. of his cases; two ulcers in eleven per cent.; and three or four ulcers in four per cent. Morot in twenty-two cases found eighteen had a single ulcer; two, two ulcers; one, three ulcers, and one four ulcers.

Location.—These perforations are encountered most frequently on the anterior wall. Oppenheimer[7] in fifteen cases noted that the perforation had taken place in the anterior wall eleven times, three times posteriorly, and once superiorly. Of the one hundred and nineteen cases of Collin in which the first portion of the duodenum was perforated, in sixty-eight it occurred on the anterior wall of the bowel, in thirty-nine the posterior wall, in ten the superior, and in one the inferior portion. In eight ulcers perforating in the second portion of the bowel, five occurred in the internal wall, two in the posterior, and one in the external wall; and in the ulcers presenting in the third part of the duodenum, four in number, in three the anterior and superior walls were involved, and in one the posterior wall. This is of considerable surgical importance. The anterior perforations are, for obvious anatomical reasons, less likely to be closed off by adhesions, and hence a free and rapid involvement of the peritoneal cavity takes place in the openings here situated. Reckmann[1] states that half the cases of duodenal ulcer result fatally from perforation into the peritoneal cavity.

Frequency of Perforation.—Perforation is said to take place one hundred and eighty one times in Collin's two hundred and sixty-two cases, or in sixty-nine per cent.; Chvostek, however, places the frequency of perforation at about forty-two per cent. of the cases. In these two hundred and sixty-two cases there was a generally diffused and fatal peritonitis, one hundred and twenty-five times. But occasionally in anterior openings, but more commonly with the perforations existing elsewhere, adhesions or ulcerations with abscess and hemorrhage of the duodenal wall or adjacent organs have been encountered. Examples of such complicating lesions are subphrenic abscess, which follows more commonly a perforation in the superior wall of the horizontal portion of the duodenum (according to Oppenheimer). Liver and pancreatic adhesions are at times met with (Oppenheimer gives six cases and Collin thirty-eight cases of such adhesions). Perforations into the gall bladder have been reported, but more important and dangerous are the ulcerations into the aorta (Stich,[2] two cases), or the vena porta (Rayer and Habershon, two cases), or the superior mesenteric vein (Warfinger), or the hepatic artery (Vonwyl). The ulceration has been also known to invade the adjacent colon (Murchison and Saunderson, two cases).

Sex.—Duodenal perforations are more common in men than in women; about seventy-nine per cent., according to Collin, are in males. From the tables of Morot, Kraus, Lebert, and Chvostek I have gathered one hundred and seventy-six cases of duodenal ulcers, and of these one hundred and forty-four were in men and thirty in women.

Cause.—This has been explained by Boas[3] to be due to the rougher food, and, in men, to their addiction to alcohol and tobacco, which intensify the acidity of the gastric juice, and thus acts unduly on the glandular mucous membrane of the duodenum, which is not protected until the alkaline bile and pancreatic fluid is poured into the intestine at the opening of Vater. Koch and Ewald, by giving to animals hydrochloric acid, 5 : 1,000, caused duodenal ulcers to appear. Pyloric spasm, Talma states, produces necrosis and anæmia of the membrane there. On the other hand, alcoholics are not found to be prone to duodenal ulcer, and though the spasms and lesions of gastric hyperacidity, which are now accepted as a causative of stomach ulcer, will doubtless apply in many instances to the development of a similar duodenal damage, there are other causes for duodenal ulceration to be mentioned beside the foregoing.

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[1] The presidential address in surgery, delivered before the American Surgical Association.

[2] Thèse de Paris, 1892.

[3] "Ulcer Perforans Duodeni." Thèse de Paris, 1893.

[4] Schwartz: "Ulcère perforante du duodenum." Bullet. et Mém. Soc. de Chirurg., January, 1898.

[5] Thèse de Paris, 1894.

[6] Guy's Hospital Reports, 1894.

[7] "Das Ulcus pepticum duodenale." Thesis, 1891.

[1] Reckmann: "Ulcus duodenale u. seine Diagnose," 1893.

[2] Deutsch. Arch. f. klin. Med., 1874.

[3] "Diagnostik u. Therapie der Darmkrankheiten," 1899.

Burns.—The principal and best known, though now somewhat disputed factor in their etiology is the influence of external burns. Holmes,[1] for instance, states that in one hundred and twenty-five cases of burns, sixteen cases of duodenal ulcer were found; Perry and Shaw in one hundred and forty-nine cases of burns met with duodenal ulcers five times; and in Collin's two hundred and ninety-seven cases of duodenal ulcer he states that burns produced the ulceration in thirty-eight instances. According to Holmes, the duodenal ulcerations after burns present themselves from the seventh to the fourteenth day, but Ponfick found in one instance a duodenal ulcer within eighteen hours after the reception of the burn. Curling also had a case in which symptoms of duodenal ulcer were recognized one day after the burn, and the autopsy confirmed the diagnosis.

The explanation most accepted at the present day is that this complication of a burn is due to septic infarctions such as may be developed in frost-bite, of which Billroth and Adams each cites a case, or in erysipelas, eight instances, or in tuberculosis (Latham). In the cases in which trichinosis (Ebstein), or heart or kidney disease, or cirrhosis, or hepatic or other carcinoma (Latham) exists, it is not quite so easy to trace the connection, though embolism even here has largely to deal with the question. The recognized explanation offered by Hunter[2] and often quoted, seems inadequate to elucidate the relation between a cutaneous burn and a duodenal ulcer. This observer proved that in animals treated by injections of toluylendiamin the bile was so changed that when discharged into the duodenum ulcerations rapidly developed. His idea, therefore, was naturally that the alteration of the cutaneous covering so altered the bile as to beget the complicating duodenal ulcerations. Unfortunately duodenal ulcers are so rarely met with on a level with or below the bile discharged into the bowel, that this at once disposes of the need of calling on the liver and pancreas as accomplices in their production. That septic infarction is the most probable cause of duodenal difficulties after burns may also be fairly inferred by the later collection of Lockwood, who, in one hundred and thirty-eight cases of burns treated with more or less approach to an antiseptic idea, noted the complication of duodenal ulcer in but one instance. A cancerous ulceration is almost unknown; but four cases (Eichert, Ewald, Schrotter, and McKenzie) have been recorded.

Frequency.—A duodenal ulcer is, according to statistics, a rare lesion. Collin, whom one is compelled to quote by the worth of his collected cases, in a range of ten years could find only twenty-six cases. Houze[3] in three additional years could add only three more cases, though Darras[4] more than one year later found five others. Since attention has been given to the subject, and particularly to the surgical aspect of it, by the present writer in 1896, when nine cases were reported as having undergone surgical treatment, there have been reported fifty-one operations for this disease.

The relative frequency as a cause of death deduced from autopsies is as follows:

Willigt	1,600	sections with	74	gastric ulcers and	2	duodenal.
Starke.....	384	" "	36	" " "	3	"
Crunfeld...	1,150	" "	124	" " "	4	"
Steine.....	3,085	" "	89	" " "	12	"
Vonwyl....	12,806	" "	98	" " "	3	"
Latham....	8,192	sections with	..	gastric ulcers and	12	duodenal.
Perry and Shaw....	17,652	" "	..	" " "	70	"
N. Y. Hospital (unpublished)	1,000	" "	..	" " "	2	"
	45,869		421		108	

or about 0.2 per cent. in frequency.

Kinnicutt,[1] however, in thirty thousand autopsies, which probably included many embraced in the above table, has given a rather higher percentage of frequency, placing it at 0.4 per cent. Though the proportion is a small one, stress must be laid on the fact that from forty per cent. to seventy per cent. of these ulcers perforate, with an almost invariably fatal result. The relative proportion of gastric to duodenal ulcers is 12 to 1 (Burwinkel).

Age.—It is encountered at all ages. Chvostek in eighty-seven autopsies on children under ten years of age, found five duodenal ulcers, of which one was seen in a seven-weeks-old child, another in a child four days old, and a third in a babe of three hours. Collin's table is the most complete in this respect, and it is here presented. In two hundred and ninety-seven cases of duodenal ulcers they were met with:

Under 10 years of age	42	times.
Between 10 and 20	24	"
" 20 " 30	43	"
" 30 " 40	52	"
" 40 " 50	46	"
" 50 " 60	41	"
" 60 " 80	28	"
" 81 " 95	3	"

Progress.—It has already been strongly stated that nearly all perforations of the duodenum will prove fatal from a generalized peritonitis unless surgical intervention should relieve the patient. What this consists of, what are its results and its difficulties, will be considered a little later. At present one must take account of the somewhat encouraging fact that all duodenal ulcers do not go on to this severe complication of perforation. At seventy autopsies, Perry and Shaw found decided evidences of repair in nearly fifty per cent. of the cases, and Collin also recorded thirty-nine instances of cicatrized ulcerations. These cured ulcers may prove innocuous, but they can, as in the stomach, narrow to a dangerous degree the lumen of the intestine and even encroach upon the bile opening, or make such traction upon it as to bring about gastric and hepatic dilatations. Some of the most brilliant surgical triumphs have been obtained in relieving such obstructions, of which examples may be subsequently found in this article.

Symptoms.—The symptoms of a non-perforated duodenal ulcer are, as shown by Schwartz, frequently very slight. In twenty out of twenty-five instances of perforation the patients were in apparent good health, or so slightly indisposed that they had not consulted a physician. In only five cases were there previous stomach symptoms. Of these one patient was thought to have dyspepsia, and two to have a gastric ulcer. In my own collection of fifty-one cases treated by operation, gastric symptoms previously existed in twenty-five out of thirty-four cases.

The usual signs may be given as follows:

1. The pain, when characteristic, occurs several hours after eating, and may be slight or severe, and presents itself just below the gall bladder, and may reach to the median line or to a level with the navel. Many times the pain is absent. Reckmann in eighty cases found sixteen in which little or no pain existed. Pressure particularly over the region to the right of the twelfth thoracic vertebra occasionally elicits pain.

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[1] "System of Surgery," vol. i., p. 733.

[2] Hunter: Brit. Med. Journal, vol. i., p. 76, 1890.

[3] "De l'ulcère perforant du duodenum." Thèse de Paris, 1896.

[4] "De la perforation de l'ulcère simple du duodenum." Thèse de Paris, 1896.

[1] Jacobi: Festschrift, 1900.

Swallowing of a sour lemonade or a strong alcoholic drink may arrest the pain by bringing about a pyloric contraction, but Pagenstecher[1] denies the value of this test.

Vomiting is present in about seventeen per cent. of the cases, but it is of a reflex character. It is of diagnostic importance if, like the pain, it shows itself from an hour or so up to several hours after a meal, and the matters rejected are broken-down food often mixed with bile and blood.

The right shoulder pains are noted by Schwartz as occasionally to be recognized. According to Vonwyl and Bucquoy, the pains are often slight from the comparative immobility of the duodenum, and vary from queer indescribable sensations to severe radiations of distress. Vomiting, when it occurs, relieves the pain.

Jaundice, if present, which is rare, may be due to simple duodenal tumefaction or to cicatricial contraction on the papilla.

Hemorrhage is to be expected in about one-third of the cases of non-perforating ulcers. Probably it is even more frequent than this, as Oppenheimer found blood in the stools of one-half of his thirty-four cases, and Krauss says it occurs even more frequently than in this ratio. This bleeding can be severe and show itself by mouth as well as per rectum. It can speedily prove fatal, as larger vessels are opened than by a gastric ulcer. Usually the blood is discharged from the bowels in a tarry condition, which bespeaks a high origin of the hemorrhage and an exposure of some duration to the action of intestinal secretions. This is spoken of as melæna. Its color may be, however, a bright hue, and recently, with Dr. Peabody, the question of the presence of a duodenal ulcer in a patient with intestinal hemorrhage and right-sided epigastric pain and distress some time after eating, was negatively decided because the blood discharged per anum was of a bright red color and unclotted. As the patient, moreover, had hemorrhoids the possibility of this origin led to the confusion in diagnosis. This escape of fresh unchanged blood from the bowels is recognized by Vonwyl, and some emphasis should hereafter be placed on this possibility. The profusion of the hemorrhage may be much beyond that encountered in gastric ulcer, for larger vessels may be involved. Collin gives twelve instances in which the blood came from the pancreo-duodenal artery; three times the gastro-epiploica dextra was opened into; twice the pancreatic artery; once the hepatic; twice the aorta; twice the vena porta; and once the superior mesenteric vein. Pagenstecher states that the ulcers on the posterior wall are more apt to bring about hemorrhage than the anterior ones, as the vessels are more abundant and larger there. Burwinkel[2] says that excepting in vicarious menstruation and typhoid fever intestinal hemorrhage in large amounts is very rare and should excite suspicion of gastric or duodenal ulcers. This writer, in spite of all that has been advanced by Nothnagel, Ewald, Lemke, and latest of all Kinnicutt,[3] that in the great majority of cases a differential diagnosis from gastric ulcer is impossible, claims that by a careful study of the symptoms he has been able to diagnose five cases of duodenal ulcers in the last few years.

Diagnosis.—The following contrasting symptoms have been grouped by Vonwyl as an aid to this end:

Gastric ulcer: (1) More frequent in women, twenty-fifth to fiftieth year. (2) Pain promptly after eating. (3) Relieved by vomiting. (4) Frequent biliary, mucous, and food vomiting. (5) Marked dyspeptic symptoms. (6) Frequent bloody vomiting. (7) More seldom bloody stools.

Duodenal ulcer: (1) Occurs most frequently in males. (2) Pain in right hypochondrium or to right of parasternal line. (3) Comes on two to four hours after meals. (4) No relief by vomiting; latter not frequent. (5) Bloody stools (melæna or bright blood), more common than bloody vomiting. (6) If jaundice is present, this would contribute to the diagnosis.

That medical and surgical education in this line is progressing has also been brought out in the cases of operations which form the basis of this paper. Here it will be seen that, notwithstanding that the greater part of them have been treated as of appendical or other origin, surgeons, awake to the possibilities of the case, are making shrewder diagnoses, and the reproach which was good up to a year ago, that no operation for a previously recognized perforated duodenal ulcer had yet been performed, no longer holds good. It may be expected that as the detection and treatment of a perforated gastric ulcer have so rapidly and so satisfactorily progressed, from 1892 when the writer was able to add to his first operation of this kind but four other instances, while now over one hundred cases each year are operated on with a mortality that has fallen (if operated on within twelve hours) from thirty-nine per cent. to seventeen per cent. (Keen),[1] a similar improvement will take place in the recognition and the proper treatment of duodenal ulcers.

The picture is a far different one when the duodenal ulcer perforates, and particularly if anteriorly, which is the most common site of this complication. Here there is usually no withholding adhesion, and a rapid invasion of the peritoneum is probable.[2] If the stomach is yet filled, the extravasation may take an anatomical course somewhat in the order spoken of by Pagenstecher, and which is in accord with my own analogous clinical experience in three perforations of the gall bladder. Fluids escaping from the duodenum or gall passages flow at first between the liver and the colon, and thence along the ascending colon, sometimes to the outside of the bowel and sometimes between the omentum and the parietal peritoneum, toward the iliac fossa; from this point they may pass over to the sigmoid flexure or into the pelvis. Given, therefore, such a free course, and with a plentiful pouring out of an acid fermenting food and gas through a direct, though small (2 to 8 mm.) opening, the symptoms presented would naturally be severe.

Great pain is usually felt at the epigastrium or to the right of this region, as was noted twenty-six times in forty-seven of my cases. It has a few times been observed at the umbilicus and in the left side, but in twenty-three others of the forty-seven instances it was simply recorded as abdominal pain. Vomiting often follows the attack of pain. It occurred in twenty-eight out of thirty-four instances. Shock is not often met with, but may be severe and fatal. Peritoneal symptoms rapidly develop with a tendency in some cases to be localized in the upper part of the abdominal cavity and in the right side; when these signs show themselves mostly to the right and at or below the level of the umbilicus, an appendicitis is necessarily simulated. When the liver dulness has been dissipated up nearly to the mammary line, air extravasation may be suspected, and when accepted as present it will aid in concentrating the diagnosis. This symptom of liver resonance, unless marked, is so often found to be due to a distended colon that it should not be much relied on.

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[1] "Die chirurgische Behandlung des Duodenalgeschwürs." Deutsche Zeitsch. f. Chir., August, 1899.

[2] "Das peptische Duodenalgeschwür." Deutsche medicin. Wochenschrift, December 20, 1898.

[3] *Loc. cit.*

[1] Keen. Brit. Med. Jour., June 11, 1898.—Mayo. "Surgery of the Stomach." Lancet, March 19, 1900.

[2] It should also be remembered that generally the duodenum in its first part is free and covered by peritoneum, so that extravasation is likewise possible through a posterior perforation in this region. It is, however, in this case more likely to enter the omental bursa (lesser omental cavity) or invade the retroperitoneal tissues.

In considering the diagnosis of a perforated duodenal ulcer as just given, I cannot but feel that more weight and attention should be given, first, to the previous history, which shows, contrary to the opinions of many anterior observers, that in the fifty-one collected cases of operations for the relief of such conditions, there was a history of gastric or dyspeptic symptoms given in twenty-five out of thirty-four instances in which this point was noted; secondly and also important is the fact alluded to on a previous page, that the initial or early pain was developed in twenty-six instances out of forty-seven in the epigastrium; and in the right hypochondrium thirteen times. The third factor of value in the diagnosis as well as the treatment of the symptoms of perforation peritonitis, whether from stomach, duodenum, gall-bladder, appendix, or any other part of the intestinal tract, is the prompt resort to an exploratory incision. This need of an early solution of the site of a perforation has been already shown in the cases of a gastric perforation, in an article[1] embracing seventy-eight cases operated upon for this trouble. The mortality in these cases clearly depended on whether the patient underwent surgical intervention within twenty-four hours from the inception (*i.e.*, the pain) of the perforation. This is yet more strongly marked in the latest collection of this class of troubles by Mayo,[2] who states that in four hundred and twenty-nine cases of gastric perforations those operated on in the first twenty-four hours were eighty-two, in which forty-seven patients recovered, and thirty-five died (forty-two per cent.); and that in operations done after that period over seventy per cent. of the patients died. In duodenal perforations the same outcome is observable. In the fifty-one collected cases herewith presented of duodenal perforations, there were twenty-five cases in which the lesion was recognized and closed at the operation; of these thirteen underwent operation after thirty hours' delay, and all resulted fatally;[3] twelve other patients were operated on within that time, and eight survived, giving thus only 33⅓ per cent. of mortality. Only, I say, and with much satisfaction, since it marks an improvement on the statistics of Pagenstecher, which gave a mortality of sixty per cent. in the found and sewn-up duodenal ulcers collected by him. Of equal value as illustrating the increasing alertness of the surgeon is the fact that prior to 1895, in the twenty-eight cases reported up to that time in which laparotomy was done for duodenal perforation, in fifteen, or seventy-five per cent., the ulcer was not found; in five, or twenty-five per cent., it was found and sutured. In only two cases, or ten per cent., was the possibility of a duodenal perforation considered. Contrast this with the thirty-one cases operated on since 1895, when the analogous surgery of gastric ulcer began to be developed. Of these thirty-one cases the perforation was not found in only eleven per cent. It was found and sutured in twenty cases, or sixty-five per cent. Its presence was considered in diagnosis in eleven cases, or thirty-five per cent.

Another indication showing the advance in our surgical art since attention has been directed to this lesion is the circumstance that it has been possible in thirteen of the more recent instances either to arrive at a correct pre-operative diagnosis, or to make the alternative diagnosis varying between a duodenal and a gastric perforation. The difficulties that have been experienced are succinctly shown in the following statement:

Diagnosis wrong; ulcer not found:

Diagnosis as acute peritonitis	8 times.
" " appendicitis	15 "
" " intestinal obstruction or appendicitis	1 time.
" " strangulated hernia	1 "
" " hydronephrosis	1 "
	26

Diagnosis wrong; ulcer found:

Diagnosis as acute peritonitis	5 times.
" " intestinal obstruction	4 "
" " appendicitis	3 "
	12

Diagnosis right or approximately so; ulcer found:

Diagnosis as duodenal ulcer	5 times.
" " gastric or duodenal ulcer	6 "
" " appendicitis or duodenal ulcer	2 "
	13

Treatment.—For the treatment of a duodenal ulcer the medical means applicable to the management of a gastric ulcer also hold good. It is but seldom that surgical aid is called for before perforation has occurred, but the cases reported by Codevilla[1] are of much surgical interest and instruction. This surgeon, for the relief of symptoms that fairly well pointed to an intractable duodenal ulceration, resorted to a gastroenterostomy in two cases, with a cure as the result of his intervention.[2] In some cases of perforation the shock and progress of the infection are so rapid as to bring about death in a few hours. Stevens[3] quotes a case in which a fatal issue occurred within twenty-one hours after the first symptom (sudden pain) had shown itself.

When the diagnosis has happily been narrowed down to a perforation of either the stomach, duodenum, or gall bladder, the incision to be advised is in or along the edge of the rectus muscle four to six inches in length and starting rather low down on the abdominal wall, so as not to reach much above the liver edge but to extend far enough downward to get easily below the transverse colon, which might be necessary. Supplementing this incision in its upper third another transverse one in the skin to the left or toward the median line is advisable. This will permit the cross-division of the fascia covering the right rectus muscle, which latter is in turn to be pulled to the left, when its posterior sheath with the peritoneum is also to be divided. This gives a satisfactory and largely increased exposure of the parts beneath, and the subsequent suture of the upper and lower sheath of the rectus with the full replacement of the muscle adequately restores the integrity of the abdominal wall. This incision I have made many times in operations on the gall bladder, and similarly in numerous instances of suppurating appendicitis when increased space is necessary.[4]

If gas or food material escapes when the abdomen is opened, the surgeon's action is rendered more certain, and by a rapid and thorough inspection, after wiping away any obscuring fluid, of the gall bladder, duodenum, and the anterior walls of the stomach, the perforation can be disclosed. If nothing is visible in these regions, the examination of the posterior gastric wall can be accomplished by either tearing through the gastro-colic omentum, or by turning up the omentum and large bowel and entering the lesser omental cavity through the mesentery as in posterior gastro-enterostomy. From the lower end of this wound, which is large enough to admit the hand, the appendical region can be explored in many instances if it should be necessary, though probably if this should be involved a separate incision might be more suitable. If a duodenal perforation exists, it will generally be found on the anterior wall of the duodenum as a small round opening, rarely beyond one-quarter of an inch in diameter, with comparatively thin edges and rarely adherent to any adjacent intestine. Gas or fluids have frequently been seen passing from the opening, and occasionally bile, which latter may also stain the peritoneal extravasation. Mayo has suggested that an acid reaction of the peritoneal effusion might help in suggesting, prior to its discovery, a gastric or duodenal opening, but as the inflammatory effusion rapidly neutralizes the stomach acidity, this will seldom be of help.

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[1] Weir and Foote: Medical News, April 25, 1896.

[2] Mayo: *Loc. cit.*

[3] One case (No. 31), however, recovered after a delay of two hundred and sixteen hours, but here the perforation had formed a chronic abscess and sinus.

[1] Codevilla: See Pagenstecher, *loc. cit.*

[2] Berg and Roux also each report a case in which for a duodenal ulcer with adhesions or pyloric stenosis a similar operation was done with success.

[3] Glasgow Medical Journal, vol. li., p. 87, 1897.

[4] Weir. Medical News, February 17, 1900. "On an Improved Method of Operating for Acute Suppurating Appendicitis," Medical News, March, 1899.

Since several of the collected cases have shown in the abdominal extravasation the presence of recognizable medicines, such as castor oil, etc., given erroneously to move the bowels, it may be considered worth while to utilize this fact, and to give, prior to the operation, a certain amount of methyl blue or other innocuous colored solution to aid in the detection of the opening. When found, the perforation should be closed by a double or triple row of interrupted silk sutures. No attempt should be made, in my judgment, to excise the ulcer before suturing. This takes too much time, and the results in the collected operations show that in seven out of nine of the successful cases suturing alone was relied upon. In one only were excision and suturing employed, and in one other case the ulcer was closed over by suturing over it the duodenum, colon, and stomach. This experience is confirmed in the large number of gastric perforations that have been treated up to date.

The suggestions given by Pagenstecher in the conduction of this operation are worthy of remembrance. They are, that the fundus of the gall bladder, when distended, lies in front of the duodenum. By raising up the transverse colon, which rests somewhat in front of and below the horizontal part of the duodenum, and by drawing it forward, this portion of the intestine is immediately revealed. Crowding the stomach and pylorus to the left and a little downward, with lifting up the liver and pushing the colon down, a good view of the locality of a perforation is obtained.

The closure of the perforated intestine, however, leaves much of the battle for life unfinished. The proper and systematic cleansing of the peritoneum is of the utmost importance. If the extravasation is limited, careful wiping out of the affected portion of the peritoneal cavity, with especial attention to the retro-gastric and supra-hepatic spaces and to the splenic and renal region, with ample gauze drainage, will in most cases suffice better than the large warm irrigations of sterilized salt solutions, which are, I think, more suitable in extensive or general peritoneal inflammations.

For those who favor multiple incisions and large irrigations the specific directions of Lennander[1] are of value. He considers, in suitable cases and in patients of sufficient vitality, that irrigation with water at 40° C. (104° F.) through several incisions, is the best method of cleansing the peritoneal cavity. One must go carefully and methodically about the solar plexus and the diaphragm; methodically loosening adhesions, irrigating, and then wiping clean with wrung-out gauze. He begins with the upper surface of the liver, particularly on both sides of the suspensory ligament; then passes between the liver and stomach to the triangular ligament, then around the cardiac portion; then between the stomach and spleen, then under the diaphragm to the left kidney, and along the spleen to the phreno-colic ligament. The division of the triangular ligament with a thermocautery has been suggested, so that one might sweep around the left lobe on both sides. He then cleans between the right kidney and the liver, kidney and colon, colon and liver; next the lumbar regions and both iliac fossæ; then both sides of the mesentery of the small intestine, and last the pelvis, which is often infected at the beginning of the trouble. A great quantity of hot fluid is of undoubted benefit in the pelvis.

Drains and tampons are intended to remove accumulating fluids as well as to shut off infected areas. Tubes surrounded by gauze are the best drains. He places sterile gauze on both sides of the suspensory ligament of the liver and between the liver and diaphragm. Drains should be placed in both lumbar regions, the left passing alongside of (better through) the phreno-colic ligament external to the spleen to the middle of the diaphragm. The right one passes to the duodenum. The pelvis of men is drained above the symphysis pubis, that of women through the vagina.

My own experience in the surgical treatment of duodenal perforation is confined to one case, which is briefly as follows:

Perforation of Duodenal Ulcer; Laparotomy; Suture; Death.—A man, aged thirty years, who had previously symptoms, confusedly detailed, of gastric disturbance but not of hæmatemesis, for several months, was seized four days previously with severe epigastric pain, chill, fever, repeated vomiting, and great prostration. No blood was expectorated or dejected. His abdomen rapidly swelled and became generally tender and painful. On his entrance into the New York Hospital, April 30, 1899, nothing could be made out by palpation save that the liver dulness was nearly obliterated. The abdomen was very tympanitic, and no special point of tenderness or dulness was observed. He also had a double hernia. On the right side there was a protrusion of intestine beyond the external ring. The pulse was 140; temperature, 104° F. The diagnosis of a general peritonitis from a gastric or duodenal perforating ulcer was made. A large median incision was made with the umbilicus in the centre for general exploration. The fingers showed nothing at the rings or at the cæcum, and then on carrying the examination upward a minute, sharply defined perforation, one-quarter of an inch in diameter, was found on the anterior wall of the duodenum near the pylorus, out of which was oozing some brandy and water given just before chloroformization. This was sutured with a double row of Lembert sutures, and the peritoneal cavity systematically and carefully washed out with sterile salt solution. He was returned to the ward in bad condition. Salt transfusion, 75 oz., etc., was made, but the patient succumbed shortly after the operation. The autopsy showed the perforation to be in the duodenum just below the pyloric termination and in its superior anterior wall. Within the bowel was a deep ulcer at the bottom of which had occurred the perforation.

Later Effects of Duodenal Ulcer and Operation for Same.—There yet remain a few words to be said about the late consequences of a healed duodenal ulcer. The resulting cicatricial contraction may bring about stricture of the duodenum and dilatation of the stomach, and may by traction or primary ulceration damage the bile entrance to the intestine. Several interesting surgical cases have been reported in which relief has been afforded by such circumstances. Pagenstecher quotes a case by Lange[1] in which a gastro-enterostomy was successfully resorted to for contraction of the duodenum to the hardness and size of the finger, 3 cm. from the pylorus, with dilatation above of the duodenum and stomach.

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[1] Pagenstecher *Op. cit.*

Codevilla[2] details a more acute case with ulcer and stenosis of the duodenum and dilatation of the stomach. The duodenum was found at the operation markedly stenosed as in Lange's case, and a gastro-enterostomy was performed with a successful and permanently good result.

Carle[3] had a similar case in the front part of the duodenum, but the gastro-enterostomy resorted to ended fatally. He also reported another instance in which great emaciation and stomach dilatation demanded surgical interference. The first and second parts of the duodenum were found strongly contracted but with atrophic thin walls. Gastro-enterostomy was employed with success; death occurred one year later from lung tuberculosis.

Rewidzow[4] also cites a case which is doubtfully placed among these, as the locality of the stenosis following bloody vomiting and gastric disorder for twenty years was shown at the operation to be below the bile papilla, where a stenosis existed. For this a gastro-enterostomy was successfully resorted to.

Operations for Duodenal Perforations.—The following list embraces all the reported cases of perforation of the duodenum that have undergone operation up to April, 1900, and which have been carefully investigated and epitomized by Dr. E. M. Foote, to whom I am much indebted for this and other help in the preparation of this article.

No. 1. Male, aged thirty-five. A heavy drinker; no history of indigestion. For a week or so loss of appetite and indefinite epigastric pain, then sudden acute pain while at work, followed by vomiting. Two days later brought to hospital in collapse. Abdomen distended, dulness in right flank; pulse rapid and feeble; temperature, 98.8° F. Laparotomy at end of two days. Acute peritonitis, cause not discovered. Death in a few hours. Autopsy showed perforation of anterior wall of duodenum close to pylorus.[5]

No. 2. Male, aged thirty-one. Acute attack like intestinal obstruction. Diagnosis, appendicitis and general peritonitis. Operation third day. Appendix normal, general peritonitis, perforation not found. Death in a few hours.[6]

No. 3. Male, aged twenty-nine. History of abdominal colic. While in usual good health he was seized at 5 P.M. with sudden pain, followed by bilious vomiting. Some lumps of fæces and gas passed that evening, but absolute constipation followed. Next day a purgative only increased the vomiting and pain. He entered hospital on the third day, with fecaloid vomiting. On the fourth day great distention, tenderness, and pain at its maximum in right hypochondrium; pulse, 120, small, dulness in both flanks. Diagnosis, perforative peritonitis. Operation in about ninety hours; general peritonitis. The hand, thrust under the liver, broke into a cavity containing two quarts of serous liquid. The intestine was searched in vain for mechanical obstruction, and on account of weakness of the patient the operation was terminated. Death same evening. Autopsy showed a perforation "near the end of the second portion of the duodenum, externally."[7]

No. 4. Male, aged twenty-eight years, always well. While drinking tea, he had a violent pain in the left side of the abdomen. Next day, a tumor to the right of umbilicus, sour vomit, later becoming fecal; tympanites; constipation, no blood. Third day, temperature normal, pulse about 130. Operation in eighty hours (about). Incision to left of umbilicus gave vent to gas and pus, intestine sound, greatly distended; incision of intestine; suture of collapse; drainage. Death in seven hours. Autopsy showed perforation in anterior wall of duodenum; purulent peritonitis.[1]

No. 5. Male, aged forty-one years, of good previous health except slight indigestion. One year before perforation, had an attack of abdominal pain with constipation. While at work he was seized with violent pain; gastric vomiting, later becoming fecal; no blood; absolute constipation. In tympanitic stage when first seen by reporter. Respiration, thoracic; pulse, 120; temperature, 99.2° F. Diagnosis, septic peritonitis. Operation, May, 1891. Usual incision; cavity searched, no cause for suppurative peritonitis found, irrigated, drained. Death in ten hours. Autopsy showed perforation in posterior wall of duodenum, one inch below pylorus, freely communicating into peritoneal cavity when intestines were lifted.[2]

No. 6. Female, aged twenty, servant. Of constipated habit, otherwise health good. Bowels moved by salts two days before the attack. A sudden attack of pain occurred in the right hypochondrium, passing then to left side, and afterward becoming general. Vomiting of sour fluid began twelve hours after the attack of pain, and continued. There was tympanites without loss of hepatic dulness. Diagnosis of general peritonitis, cause unknown. Operation in twenty-four hours. A median incision below the umbilicus allowed the escape of inoffensive fluid. A second incision above the umbilicus disclosed the perforation one-quarter of an inch in diameter, in the posterior aspect of the duodenum, close to the pylorus. Milk was escaping through it. The ulcer was excised and sutured, the abdomen flushed. Death in six hours. General peritonitis.[3]

No. 7. Male, aged twenty-one, always in good health. Sudden pain in the lower abdomen, followed by vomiting and collapse. After eighteen hours laparotomy gave exit to much brownish, acid, non-feculent fluid. There was adhesive peritonitis. The cause of peritonitis was not found. Death in a few hours. Autopsy showed a perforation in the anterior wall of the duodenum, about five inches from the pylorus, and about five inches in diameter; a second non-perforating ulcer of the posterior duodenal wall.[4]

No. 8. Male, aged fifty-six. Brought to the hospital in a condition of tympanites, and having a right inguinal hernia. Laparotomy was done. The hernia was explored and found to be in good condition, and the incision was prolonged upward seven inches, giving vent to purulent and fecal fluid. No cause for the peritonitis was found about the cæcum or elsewhere. Death in a few hours. On the anterior surface of the duodenum, 0.5 inch from the pylorus, was a perforated ulcer, 0.5 x 0.7 inch. It could easily have been sutured.[5]

No. 9. Male, aged twenty-eight. Of good health until two months before perforation; he did not feel quite himself, but there were no localized symptoms. While ascending an omnibus, he felt a sudden pain in the abdomen; nausea and vomiting after an emetic had been given; constipation for four days, then a little fecal matter and flatus, after an enema. On the seventh day entered hospital; abdomen distended; general tenderness; respiration, 28, thoracic; pulse, 104; temperature, 99.8° F. Questioned with reference to duodenal ulcer, could not localize first pain; never any blood by mouth or in stools; only slight history of indigestion. No evidence of trouble in upper part of abdomen. Diagnosis, septic peritonitis with pus in pelvis. Operation in one hundred and fifty hours (about); subumbilical incision; two pints of pus were taken from pelvis; appendix, cæcum, and small intestine sound; higher search was abandoned as there was less peritonitis in that direction; irrigation, drainage, suture. Death in fifty-four hours. Autopsy showed septic peritonitis in pelvis, and also about duodenum, these areas being separated by a middle zone, relatively free from peritonitis; perforation, 0.5 inch in diameter, 0.7 inch from the pylorus, in the upper wall of the duodenum.[1]

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[1] Pagenstecher: *Op. cit.*

[2] *Loc. cit.*

[3] Pagenstecher: *Op. cit.*

[4] Pagenstecher. *Loc. cit.*

[5] Mackenzie (Jones, operator). Lancet, 1888, vol. ii., p. 1,060.

[6] Mackenzie (Croft, operator) Lancet, 1888, vol. ii. p. 1,060.

[7] Boiffin: Cong. fr. de Chir., 1892, p. 210.

[1] Lockwood: Med. Soc. Transactions, 1892, vol. xv., p. 91.

[2] Lockwood: *Ibid.*

[3] Gould: Middlesex Hosp. Reports, 1893, p. 168.

[4] Perry and Shaw: Guy's Hospital Report, 1893, vol. i., p. 261.

[5] Lockwood: Lancet, 1894, vol. ii., p. 964.

No. 10. Male, aged sixty-one, with a long history of gastric ulcer, with epigastric pain and vomiting, never of blood. Sudden pain occurred in right hypochondrium, with collapse. Diagnosis, perforation of gastric ulcer. Operation in four hours fifteen minutes. Perforation in duodenum, anterior wall, 0.7 inch from pylorus, sutured; thorough washing, drainage. Death in six days. Autopsy showed suture tight; a second ulcer in the back of the duodenum, non-perforating; purulent fluid behind liver and in pelvis.[2]

No. 11. Male, aged twenty-eight, in good health. One hour after a movement of the bowels, while lifting a barrel from a dray, felt a sudden pain across the abdomen like a knife; vomiting immediately began and continued. .Third day fecal vomiting occurred; pain especially on right side; pulse, rapid; temperature, 100.6° F.; respiration, rapid; cold sweat. Diagnosis, intestinal obstruction. Operation in sixty-two hours. Subumbilical incision gave vent to a large amount of sero-pus with a fecal odor; cæcum, appendix, hernial openings, and intestine in pelvis examined; incision prolonged upward; perforation as "big as a florin," in anterior wall of duodenum, one inch from pylorus, pared and closed with six or eight Lembert stitches. Area covered by omentum; irrigation; drainage in pelvis. Death in three hours. No autopsy.[3]

No. 12. Female, aged twenty-seven. For a fortnight had epigastric pain, and constipation for seven or eight days; treated for indigestion. Sudden pain in epigastrium and collapse; vomiting frequently repeated. Thirty hours later, slight tympanites; abdomen uniformly tender; pain most marked in epigastrium; vomiting; respiration rapid and irregular; pulse, 120; temperature, 100.6° F.; diagnosis, general peritonitis from mechanical obstruction. Operation in thirty hours (about). Subumbilical incision gave vent to fluid and fibrin; intestinal coils were congested; no lesion found; incision prolonged upward; gas noticed near gall bladder; perforation of duodenum 0.7 inch from pylorus; surrounding induration incised; suture; irrigation; sponging; no drainage. Nothing was taken by mouth for seventeen days. Recovery occurred. Two months later symptoms of obstruction were shown; operation on third day; adhesions which obstructed the ileum a short distance above the cæcum were freed. Death took place from perforation of the wall of the ileum just above the obstruction. The suture of the duodenum was smooth and thin.[4]

No. 13. Male, aged thirty-five, of alcoholic habit. Upon going to work he was attacked by sudden abdominal pain and vomiting; pain and nausea continued, though vomiting ceased. Thirty hours later the patient lay with hollow eyes, alternately extending and drawing up his legs as paroxysms of pain came on. Nothing had passed by anus. There was tympanites except for dulness in the right iliac region, where pressure was painful. No tumor could be made out. Temperature, 37.9° C. (100° F.); pulse, 104 and small. Operation by Brissaud, fifty-one hours after the attack, December 14, 1893. An incision was made over the appendix, giving vent to a great quantity of fecal matter. The appendix was not seen; drainage. Death in a few hours. Autopsy showed general peritonitis, and a fusiform collection of pus from the liver to the right iliac region. There was perforation of an ulcer in the anterior wall of the duodenum, just below the pylorus.[1]

No. 14. Male. After a debauch the patient was attacked with a sharp pain in the right side of the abdomen. Forty-eight hours later there was general tympanites, dulness over a tumor in the right iliac region, and collapse. Operation in fifty-three hours as for appendicitis; from the incision pus and milky fluid escaped in large amounts. Irrigation and drainage; death. Autopsy showed a perforated duodenal ulcer, the sac about the cæcum containing much of the milk and food which had been taken during illness.[2]

No. 15. Male, aged twenty. Slight indigestion. While at the theatre a sudden attack of severe pain occurred in the epigastrium with tenderness; no vomiting; passage of flatus; slight tympanites. Temperature, 96° F.; pulse, 100. On the second day greenish vomiting, becoming fecaloid; obstipation; rapidly increasing tympanites; tenderness in the cæcal region. Diagnosis of appendicitis. Operation in about sixty hours. Gas without odor; thin, purulent fluid, and lymph in peritoneal cavity. Perforation not found; intestines washed; abdomen closed. Death in twenty-four hours. Perforation was in anterior aspect of first portion of duodenum.[3]

No. 16. Male, aged twenty-three. Had an attack of sudden pain, vomiting, and obstipation three years previous; an acute attack of pain and vomiting lasting five days. There were two movements of the bowels in this period. When seen on the sixth day, there were marked tympanites and a very rapid pulse, not much tenderness, and pain in the cæcal region. Diagnosis of appendicitis. An incision about one hundred and five hours after attack allowed odorless gas and thin pus to escape. The intestinal coils were covered with lymph, and greatly distended. An incision into the jejunum permitted several pints of fluid to escape. Perforation was not found. Abdomen was washed and drained. Death in twenty-two hours. Autopsy: There was a small perforation of the anterior wall of the duodenum, one-half an inch below the pylorus. At the same distance, there was in the posterior wall the scar of a healed ulcer.[4]

No. 17. Male, aged twenty-eight, hard drinker. Had sudden abdominal pain accompanied by vomiting. Two days later admitted to hospital with general abdominal distention and tenderness, but no loss of liver dulness. Temperature, 103° F.; respiration, 20; pulse, 120. On the third day a liberal median incision revealed a general peritonitis, with a small amount of fluid; cause not found. Rapid irrigation and drainage. Death three days after operation. Autopsy showed a sharply defined ulcer in the third part of the duodenum, in its posterior wall. The ulcer had for its base the pancreas, whose tissues were necrotic and infiltrated with pus. The suppuration had extended as far as the jejunum, and had there entered the general peritoneal cavity.[5]

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[1] Lockwood: Lancet, 1894, vol. ii., p. 968.

[2] *Ibid.*

[3] Eve: Lancet, 1894, vol. ii., p. 1891.

[4] Dean: Med. Soc. Trans., vol. 17, p. 305, 1894.

[1] Collin: "L'ulcère simple du duodenum." Thèse de Paris.

[2] Bryant: MEDICAL RECORD, 1895, vol. xlvii., p. 25.

[3] Shield: Lancet, 1895, vol. i., p. 1,170.

[4] Shield: *Ibid.*

[5] Bolton: MEDICAL RECORD, 1900, vol. lvii., p 494.

No. 18. Male, aged thirty-five, a hard drinker, with history of a similar attack thirteen years previous. For a few days there was a severe abdominal pain accompanied by vomiting. Was admitted to the hospital with very great general tenderness, no distention, and a temperature of 102° F. The symptoms improved until the fourth day after admission, and then signs of a rapidly spreading peritonitis were manifest. Diagnosis, appendicitis. Incision made on the fourth day over the appendix showed that organ to be normal. General peritonitis was present and a large quantity of odorless fluid was in the abdomen. Drainage. Death in a few hours. Autopsy showed a perforation in the superior wall of the first portion of the duodenum just beyond the pylorus. The gut was adherent to the liver by recent fibrin. There was also the scar of an old healed ulcer.[1]

No. 19. Male, aged fifty-six. Had a long history of gastritis and of diarrhœa which was sometimes bloody. Acute attack of pain, four hours after dinner; constant vomiting; collapse. The usual lavage failed to give relief and the water did not return readily. Morphine administered; passage of gas per anum. The next day symptoms disappeared, then returned with vigor. Stool after enema. The second day there was again a remission and again a relapse toward night. Dulness and pain were most marked in the right iliac fossa. Pulse, 112; temperature, 38.2° C. The third day there was still iliac tumefaction; marked sepsis; pulse, 160. Operation sixty-six hours after attack. Incision over appendix, which was thought to be the origin of the disease, allowed the escape of three pints of reddish purulent fluid with fibrin masses. The peritonitis appeared limited, and it was judged best not to break up the adhesions to find the perforation. Douche and drainage. Death nine hours after operation. Autopsy showed an ulcer just below the pylorus, occupying two-thirds of the circumference of the duodenum, the anterior wall not being involved. The perforation was on the postero-external surface.[2]

No. 20. Male, aged thirty-three. No previous gastric trouble. Sudden colicky pain in right hypochondrium; collapse; no defecation nor passage of wind. Following day, tympanites; liver dulness absent; temperature, 100° F.; pulse, 122; respiration, 38. Operation in twenty-five hours. Incision was made in median line; purulo-fibrinous peritonitis; gas and fluid from duodenal region; perforation sutured by two rows of stitches; intestines cleaned by moist gauze; no drainage. Recovery after bronchitis; primary union of wound. Patient was seen four years later, in good health.[3]

No. 21. Male, aged thirty-five, a hard drinker. Had sudden severe abdominal pain, without vomiting. Admitted to the hospital eight hours later with a tense abdominal wall, and tenderness over the gall bladder. The pulse was 90, and there was no fever. Later the temperature rose, and distention with obliteration of the liver dulness developed. Diagnosis, appendicitis. Operation in twenty hours. Incision made over appendix, which was normal. A well-marked general peritonitis was present, but the patient's condition prevented further search. Death in twenty-four hours. Autopsy showed a perforation of the duodenum in the posterior wall, one and one-quarter inches from the pylorus, and a second non-perforating ulcer lower down.[4]

No. 22. Male, aged fifty-two. Had an attack of acute pain in epigastrium with obstipation and tympanites, six years previous. Recovery in six weeks. Had more or less pain since. Acute attack of severe pain about pylorus, later extending downward and backward. Absolute obstipation; tympanites slight on second day and increasing, on third day vomiting of moderate character; temperature, 100°–100.5° F. Diagnosis of appendicitis. Operation on fourth day. Intestines were distended and covered with lymph; no pus. Perforation of duodenum into general peritoneal cavity was found and closed; cavity douched with hot water: gauze drain. Thirst and brownish vomiting; rapidly rising temperature. Death on third day after operation. No autopsy.[1]

No. 23. Male. Had sudden epigastric pain while at work, followed by vomiting, tympanites, and loss of liver dulness. Operation in about thirty hours. Perforation in anterior wall of first portion was found and sutured. Gas and yellowish fluid in peritoneal cavity. Flushing with hot water; drainage for twenty-four hours. During convalescence return of symptoms necessitated a second laparotomy. Only adhesions of liver to diaphragm were found. A needle thrust through eighth intercostal space into these drew a drop of pus. A mural abscess formed later which probably caused the above recurrence of symptoms. Recovery.[2]

No. 24. Male, aged fifty, who for ten or fifteen years had pain after meals, with vomiting and bloody stools; last hemorrhage seven months before entrance to hospital. Emaciated and anæmic on entrance; stools were black. Diagnosis of ulcus ventriculi. Two days later sudden pain in right hypochondrium, with retracted abdomen. Temperature, 100° F.; pulse rate normal. The signs of peritonitis with feelings of distention increasing, laparotomy was performed, twelve hours after the attack. A long incision was made above umbilicus with cross-cut to the left and right; stomach and duodenum were examined and fluid like coffee-grounds was squeezed from its posterior region by pressure, but no perforation could be made out. Duodenum, stomach, and colon were sutured together to protect the general peritoneal cavity. Cavity was irrigated and wiped, and drained at epigastrium and through pelvis. Recovery. Six months later he was in good condition, as far as duodenal ulcer went; still had chronic gastritis. Death in eight months from operation for suppurative peritonitis. Autopsy showed a new perforation in the posterior wall at the beginning of the second portion of the duodenum.[3]

No. 25. Male, aged twenty-four years, with no gastric trouble. After a large dinner he felt indisposed for a few minutes. The next morning he rose at six in usual good health and ate his customary breakfast. At the last mouthful of a glass of white wine, he felt a sudden most severe pain and lay down in bed. There was vomiting of food, and afterward incessant vomiting of bile. He described the pain as "not like a general colic, but always in one point here," indicating a spot on the left, midway between the umbilicus and ensiform cartilage. A physician diagnosed volvulus, and tried by enemata and massage to relieve the pain. In five hours vomiting ceased and the pain subsided somewhat and was referred to the lower abdomen. No fecal matter or gas passed the anus. There was no tympanites nor difficulty in passing water. Sixteen hours after the attack he was admitted to the hospital. The abdomen was retracted and board-like; the pain was less and vomiting had ceased. There was costal respiration, and the appearance of the face indicated severe abdominal trouble; the nose was pinched, the eyes were sunken, the hands clammy, and the patient was in a half stupor. Diagnosis was thought to lie between appendicitis and duodenal perforation. Nineteen hours after the attack an incision was made in the median line from the pubis to above the umbilicus. The abdomen contained non-feculent fluid, and there were light adhesions on the intestinal coils. Appendix was normal; no intestinal lesion; pelvis normal. Incision was prolonged upward and stomach searched; gas was found escaping from under liver, and perforation near pylorus on anterior surface of duodenum sutured. Abdomen was wiped and drained from site of duodenum. Several saline injections were given, amounting to 4,200 c.c. in all. Death in twenty hours from peritonitis; suture tight.[1]

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[1] Bolton: *Ibid.*

[2] Festal: Jour. de Méd. de Bordeaux, 1895, vol. xxv., p. 49.

[3] Herczel, 1895, quoted by Pagenstecher: Deut. Zeit. f. Chir., 1899, vol. liii. p. 557.

[4] Bolton: *Loc. cit.* Also in previous article on perforating ulcer by Weir and Foote, Medical News, 1896

[1] Warren Boston Med. and Surg. Journal, 1896, vol. cxxxiv., p. 460.

[2] Dunn: Brit. Med. Journal, 1896, vol. i., p. 846.

[3] Landerer and Glucksman: Mitt. aus d. Grenzgebiet. d. Med. und Chir., 1896, vol. i., pp. 168 and 738.

No. 26. Male, aged twenty-six; health perfect, never had any gastric symptoms. Two hours after his usual light breakfast, while making a slight effort to open a sack, the patient experienced an intense pain in the left side of his abdomen. He was taken almost at once to a hospital. Diagnosis of appendicitis; treatment by ice and opium. Following day had a feeble pulse, without fever; abdomen distending; tenderness in left iliac fossa. On second day vomiting set in, becoming bloody and bilious. About fifty-six hours after the attack, Sebileau made an incision as for appendicitis, permitting the escape of non-feculent fluid, like bouillon. The appendix was normal. The patient was already collapsed, and nothing further was done, except to drain with gauze and give a saline injection. Death took place after incessant vomiting in thirty hours. Autopsy: The abdomen contained fluid. There was general peritonitis; perforation in the anterior wall of the duodenum, 1 cm. from the pylorus.[2]

No. 27. Male. An attack of sudden pain like lead colic. Incision from the ensiform downward. There was food under the liver, and a perforation was found in the first part of the duodenum, and sutured. Death in twelve hours.[3]

No. 28. Male, policeman, of alcoholic habit and history of gastric attack. While on duty the patient had a sudden attack of pain which made him writhe in agony. His bowels had moved a short time before. When seen soon after, the abdomen was retracted, as hard as a board, excessively tender, especially under the ribs and in the right flank. Diagnosis of hepatic colic. Compresses were applied and morphine administered. The following day he felt better. An injection resulted in a large stool. Milk and Vichy were administered. There was no fever, nor much pain, but the abdomen was still retracted. Thirty hours after the attack vomiting set in, soon becoming bilious. The abdomen swelled and the patient was taken to a hospital. Diagnosis, appendicitis, intestinal obstruction, or volvulus. Abdomen was opened forty-eight hours after the attack; nothing but general peritonitis discovered. Dieulafoy, operator. Death occurred in one hour. Autopsy showed a perforation of the duodenum in the anterior wall just below the pylorus.[4]

No. 29. Female, aged twenty-five, servant, giving a history of gastric trouble with vomiting, but never of blood. An increase of gastric pain, with general tenderness and abdominal swelling, was followed four days later by marked distention. Palpation showed the greatest tenderness to be in the cæcal region. There was no fever. A needle thrust into the right iliac fossa brought out gas, and an odorless fluid containing flakes of fibrin. An incision was made over the appendix, which was congested. There was general peritonitis. Death occurred in four days from the operation. Autopsy showed pus in the pelvis and about the duodenum, in the lower wall of which, close to the pylorus, there was a perforating ulcer. A second ulcer was situated in the posterior wall.[1]

No. 30. Female, aged thirty-four years, servant, with a history of gastric troubles for twenty years, with frequent vomiting of blood; last attack was one week before admission to the hospital, the vomiting being followed by bloody stools. Pulse, 84, regular, strong; rectal temperature, 98.6° F. Maximum pain was midway between ensiform and umbilicus to the right of the median line. Ice-bag applied on abdomen; nothing but ice given by mouth. Next day pain involved the whole right side; was relieved by morphine, but recurred with vomiting. A small pulse of 106, and cold sweat. More morphine was given. Two hours later the pulse was 130; there was tenderness all over the abdomen, with œdema in the epigastrium. Diagnosis, gastric ulcer. Laparotomy two days after admission to the hospital (thought by the operator to be "at least fifteen hours after perforation"), through the left rectus above the umbilicus; gas and fluid escaped; no adhesions; general peritonitis. Perforation at pylorus, thought to be in the lesser curvature, was sutured. Abundant irrigation; gauze drainage; 700 c.c. saline solution injected. Death twenty-four hours after operation. Autopsy showed perforation in the superior wall of the duodenum near the pylorus. The suture was perfect.[2]

No. 31. Female, aged fifty-four years, with history of indigestion; no bloody vomiting. A sudden attack of pain and vomiting, not of blood, followed by a large bloody stool and several small ones of a tarry character, was succeeded eighteen days later by a second attack. There were tenderness and resistance to the right of the median line above the umbilicus; no fever. Laxatives and enemata relieved the abdomen of gas and fecal matter, and the area of resistance became a well-defined tumor. Nine days after the last attack an incision was made through the right rectus muscle, and in separating the abdominal wall from the viscera several small abscesses were opened, and through one of these gas and gastric contents escaped. Perforation was readily found and closed. It was at the pylorus and thought to be in the stomach. The gall bladder was opened and eight stones were removed. Most of the omentum was excised. Iodoform-gauze drains were inserted. Death took place in five weeks. Autopsy showed that the abdominal condition was perfect. Death was due to pulmonary thrombosis, infarction from saphenous thrombosis. The sutured ulcer had healed. Two others in the duodenum had not perforated.[3]

No. 32. Male, aged thirty-seven, shoemaker, with nausea and vomiting and indigestion more or less for years. One morning he awoke feeling perfectly well. On sitting up in bed he was seized by a terrible pain in the umbilicus and to the right side, lasting several hours and followed by vomiting. Enemata resulted in several small stools. The next day he was taken twenty-five miles in a sleigh to the hospital, where he arrived with respiration 26; pulse, 140; temperature, 102.5° F., but free from pain while at rest; tenderness in left iliac fossa and in the right hypochondrium, and over right rectus muscle. Stomach and bowels were washed out. Diagnosis of duodenal ulcer or appendicitis. Sixty hours after the attack an incision was made in the median line, mostly below the umbilicus. Fluid and gas and fibrin escaping mostly from above, the cut was extended upward and the right rectus was cut across. A perforation into which the index finger passed was found in the anterior superior wall of the duodenum near the pylorus. It was sutured and the cavity washed out with water at a temperature of about 45° C., wiped out, and drained in both loins as well as about duodenum and liver. Compresses wrung out of hot saline solution were placed in the wound, which was left open. The pulse and temperature gradually rose, and in spite of 1,150 c.c. of salt solution injected into a vein, the patient died in twenty-six hours after operation. Autopsy showed fibrous peritonitis without fluid. The suture was firm. There was an abscess between the stomach and colon.[1]

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[1] Banzet and Lardennois: Bull. Soc. Anat. Paris, 1897, vol. lxxii., p. 479.

[2] Lardennois: Bull. Soc. Anat. Paris, 1897, vol. lxxii., p. 46.

[3] Soligeux: Bull. Soc. Anat. Paris, 1897, vol. lxxii., p. 72.

[4] Beausse: Jour. de Méd. de Paris, 1897, vol. ix., p. 146.

[1] Lennander: Mitt. aus d. Grenzgeb. d. Med. und Chir., 1898, vol. iv., p. 91.

[2] Lennander: *Ibid.*

[3] Lennander: *Ibid.*

No. 33. Male, aged forty-six. While lifting a heavy weight, he felt something snap, and immediately afterward there was intense pain (locality not given), which soon spread to the whole abdomen. Four days later he entered the hospital, not having passed gas or fecal matter per anum. There was no localized pain, but pressure was everywhere painful; no tumor or fluctuation. The patient had not vomited but had a hiccough. Pulse, irregular, 110; temperature, 99° F. A diagnosis of intestinal obstruction was made, and castor oil was given in small doses every hour. The next day there was great prostration, with choreic movements. Five days after the attack the abdomen was opened by a median incision from pubis to ensiform cartilage, with a cross-cut through the right rectus muscle. There was a general peritonitis with pus and membranes all over, but especially in the pelvis. At the pylorus on the superior surface was a large perforation which was sewed with difficulty, and the abdomen was flushed and closed. Death occurred two hours after the operation.[2]

No. 34. Female, aged thirty, with a history of indigestion and some epigastric pains. While eating breakfast she was seized with terrible pain in the epigastrium and left the restaurant for a seat in the park close by. She was taken at once to a hospital. In six hours the pain was general and vomiting set in. The following morning she was worse, without stools or passage of gas, and scanty urine. The condition grew rapidly worse, with rapid pulse, subnormal temperature, tympanites, and loss of liver dulness. A diagnosis of perforation, probably of the stomach, was followed by operation, twenty-eight hours after the attack. Incision above the umbilicus gave escape to gas and a quart of bile and purulent fluid. Stomach and biliary tract were normal, and perforation was found in the right side of the second portion of the duodenum. Opening was sutured and abdomen closed over a rubber drain to duodenum. Death in fourteen hours. Autopsy showed perforation a little below and to the right of the opening of the common duct, which explained why the bile flowed so freely into the abdomen. The closure was perfect. There was a second ulcer a little below the first which had not perforated.[3]

No. 35. Male, aged twenty-three, a soldier with history of numerous sprees before he entered the army. During a march he took a cup of coffee, and almost immediately he was overcome by pain in the epigastrium and right hypochondrium, streaming into the right shoulder. He was nauseated but did not vomit. There were tenderness and muscular contraction on pressure, especially on the right side. An enema produced a normal dejection. The pain spread over the whole upper part of the abdomen, accompanied with a certain amount of distention, constant vomiting of greenish fluid, and a partial disappearance of the liver dulness. Incision made above the umbilicus forty-eight hours after the attack. General peritonitis. Intestine was overhauled, then liver examined. Bubbling at its base led to the discovery of the duodenal perforation in the postero-superior wall of the first portion of the duodenum. The right rectus was divided to give room for suturing, but the stitches would not hold, and the perforation, of a size to admit the little finger, was walled off from the peritoneal cavity by omentum sutured above and below it. Death in thirty-six hours of general peritonitis. There were no other lesions found at autopsy.[1]

No. 36. Male, aged twenty-two; always perfectly healthy. Had an acute attack of intense pain and vomiting three hours after supper; pain referred to the umbilicus and right side. On the following morning temperature was 101° F.; pulse, 120; respiration, 42; moderate tympanites. Lower edge of liver dulness was two inches above the costal margin; tenderness most marked in the epigastrium, and on the right side of abdomen. Diagnosis of peritonitis, probably due to appendicitis. Operation fifteen hours after the onset of attack; incision made over appendix. General sero-purulent peritonitis was found. The appendix appeared normal but was excised. A second incision above umbilicus revealed, after careful search, a one-quarter-inch opening in the anterior wall of the first portion of the duodenum, close to the hepatic ligament. It was in the centre of an indurated area, and on account of its deep situation no excision was made. It was sutured, and the peritoneum cleaned with gauze; abdomen closed over iodoform gauze drain. Recovery took place with severe illness.[2]

No. 37. Male, aged thirty-eight, with history of attacks of intense pain in the epigastrium three or four hours after meals, without nausea or vomiting. While in his usual good health, he suffered an acute attack of violent pain in the epigastrium with collapse. He recovered somewhat and then grew gradually worse, with vomiting on the third day; no movement of the bowels for a week before the attack. On the third day, temperature, 100° F.; pulse, 99; respiration, 30. Face was drawn; abdomen distended with gas; dull in flanks; liver dulness absent. Operation about seventy-two hours after onset of acute symptoms. Through an incision in the median line, much gas and thin greenish-yellow purulent fluid escaped, with flakes of lymph; appendix was normal. A search over the intestine showed the perforation to be in the anterior wall of the duodenum near the pylorus. It was sutured and the abdomen swabbed out. The operation lasted two and a half hours; afterward one quart of saline solution was injected into the basilic vein. Death took place in eight hours. The peritoneal cavity was dry, except six ounces of pus between the diaphragm and liver. The suture was tight, and adhesions had already formed around it.[3]

No. 38.—Male, aged thirty, with a history of dyspepsia. While stooping to draw off his boots, the patient suffered a severe pain in his stomach which stretched him out. The following day an enema was without result. The abdomen was swollen and painful, the pain being all about the umbilicus, the urine scanty, and the pulse 120. About twenty-seven hours after the accident an incision was made in the median line at the umbilicus. The intestinal coils were distended and red. A mass of fecal matter seemed to clog the lumen, and was pushed along for a couple of yards. A suspicious yellow fluid was in the peritoneal cavity, and pus pas found in the pelvis. The appendix was normal. The abdomen was flushed with boric-acid solution and closed. The vomiting ceased; gas and a great quantity of fæces passed, and the abdomen became soft. Five days later the patient was attacked with dyspnœa, and double pneumonia developed. Death took place in nine days after the operation. There were numerous pus foci in the abdomen, and a perforation of the duodenum partly shut in by adhesions.[1]

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[1] Lennander, *Ibid.*

[2] Schwartz (Rochard, operator): Bull. et Mém. de la Soc. de Chir., January, 1898, p. 3.

[3] Schwartz (Guinard, operator): Bull. et Mém. de la Soc. de Chir., January, 1898, p. 3.

[1] Schwartz (Sieur, operator): Bull. et Mém. de la Soc. de Chir., January, 1868, p. 3.

[2] Wanach: Arch. f. klin. Chir., 1898, vol. lvi., p. 425.

[3] Whipple: Brit. Med. Jour., 1898, vol. ii., p. 1429.

No. 39.—Female, aged seventeen, and fairly healthy; had rarely suffered from indigestion. One week before perforation occurred, there had been indefinite pain in the abdomen for which she consulted a physician, who feared a beginning attack of appendicitis. About three hours after eating a hearty supper, while walking rapidly, she was seized with a violent pain above the umbilicus. Prostration followed, with rapid pulse, subnormal temperature, vomiting, and rigid abdominal muscles. Infusion of saline solution and stimulants failing to improve the patient's condition, operation was performed twelve hours after the beginning of the attack; incision as for appendicitis. Appendix and pelvic organs were normal, as was the small intestine. In the upper part of the abdomen there was a good deal of lymph and greenish fluid. The perforation of the duodenum was in the anterior wall of its third portion, and was about the size of a goose-quill, and surrounded for about an inch by an indurated area. Fluid was freely escaping. Direct sutures would not hold, so a purse-string was inserted, and afterward other peritoneal sutures. In this way the opening was firmly closed. Lymph and fluid were wiped away, and the abdomen was flushed with a great quantity of hot saline solution. Numerous gauze drains were inserted. Convalescence was slow, as it was a long time before the suppurating tracts, where the drains had lain for a week, had healed, but the patient ultimately recovered completely.[2]

No. 40.—Male, aged thirty. Sudden pain in abdomen occurred, followed by shock and toxic symptoms. Operation was done thirty-six hours later as for appendicitis. Perforation was found in first portion of duodenum. No blood or food in peritoneal cavity. Death occurred in a few hours.[3]

No. 41.—Male, aged forty, was seized with pain while at work, followed by shock and toxic symptoms and great tympanites. Operation in twenty hours. Perforation was found in first portion of duodenum, no blood or food having escaped. Death took place in a few hours.[4]

No. 42.—Male, aged thirty-eight. A supposed pulmonary abscess was opened and a large quantity of pus escaped. Two weeks later an abscess formed in the groin and was opened. Later the abdomen was opened for appendicitis, and a quart of creamy pus containing streptococci escaped. Death followed. Autopsy showed two ulcers near pyloric ring, one in the duodenum, the base of which had healed over, and one in the stomach perforated. There were numerous pus pockets in the abdomen, one in the head of the pancreas being the original one apparently.[5]

No. 43.—Male, aged twenty-nine, alcoholic. For three years had morning vomiting. Following a long spree he felt umbilical pain, and vomited and had a chill. The next day the abdomen was moderately distended and rigid. Diagnosis of general peritonitis from appendicitis. Operation was done one to two days after attack. About one quart of fluid and fibrin escaped. Appendix was amputated. Death occurred in thirty hours. Autopsy revealed perforation in superior anterior surface of duodenum near pylorus.[1]

No. 44.—Male, aged thirty, with history of gastric disturbance; no hæmatemesis. Had sudden severe epigastric pain, with chill, fever, and repeated vomiting and great prostration. No blood passed by mouth or rectum. Gradually increasing distention and tenderness were noted. Four days later, April 30, 1900, he entered the New York Hospital; the abdomen was generally swelled, but not presenting any special points of tenderness or dulness. Liver dulness was absent. Patient had a double hernia, and in the right hernial sac intestine was to be felt. Temperature, 104° F.; pulse, 140. Median incision was made with umbilicus in centre. Nothing abnormal was found at the internal rings or about the cæcum. From a one-fourth-inch perforation in the antero-superior wall of the duodenum close to the pylorus, brandy and water was found escaping. Closed with a double row of sutures; thorough washing of intestines and cavity; saline transfusion of seventy-five ounces, etc. Death occurred in a few hours. Operator, Weir. Case not previously reported.

No. 45.—Male, aged twenty-seven, always healthy but a steady drinker. Had colicky pain for four days, above the umbilicus on the right side. Bowels moved daily and he kept on working. Then suddenly he had severe pain three inches above navel, and a little to right of median line, with chill, no nausea. Nine hours later, pulse, 80, respiration, 20; temperature, 101.5° F. March 28, 1899, abdomen was opened; ten hours after had sudden pain, along right semilunar line above and below umbilicus, bile-stained fluid escaped. Appendix was examined as a matter of precaution and found normal. Incision extended upward to ribs. There was a perforation of duodenum on anterior surface, descending portion, big enough to admit 26 F. sound, through which bile and intestinal contents were escaping. All organs in the vicinity showed signs of irritation and so were washed with saline solution, while opening was closed by pad. Suture of perforation was done, with repeated flushing of peritoneal cavity without evisceration, and wiping with dry gauze, gauze drain to ulcer; wound elsewhere closed. No shock. Patient was fed by rectum for forty-eight hours. Temperature on following day 101° F. There was infection of skin stitches, which were removed. Recovery was otherwise uneventful and perfect.[2]

No. 46.—Female, aged twenty-five. She had a sudden attack of umbilical pain, with rigor and slight vomiting; on following day, pain at pylorus and blood passed per rectum. Temperature then and later 101° F. or less. Attack gradually subsided, but in two weeks a similar slighter attack occurred. Later a fluctuating tumor was found in region of gall bladder, gradually increasing in size until it occupied the whole right upper quadrant of abdomen. It was crossed by resonant colon, elsewhere dull on percussion. Diagnosis was hydronephrosis. Through lumbar incision a quart or more of clear amber, odorless fluid drawn off. Cyst reached from liver to iliac crest, and backward to spine. Kidney was not felt. Wound was stuffed with gauze, which next day was soaked with sour fluid. On third day food was noticed in dressing. Patient developed acute bronchitis and died on fifth day. Autopsy showed duodenal perforation three and one-half inches from pylorus forming this retroperitoneal cyst below right kidney and reaching behind duodenum as far as pancreas.[3]

No. 47.—No history was given. Incision made from ensiform cartilage to pubis; ulcer found at back of the duodenum and with difficulty stitched. Patient collapsed and the abdominal wound was hastily closed. Death from hemorrhage from a vessel in the abdominal wound.[1]

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[1] Routier · Bull. et Mém. de la Soc. de Chir., 1899, p. 17.

[2] Taylor: North Carolina Med. Jour., 1899, vol. xliii., p. 109.

[3] Erdmann: MEDICAL RECORD, 1899, vol. lv., p. 477.

[4] *Ibid.*

[5] Brooks: MEDICAL RECORD, 1899, vol. lvi., p. 943.

[1] Brooks (Le Boutillier, operator): MEDICAL RECORD, 1899, vol lvi., p. 944

[2] Johnson; Am. Surg., 1899, vol. xxx., p. 634.

[3] Wright and Bury: Lancet, 1899, vol. ii., p. 215.

No. 48.—Patient was neurasthenic and little attention was paid to his statement that he had great pain. Operation on the fifth day, when liver dulness was entirely obscured. Gas had escaped from the perforation, but no fecal matter; the ulcer was therefore sutured and the abdominal wound closed without drainage. Death on the third day from infection leading from the site of perforation to the pelvis. Suture firm. The operator thought that pelvic drainage might have saved this patient.[2]

No. 49.—Male, aged fifty-two years. Epigastric pain of three days' duration was followed by violent exacerbation. There was no vomiting. Six hours later the abdomen was tense, rigid, almost motionless, with complete absence of liver dulness in the line of the nipple. A diagnosis of perforated duodenal ulcer was made and operation decided upon. Ten hours after the attack an incision was made through the right rectus, and a clean-cut perforation was found at the junction of the first and second portions of the duodenum. There was intestinal injection but no well-marked peritonitis. The perforation was closed with two rows of sutures; the intestines were brought out and washed with sterile water; a gauze slip was passed to the site of the ulceration, and the cavity of the abdomen was otherwise closed. Recovery was uneventful. The gauze plug was removed on the second day, and the bowels moved on the third day.[3]

No. 50.—Male, aged twenty. Seven months previously he had an attack of epigastric pain and vomiting lasting two weeks; sudden severe pain in the right side of the abdomen, accompanied by vomiting. A few hours later the tenderness was greatest over the appendix. Temperature, 102° F.; respiration, 48; pulse, 118. Diagnosis, appendicitis. Twenty hours after the attack, an incision over the appendix allowed the escape of a quantity of odorless gas and fluid. On account of feeble condition, further operative attempt was abandoned. Death in twenty-four hours. Autopsy showed a perforation in the duodenum, anterior wall, just beyond the pylorus.[4]

No. 51.—Male, aged forty-five, a moderate drinker. Four years previously he had a similar attack. While in perfect health he was seized with severe pain in the right side of the abdomen, referred to the iliac region. A few hours later the abdominal wall was tense, without distention or loss of liver dulness; tenderness over the appendix. Temperature, 100° F; respiration, 32; pulse, 104. Diagnosis, appendicitis. Twenty-two hours after the attack an incision over the appendix evacuated considerable turbid serum. The appendix was normal. The peritonitis was most marked on the right side, and was followed up the colon to the hepatic region, but no cause for it could be found. The whole abdomen was flushed and drains were placed in the duodenal region and in the pelvis. Death occurred in seven days. Autopsy showed a general exudative peritonitis, without free fluid. In the duodenum, anterior wall, just below the plyorus, was a perforated ulcer, with the scar of a healed one.[5]

Scabies in infants and pregnant women:

℞ Ung. styracis,
Ol. olivæ .... p.æ

—*Bull. gén. de Thérapie.*

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[1] Elliott: Boston Med. and Surg. Jour., 1900, vol. cxlii., p. 41.
[2] Elliott. *Ibid*
[3] Perkins and Wallace. Lancet, 1900, vol. i., p. 458.
[4] Bolton: MEDICAL RECORD, 1900, vol. lvii., p. 494.
[5] Bolton: *Ibid.*

A PRELIMINARY REPORT ON A NEW AND SIMPLE METHOD OF STERILIZING CATGUT.[1]

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EVER since the time that the absorbable ligature was introduced into surgical procedure by Lister, catgut has held a prominent place in our surgical armamentarium. There has been, and still is, however, much difference of opinion regarding the relative value of the non-absorbable ligatures—silk, silkworm gut, silver wire, and the more recently recommended celluloid thread, and the absorbable ligatures—catgut, kangaroo tendon, etc. Without giving an account of the indications for the use of the one or the other, it suffices to state in this place that the use of catgut has been much curtailed because of the difficulty—by some considered an impossibility—of always sterilizing it perfectly. For well-known reasons the ordinary method of boiling is not applicable to catgut. Immersion for a short time in strong antiseptic solutions may render the catgut sterile, but it becomes hard, fragile, and useless. Prolonged immersion in dilute solutions of antiseptics has been found to suffice in most cases and has been extensively used. In this class of methods may be placed the catgut of Lister, von Bergmann, Braatz, the juniper-oil catgut of Kocher, the silver catgut of Credé, and the chromicized catgut of Macewen. Sterilization by dry heat has been recommended by Reverdin, Kümmel, Lauenstein, and others, but time, care, and a special heating oven are required.

A number of boiling methods have been recommended: the cumol method of Krönig, the xylol method of Brunner, the alcohol method of Dowd and of Fowler, the carbolic-acid alcohol method of Saul, the more recent formalin method of Cunningham and of Hofmeister, etc. In most of these procedures the catgut is first freed of its fat and then boiled in a special solution for various lengths of time. Most of the fluids that have been used are inflammable or their vapors are inflammable, and some of them have a low boiling-point so that they have to be boiled under pressure. As a result a more or less elaborate apparatus is necessary; hence the procedures are not available for general use. Large drug houses that prepare sterile catgut for the market use one or the other of these methods. The immersion of the catgut in a dilute solution of formalin (two to four per cent.) fixes the albuminous substances so that the catgut can then be boiled in water or in decinormal salt solution without injury to it. Catgut prepared in this manner is often of very good quality. But under the same conditions of preparation it is sometimes soft and strong, at other times hard and fragile. Considerable practical experience is necessary, and even then one cannot succeed in obtaining uniform results with the formalin method. Formalin catgut is absorbed somewhat more slowly than catgut prepared by other methods.

We have, therefore, up to the present time no absolutely satisfactory and practical means of sterilizing catgut. Prolonged immersion in dilute solutions of antiseptics requires time, and is not always certain; sterilization by dry heat is impracticable; most of the boiling methods require a complicated apparatus; the formalin method does not give constant results even in experienced hands.

The requisites for a good catgut are: (1) sterility; (2) strength; (3) softness and pliability.

In a series of investigations on the preparation of catgut and other suture materials, the writer had occasion to apply to the work a chemical principle seldom described but much used in chemistry—that animal substances are insoluble in those solutions which precipitate the animal substances themselves. Thus ammonium sulphate precipitates albumin, and therefore albumin is insoluble in solutions of this chemical. Among other substances ammonium sulphate, one of the most perfect precipitants of albumin known to chemistry, was used; it was discovered that this material has some hitherto unrecognized properties. One of these properties is made use of in the method of sterilizing catgut now to be described.

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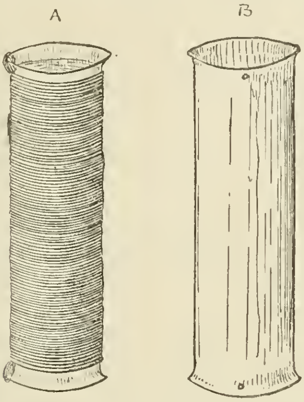
[1] Read at the meeting of the Surgical Section of the Academy of Medicine, April 9, 1900.

The fatty matter is removed from the catgut by immersing the latter in ether or chloroform for from twelve to forty-eight hours. It is advisable to use a mixture of chloroform one part, ether two parts, as such a mixture seems to have greater penetrating power; besides chloroform is an antiseptic. A stock of catgut from which the fat has been removed in this manner may be kept on hand in the dry state, the ether and chloroform mixture having been allowed to evaporate, and the catgut kept in a clean receptacle. When the catgut is to be sterilized, it is wound in a single layer and as tightly as can be done with ease with the fingers on spools or frames of any convenient size and shape. I have found the spools here pictured (see figure) useful; they are of a convenient size, and from five to ten yards of catgut can be wound in a single layer on them. The spools are then boiled from ten to thirty minutes in a hot saturated solution of ammonium sulphate in water. This solution is made by adding chemically pure ammonium sulphate to boiling water until the latter is saturated or almost saturated. The solution boils at 106°–108° C. or 220°–226° F.—a high boiling-point, as will be observed.



Glass Spools for Use in the Sterilization of Catgut by the Ammonium-Sulphate Method. *A*, Spool with single layer of catgut wound on it; *B*, spool with perforations at its ends.

When the spools are removed from the boiling solution some of the salt crystallizes upon them. This is at once removed by a moment's immersion and agitation in warm or cold water, carbolic acid, or bichloride solution. The catgut is then ready for use or for preservation in strong alcohol.

Catgut that has been prepared in this manner will be found to have lost none of its physical properties. It is fully as strong as catgut prepared by other methods; indeed, comparative experiments, which it would take too long to detail here, have shown that very fine catgut is stronger after having been boiled in the ammonium-sulphate solution than after it has been prepared by other methods. The catgut does not swell up; it remains of the same thickness as the raw material. It is readily absorbed in the tissues of the body, and its absorption takes place between the fourth and the eighth days.

Bacteriological experiments have shown conclusively that catgut prepared by this method is always sterile after five minutes of boiling. The accompanying table gives a summary of some of my experiments and results. As will be seen in the table, the anthrax catgut was always rendered sterile in less than five minutes and the staphylococcus catgut in less than three minutes.

Instead of in plain water the ammonium sulphate can be dissolved in one or two per cent. watery carbolic-acid solution, or in 0.1 to 0.5 per cent. watery chromic-acid solution. The subjoined table shows how much less time is required to sterilize the catgut when two-per-cent. carbolic-acid solution is used instead of plain water. Thus, while it takes between three and five minutes to sterilize catgut that has been infected with anthrax spores when boiled in the watery solution of ammonium sulphate, it takes from two to three minutes to sterilize it when two-per-cent. carbolic-acid solution is used instead of plain water.

Bacterium.[1]	Boiled in Hot Saturated Solution of Ammonium Sulphate in Water Temp. 108° C.		Boiled in Hot Saturated Solution of Ammonium Sulphate in Two Per Cent. Carbolic Acid. Temp. 108° C.	
Catgut bacillus (*a*).......	Control,	+ +	Control,	+ +
	2 minutes,	+	1 minute,	—
	5 "	—	3 minutes,	—
	10 "	—	5 "	—
	15 "	—		
	20 "	—		
	25 "	—		
	30 "	—		
Staphylococcus pyogenes aureus, from acute tonsillitis.	Control,	+ +	Control,	+ +
	1 minute,	+	30 seconds,	+
	2 minutes,	+	1 minute,	—
	3 "	—	2 minutes,	—
	4 "	—	3 "	—
	5 "	—	4 "	—
	10 "	—	5 "	—
	15 "	—		
	20 "	—		
	30 "	—		
Staphylococcus pyogenes aureus, from phlegmon of arm.	Control,	+ +	Control,	+ +
	1 minute,	+	30 seconds,	+
	2 minutes,	+	1 minute,	+
	3 "	—	2 minutes,	—
	4 "	—	3 "	—
	5 "	—	4 "	—
	10 "	—	5 "	—
	15 "	—		
	20 "	—		
Spores of bacillus anthracis grown at 28° C. for 48 hours killed by five-per-cent. carbolic acid at room temperature in three and one-half days and by steam at 100° C. in three to four minutes.	Control,	+ +	Control,	+ +
	1 minute,	+	1 minute,	+
	3 minutes,	+	2 minutes,	+
	5 "	—	3 "	—
	10 "	—	4 "	—
	15 "	—	5 "	—
	20 "	—		
	30 "	—		
Bacillus anthracis and spores killed by steam at 100° C. in two to three minutes.	Control,	+ +	Control,	+ +
	1 minute,	+	1 minute,	+
	3 minutes,	+	2 minutes,	—
	5 "	—	3 "	—
	10 "	—	4 "	—
	15 "	—	5 "	—
	20 "	—		
	30 "	—		

Catgut can be chromicized by boiling in chromic acid of any desirable strength. My experiments in regard to this matter are not as yet completed, but from the results thus far obtained it is probable that catgut can be made more or less absorbable at will, depending upon the strength of the chromic-acid solution used and the length of time of boiling. For general use I have made chromicized catgut by boiling it for twenty to thirty minutes in a saturated solution of ammonium sulphate in 1 . 1,000 chromic-acid solution.

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[1] Sterile coarse catgut threads were immersed in bouillon cultures of bacteria for twenty-four hours, and were dried and boiled in the solutions. The threads were then washed in sterile water, cut into short pieces, and dropped into nutrient bouillon. + + = profuse growth, + = growth, — = no growth.

The ammonium-sulphate solution can be used any number of times; the salt crystallizes out unchanged as the solution cools, and redissolves on heating. An excess of ammonium sulphate does no harm. The catgut can be resterilized any number of times by boiling it in the solution for from five to fifteen minutes.

During the last two months catgut prepared in this manner has been used by myself in a number of cases, mostly minor operations, and by several gentlemen in major operations in their services in Mt. Sinai and the City hospitals. The results obtained have been very satisfactory. The catgut was well borne by the tissues; it was absorbed in from four to eight days; it was strong, soft, and pliable—in short, it had all the qualities of a good catgut.

The advantages of this new method of sterilizing catgut are its cheapness (c. p. ammonium sulphate costs from 15 to 25 cents a pound), its availability for general use (no previous experience with the procedure is necessary), the non-inflammability and high boiling-point of the fluid used; its simplicity (nothing need be measured or weighed out); and, above all, the fact that all grades of catgut can be used and no apparatus of any kind is necessary. Any one who desires to prepare sterile catgut for himself need only obtain catgut free from fat or prepare such for himself, and then boil it, wound up on spools in single layers, in a hot saturated solution of ammonium sulphate in one or two per cent. carbolic-acid solution, for from three to five minutes, or in a saturated solution of ammonium sulphate in plain boiling water for from ten to thirty minutes; then the ammonium sulphate is washed off by immersing and agitating the spools for a minute or two in cold or better warm water, carbolic acid, or sublimate solution, and then the catgut is ready for use or for preservation in strong alcohol.

In this preliminary report the theoretical principles on which this method is based are hardly touched on. Upon the same principle, with a little difference in technique, sponges and other surgical materials can be sterilized repeatedly by boiling. The further description and discussion of these matters the writer reserves for future publication.

To recapitulate, the steps of the procedure are the following:

1. Catgut, freed from fat as above described, is tightly wound in single layers on suitable spools.

2. The spools are boiled for from ten to thirty minutes in a hot saturated solution of ammonium sulphate in water, made by adding chemically pure ammonium sulphate to boiling water until no more will dissolve.

3. Two-per-cent. carbolic-acid solution may be substituted for the water if a quicker sterilization (three to ten minutes) is desired; or 1 : 1,000 chromic-acid solution, if the catgut is to be chromicized.

4. The spools are thoroughly washed by agitation for from one to two minutes in cold or better warm sterile water, carbolic acid, or bichloride solution of any strength.

5. The catgut spools are preserved in strong alcohol.

6. For resterilization the catgut spools are boiled for from five to fifteen minutes in any of the solutions, and washed in the same manner as described under 4.

105 East Fifty-seventh Street.

Interesting Case of a Pin Transfixing the Eye.—Christian R. Holmes reports the case of a woman who was struck in the face by the free end of a rug she was shaking, with the result that a pin entered the conjunctiva and penetrated the globe, the head showing superficially to the conjunctiva 2 mm. below the horizontal line, and 5 mm. from the inner corneal margin. There was subretinal hemorrhage where the pin entered the eye, and also where it penetrated the posterior part of the globe. Under cocaine the pin was extracted by means of forceps, without loss of vitreous or of blood, but with difficulty on account of the end having become hooked. Pain and inflammation subsided three hours after the operation.—*The Cincinnati Lancet-Clinic*, March 31, 1900.

Ambulatory Treatment of Fractures.—Charles D. Lockwood defines this treatment as any method that enables the patient to be about in an erect posture—while bony union is taking place—and that materially shortens the period of enforced recumbency. His conclusions are: (1) That orthopedic measures and appliances should be more widely used in the treatment of all bone diseases and fractures; (2) all fractures of the lower limb are adapted at some period of their existence to ambulatory treatment, the time depending upon severity, nature, and site of fracture; (3) this form of treatment does not materially hasten bony union, but it makes it more often attainable; (4) the dangers attending ambulatory treatment are largely theoretical, and may be practically disregarded; (5) the early application of ambulatory apparatus, together with early massage, as practised by the French, is the ideal treatment for fractures.—*Illinois Medical Journal*, April, 1900.

The Early Diagnosis of Idiocy.—J Park West urges careful observation with a view to early diagnosis of this condition in children, because of the great importance of early giving the proper treatment. He mentions many of the physical signs of idiocy, with the differential diagnosis from hydrocephalus. One of the earliest symptoms in congenital cases is abnormal movements, or rather the absence or the slow performance of the constant movements of normal healthy children. Likewise, a great increase in the "normal unrest," as tremor, twitching or jerking, indicates trouble of the nervous system. Congenital idiots grow slowly, both physically and mentally. Defective development and defect in the formation of some part or parts are not unusual.—*Columbus Medical Journal*, March, 1900.

Tuberculous Osteitis of the Patella.—Maurice Gross considers that primary tuberculous osteitis of the patella is of more frequent occurrence than is usually supposed. It is a disease of much gravity, the tuberculous area rapidly perforating the thin posterior cartilaginous layer of the bone, causing a tuberculous arthritis of the knee. If a diagnosis be made sufficienty early in the disease, a relatively simple operation will suffice to check it. The operations which are of value are the following: (1) Scraping out the infected area; (2) ablation of the patella in nearly all cases of disease of this bone, especially in adults. Synovectomy may be done in connection with this procedure. (3) The patella can be removed without interfering with the functions of the knee joint. After total subperiosteal suppression of the patella, it has the power of reproducing itself.—*Revue Médicale de la Suisse Romande*, March 20, 1900.

Experimental Researches in Regard to the Conveyance of Tuberculous Poison from Parent to Child.—Angelo Maffucci concludes that the tuberculous poison is more often passed on to the child than is the bacillus; that it may be conveyed by the ovum, spermatozoön, or placenta; that embryonal intoxication is manifested by imperfect development, abortion, premature labor, death, and cachexia in extra-uterine life. The embryonal tissues resist and often destroy the bacillus, generating a toxin which becomes fixed in them. The children of tuberculous parents are not more susceptible to the tuberculous virus than those of healthy parents, the greater frequency of tuberculosis among them being due to contact and to the possibility of a germ carried from embryonal life rather than to a hereditary predisposition. Good hygienic conditions can overcome hereditary and embryonal tuberculosis.—*Rivista Critica di Clinica Medica*, March 24, 1900.

Cultivation of the Lepra Bacillus.—Juan de Dios Carrasquilla says that Hansen's bacillus may be cultivated in gelatinized human serum when this is sown with lymph taken from a leper by Herman's method. A second culture, identical with the first, may be obtained by transferring to other tubes of gelatinized human serum. The bacillus may also be cultivated in bouillon after previous culture in gelatinized human serum. The bacillus grown in both is aerobic and motile. The optimum temperature is 37° C. The temperature may be reduced to 25° for a few hours without injury, but the bacillus is destroyed at a temperature of 45° C.—*Gaceta Médica Catalana*, February 15, 1900.

A Case of Bilateral Facial Paralysis.—Jolly reports the case of a man forty-four years old who had suffered for nearly twenty years from facial paralysis on both sides. The trouble had followed an injury incurred by being caught by a revolving wheel and thrown violently on to a heap of coal. The patient was unable to wrinkle the forehead, to wink the eyes, or to change the expression of the mouth. The only movements possible were those of the jaw; all the muscles supplied by the facial were paralyzed. One eye was nearly destroyed by the original injury, and the other suffered greatly through its exposure to dust. The nerves were injured in their passage through the petrous portion of the temporal bone, and there must have been a transverse fracture through both these bones.—*Deutsche medicinische Wochenschrift*, March 15, 1900.

The Fate and the Action of Acid Sodium Urate in the Abdominal Cavity and Joints of Rabbits.—As the result of an experimental investigation undertaken for the purpose of determining the alterations induced by acid sodium urate in the tissues and the fate of this substance in the body, His found that this substance, injected into the abdominal cavity and joints of rabbits, excites inflammation, attended with necrosis. This is distinguished from that induced by indifferent foreign bodies by beginning earlier, by its greater intensity and extent, and by extension of the necrosis to adjacent parts. On injecting the urate into the joints the cartilage remains intact, while the synovial membrane and the periarticular structures become inflamed. Acid sodium urate acts in part as a foreign body and in part as a feeble tissue-poison. The toxic action is attributable to the solution of the salt. Within the body the amorphous salt may undergo crystallization. Even considerable amounts of urates are absorbed from the abdominal and articular cavities within eight or ten days at most. In the removal phagocytes participate in an active manner; also uninuclear and multinuclear leucocytes, granulation cells and giant cells. Within these cells the urate is rapidly destroyed, and it can no longer be demonstrated in the regional lymphatic glands. It is probable that the same processes take place in cases of recent gout in human beings, but that in cases of chronic gout the reactive powers of the organism are diminished. In future autopsies in cases of gout attention should be directed to the changes in the recently inflamed parts, and among therapeutic measures vital processes should be taken into consideration in addition to the chemical.—*Deutsches Archiv für klinische Medicin*, Bd. 67, Heft 1 and 2.

Rupture of the Pregnant Uterus.—Alexander Doktor reports the case of a woman, thirty years old, who was brought to the hospital in a state of partial collapse. She had passed through a normal pregnancy and had been in labor for a while, but the pains suddenly ceased after about twenty hours, and the patient's condition became very grave. A diagnosis of rupture of the uterus was made. Cæsarean section was performed, and the patient made a good recovery. The fœtus was a male, weighing nine pounds five ounces, with a large head (fifteen and three-fifth inches in circumference) the bones of which were in great part ossified, and the sutures and fontanelles were narrow.—*Der Frauenarzt*, March 16, 1900.

Human Actinomycosis.—Antonin Poncet gives the results of a study of twenty-six cases. In twenty-one the tumors were situated in the cervico-facial region, one in the pleural region, with perirenal infiltration and secondary nucleus in the breast, two in the cæcal, one in the umbilical, and one in the vesico-ano-rectal region. Out of fifteen of the cases in which the ultimate results of the disease could be traced, there were five deaths, two relapses, and eight temporary cures. The author advises the iodine treatment, but considers its value problematical. He urges great vigilance, early diagnosis, and prompt surgical interference. Mere evacuation is not sufficient, but should be followed by curetting and cauterization.—*Bulletin de l'Académie de Médecine*, March 27, 1900.

Sciatica and its Treatment.—Francesco Tommasoli refers to the various methods of treatment used in this affection, such as the rest cure, injections of antipyrin or carbolic acid, mud baths, electricity, compression, and nerve stretching. He then describes the surgical treatment of the nerve as performed by himself. The usual pre-operatory procedures are followed, and the patient is given an injection of morphine and atropine and anæsthetized. An incision about 8 cm. long is made in the posterior median line of the thigh, between its upper and middle third; the sciatic nerve is seized by the curved index finger of the right hand, and gently pulled until it is lengthened by several centimetres. The wound is then irrigated and dried, and sutured with catgut. The results have been satisfactory in several cases.—*Il Raccoglitore Medico*, March 20, 1900.

Septic Maculo-Papular Erythema in Conjunction with a Follicular Angina.—Karl Dehio says that through clinical observation alone must we expect light to be thrown upon most questions involved in erythema multiforme. He relates a case in a female nurse, twenty-three years old, who after chills had on the third day a temperature of 40.5° C., and pain in swallowing (angina lacunaris). The same night there appeared an erythema upon hands, feet, and neck, disappearing under pressure. This was followed by delirium, increased temperature and pulse, vomiting, increase in size of original dark red maculæ and many new ones, with subsequent change of the central parts into livid red, which on pressure left behind a dark brown pigmentation. Desquamation in large flakes and convalescence set in on the fourteenth day of the fever. He regards the process as an infection akin to the exanthemata.—*St. Petersburger medicinische Wochenschrift*, March 17, 1900.

Progress of Medical Science.

Journal of the American Med. Ass'n, April 28, 1900.

Congenital Aphakia and Irideremia. — Flavel B. Tiffany reports several cases in the same family, and states that congenital aphakia is an exceedingly rare anomaly, being usually accompanied with other serious defects of the eye. Iridodonesis is generally explained by the loss of the crystalline lens, that is, the posterior support of the iris. The writer attributes the trembling of the iris in these cases not only to congenital aphakia, but probably to a weakness of the ciliary body and suspensory ligament, and the dimness of vision to an arrest of development or defect of one or several of the ten layers of the retina. Very curiously, concave glasses gave improvement of vision, showing a high degree of myopia, whereas hypermetropia was expected.

The Smegma Bacillus.—Oscar A. Dahms, among the differential points distinguishing the smegma and syphilis bacilli, says the latter are, as a rule, slender straight or curved rods, while the former are smaller, plump rods. The smegma organisms are more readily decolorized by alcohol. They may also resist the action of acids for two minutes or longer, while the organisms of syphilis are decolorized by acids in thirty to forty seconds. The latter are stained well by Doutrelepont's method, while the smegma bacilli are not. In differentiating the smegma from the tubercle bacillus, Marion Dorset has found that Sudan iii. stains the tubercle bacillus a bright red, while it does not stain the smegma bacillus.

Treatment of Variola by Bichloride Baths.—H. A. Ingalls believes in regard to this treatment that: (1) There is practically no mortality. (2) The suppurative fever can be shortened four to six days if the patient is treated from the onset. (3) A minimum of pitting is secured, and there is an almost entire absence of the characteristic disagreeable odor. (4) The period of desquamation is materially lessened, owing to the thinness of the scab formation. (5) Pain is much reduced, morphine being rarely indicated. (6) Distorting of features is eliminated to a great extent.

Double Inguinal Hernia upon the Same Side; Illustration.—Charles C. Allison describes this case of a man fifty-six years old, operated on February 3, 1900. The hernial protrusion was oblong in shape and extended into the upper part of the scrotum. It was reducible, and its reduction revealed a very marked attenuation of the abdominal muscle over the inguinal region. It is a case of exceeding rarity.

Endothelioma of Gasserian Ganglion: Two Successive Resections of Ganglion—First by Extradural (Hartley-Krause) Operation, and Secondly by Intradural Operation.—By F. X. Dercum, W. W. Keen, and W. G. Spiller.

Peripheral Resection of Fifth Nerve. Three Cases with Microscopic Examination of Portions of Nerves Removed, and Report on Later Condition of Patients.—By W. W. Keen and W. G. Spiller.

Method of Total Extirpation of Gasserian Ganglion for Trigeminal Neuralgia, by a Route through the Temporal Fossa and beneath the Middle Meningeal Artery.—By Harvey Cushing.

Method of Exposing Gasserian Ganglion; Removal of Superior Maxillary Nerve.—By Gwilym G. Davis.

Medical Ethics and Medical Journals.—By P. Maxwell Foshay.

Philadelphia Medical Journal, April 28, 1900.

Exophthalmic Goitre; its Complications and Affinities.—Roberts Bartholow says that the most useful single remedy for this affection is galvano-faradism, the descending stabile current being applied so as to include the pneumogastric and cervical sympathetic nerves within the circuit. In the cases in which cardiac symptoms predominate sparteine sulphate and picrotoxin, combined perhaps with the sulphates of iron and manganese, are of value. In the more chronic cases, associated with valvular lesions, fibroid degeneration of the thyroid, and pigmentation of the skin, he has had the best results from a solution of sodium iodide ʒ v., sodium bromide ʒ iii., sodium arsenate gr. i., in distilled water ℥ iv., in teaspoonful doses three times a day.

An Early Sign of Tuberculosis.—Thomas F. Harrington calls attention to a widely dilated condition of both pupils as symptomatic of very early tuberculous infection. He says that he has time and again observed dilated pupils in patients with other diseases or in apparent health, and has so frequently seen tuberculosis occur at a later day that he has come to associate this sign with incipient tuberculosis.

Extra-Abdominal Shortening of the Round Ligaments by an Inch Incision Over the Internal Ring for Freely Movable Posterior Dislocation of the Uterus.—By A. H. Goelet.

Infection through the Tonsils, Especially in Connection with Acute Articular Rheumatism.—By Frederick A. Packard.

A Study of the Rectal Valves, Experimental and Clinical.—By A. B. Cooke.

Some Obstetric Notes.—By Francis H. Stuart.

Boston Medical and Surgical Journal, April 26, 1900.

Splenic Pseudoleukæmia.—R. C. Cabot says that in the diagnosis of this disease we have to distinguish (1) cases of idiopathic splenic enlargement without any anæmia or any other symptoms, which are not very uncommon. (2) We must exclude pernicious anæmia, in which a slight enlargement of the spleen is almost always present, and sometimes a very considerable one. (3) We must distinguish the disease from cirrhosis of the liver, which is often extremely difficult. (4) Splenic tumor associated with chronic malarial poisoning must also be excluded. (5) From leukæmia the disease may be easily and quickly distinguished by the blood examination. (6) The anæmias of children are frequently associated with enlargement of the spleen, with or without leucocytosis, and their classification is still unsatisfactory. As a rule such cases are usually considered secondary to rickets or syphilis. As to the prognosis, some of Osler's cases have lasted twelve years, and the patients are still in good health. Splenectomy was done in one of his cases with favorable results. The author considers it a reasonable method of treatment, as splenic enlargement seems to have preceded the anæmia in all the recorded cases in which the question has been looked up thoroughly.

Splenic Anæmia.—James Marsh Jackson reports the case of a woman twenty-eight years of age. At the physical examination a mass was found on the left side extending from the seventh rib diagonally across to the umbilicus, and then toward the right anterior spine; dulness extended over into the left flank, and back and down to the crest of the iliac bone on the left side. The mass descended slightly with inspiration; edge (right), notched twice; otherwise the mass was perfectly smooth. The rest of the abdomen was soft, tympanitic, and not tender. The examination of the blood showed: red cells, 4,076,000; white cells, 5,200; differential count, 500 cells; polymorphonuclear neutrophiles, 36.2 per cent.; lymphocytes, 58.7 per cent.; myelocytes, 4.5 per cent.; eosinophiles, 0.6 per cent.

Splenic Anæmia.—John Lovett Morse reports two cases. Anæmia of various grades of severity, with enlargement of the spleen, with or without leucocytosis, is not at all uncommon in infancy. It is especially common in rickets. The splenic tumor and anæmia seem independent of each other, and are both probably the results of some common cause, which in infancy is apparently always some profound, complicated, and obscure disturbance of the nutrition. Reasoning from analogy the author is inclined to think that these unusual cases of anæmia and splenic enlargement in adult life may be due to obscure disturbances of nutrition, and may also be independent of each other and the results of a common cause.

Splenic Anæmia.—Henry Jackson reports a case in a young man aged twenty years. The physical examination showed splenic dulness from the eighth rib to just below the costal margin, where the edge was plainly felt, smooth and rather hard. Red cells, 4,000,000; hæmoglobin, twenty per cent.; polymorphonuclear neutrophiles, sixty-one per cent.; lymphocytes, twenty-nine per cent.; large mononuclear and transitional forms, eight per cent.; eosinophiles, two per cent. He suffered greatly from bleeding hemorrhoids. At the present time he is not anæmic, but the spleen remains enlarged. The diagnosis is obscure, but it was probably a case of splenic anæmia.

Medical News, April 28, 1900.

Interesting Case of Syphilis. Epithelioma.—In the first of these two cases reported by L. Blake Baldwin, the condition of the patient before treatment was appalling, the entire body being covered with ulcerating lesions, two hundred and eighty-four in all, and the weight having fallen from one hundred and seventy-eight pounds to ninety pounds in fourteen weeks. The stomach resisted five-grain doses of potassium iodide, and he was treated with wet bichloride-of-mercury dressings applied to all ulcerated surfaces except the cranium. After the first week the wet dressing was applied to the head also. Internally he was given the pure juice of five pounds of beef daily, seasoned with salt and pepper, which amount was increased during the first week to eight pounds. He was also given gr. xl. of potassium iodide three times daily, the dose being increased during the first week to gr. cxv. t.i.d. Following the removal of the crusts and cessation of the suppurative process, the ulcers were dressed with Unna's emplastrum hydrargyri mull. His recovery was rapid: on the fourteenth day he walked unassisted to meals, and two months after the first consultation he weighed one hundred and eighty-seven pounds. The second case reported was one of epithelioma of the face in a Polish woman, together with eruptions on the abdomen, breast, and thigh. The original eruption on the face began eleven years ago as a black pimple with but little discharge. The patient had borne fifteen children. There was no history of sore throat or falling of the hair, nor any necrotic ulceration.

Cancer of the Breast and the Results of Operation.—Clarence A. McWilliams studies the statistics of one hundred cases, and presents the following summary: Trauma present in 44.6 per cent.; married, 74 per cent.; children born to 66.6 per cent.; average number of children to each, 5; pain present in 56.2 per cent.; nipple retracted in 45.2 per cent.; right breast involved in 51; left breast involved in 49; axillary glands palpable in 48.9 per cent.; axillary glands found cancerous by microscope, 78.6 per cent. Average age was forty-nine years six months twenty-six days. Mortality of operation, four per cent. Average length of time in hospital, twenty days. Prolongation of life for one year, fifty-nine per cent.; for two years, thirty-six per cent. Cured (no recurrence at end of three years), thirty-four per cent. Recurrence took place in one year in twenty-one cases; in two years in twenty-eight cases; locally in fifteen cases; in lung in six cases. Average length of time in recurrent cases from operation to death, one year two months twenty days; average length of time from period of recurrence to death, five months.

Cancer Occurring in Acid Parts of the Body.—A. L. Benedict presents statistics tending to show that the great majority of cancers develop in acid media. Whether acid parts of the body happen to be where mechanical traumatisms are frequent, or whether the localization is due to some unsuggested cause, the writer does not pretend to state.

Some of the Reasons why the Surgical Treatment of Nasal Disease has been Placed on a Conservative Basis.—By Clarence C. Rice.

After-Treatment of Tenotomy of the Eye Muscles.—By Alexander Duane.

A New Traction Hip-Splint.—By L. Blake Baldwin.

New York Medical Journal, April 28, 1900.

The Relation of Hydrochloric-Acid Secretion to Indicanuria.—According to A. A. Jones, indican bears no constant relationship to the secretion of hydrochloric acid in the stomach. The later portion of the article discusses the matter of indican in its general relation to various diseases. It now seems settled that this substance is the product of putrefaction of albuminous matter caused by bacterial action. It is produced when pus formation, gangrene, necrosis, or ulceration takes place. The mother-substance is indol. It is always present in the bowel excepting in the sterile gut of the new-born. An excessive amount of indican is present in ileus and in gastric ulcer.

Ethylic Bromide (C_2H_5Br) Anæsthesia Preliminary to the Use of Sulphuric Ether.—G. R. Fowler commends the following plan: From one to two drachms of ethylic bromide is placed upon the inhaler, and in from thirty to forty-five seconds, according to the freedom with which the patient breathes, the administration of the sulphuric ether is begun, without changing the inhaler, and proceeded with as in ordinary ether anæsthetization.

A Contribution to the Histo-Pathology of Epidermolysis Bullosa (Hereditaria).—By G. T. Elliot.

Nitrous Oxide; Ether; Chloroform.—By S. Ormond Goldan.

The Diagnosis of Hysteria.—By C. W. Burr.

The Lancet, April 21, 1900.

Coxa Vara.—C. B. Keetley defines this affection as a deformity of the upper epiphyseal region of the femur in which the head of the bone sinks to a lower level than normal, in extreme cases almost touching the lesser trochanter. The upper border of the neck of the femur is longer and the lower border shorter than normal; hence the neck is more horizontal than normal, or it may descend instead of ascending in the usual way. The articular surface of the head may thus come to look downward. The neck is also bent in a horizontal as well as in a perpendicular plane, with the convexity forward. The underlying condition is rachitis of adolescents. The author was the first to recognize the nature of the deformity, and reported a case in the *Illustrated Medical News* of September 29, 1888. Since then Ernst Müller and Kocher have described the affection at great length.

Note on the Influence of the Temperature of Liquid Air on Bacteria.—Allan Macfadyan and S. Rowland report the results of exposing various micro-organisms (bacillus typhosus, bacillus coli communis, bacillus diphtheriæ, bacillus proteus vulgaris, bacillus acidi lactici, bacillus anthracis, spirillum choleræ asiaticæ, staphylococcus pyogenes aureus, bacillus phosphorescens, a sarcina, a saccharomyces, and the bacteria in unsterilized milk) to the temperature of liquid air (— 190° C.) for a period of some days. In no instance could the slightest structural alteration in the bacteria be discovered, nor could any impairment in the vitality of the organisms be detected, except that in one or two instances the growth in the sub-cultures was slightly delayed.

The Production of Local Anæsthesia in the Ear.—Albert A. Gray comments upon the difficulty of inducing anæsthesia of the unperforated drum membrane with aqueous solution of cocaine or eucaine, due to the fact that the nerves terminate in the inner layer of the tympanic membrane, and the drug must be made to penetrate the epithelial and dense fibrous layers before it comes in contact with the nerve termination. The author has overcome this difficulty by employing a solution of five parts of cocaine hydrochlorate in fifty parts each of dilute alcohol and anilin oil. He finds that a few drops of this solution instilled into the meatus and allowed to run down on to the tympanic membrane will quickly induce complete anæsthesia of this part. Several cases of the successful employment of this solution are reported.

On Backache as a Symptom of Rectal Disorder.—E. Harding Freeland calls attention to the frequency with which the presence of backache points to disease of the rectum, and says that when it is associated with symptoms referable to the other pelvic organs, the bladder or the uterus, the rectum will not infrequently be found to be the organ primarily at fault. He reports several cases in support of this view. As the earliest sign of incipient cancer of the rectum he thinks it is of especial value.

On the Causation of Nervous Symptoms in Typhoid Fever, with an Experimental Study of the Action of Typhoid Toxins on the Ganglion Cells of the Central Nervous System.—By Alexander G. R. Foulerton.

Epileptic Attacks Preceded by Subjective Auditory and Taste Sensations, Probably due to a Tumor of the Left Temporo-Sphenoidal Lobe.—By J. Mitchell Clarke.

The Modern Treatment of Uterine Fibroids, with a Table of Sixty-Eight Consecutive Cases of Hysterectomy.—By William Duncan.

A New Method of Treating Femoral Fractures in the Infant.—By John D. Rice.

Dislocation of the Epiphysis of a Metacarpal Bone.—By E. Kerr Herring.

The Medical Press and Circular, April 11, 1900.

Complicated Case of Double Ovariotomy in a Girl.—J. Halliday Croom relates a case in which there had been a swelling of sixteen months' duration in a girl of eighteen who had never menstruated. Everything pointed to cancer except the age. Blood-stained fluid was removed from the pleural cavity, as well as from the abdomen. A dermoid tumor was removed, the ovary on the opposite side being found healthy. Two years later the patient came again under observation for a swelling of six weeks' duration, and a large hard tumor was found along the middle line with dulness almost continuous with that of the liver. A cystic papilloma, probably starting from the other ovary, was removed.

A Case Simulating a Perforating Gastric Ulcer.—J. W. Thompson and Conway Dyer relate an instance in which the symptoms pointed to ulcer of the stomach. The abdomen was opened and a coil of jejunum was found intensely congested with two gangrenous spots. Resection was done with the Murphy button, and the bowel was flushed with sterile salt solution. The bowels moved on the fifth day, and the button passed on the eighteenth day. Prompt operation in such cases may save life.

A Case of Rupture of the Quadriceps Tendon.—Arthur H. Burgess relates the steps of an operation for injury above the knee with loss of power of extension. The tendon was drawn down and sutured to the patella by three stout silk sutures. The course was satisfactory, the sutures being removed on the twelfth day. Five weeks later the patient walked without support. Non-operative treatment is not likely to yield a good result.

Practical Observations on Cancer of the Breast.—By Sir William M. Banks. (Lettsomian lectures.)

A Case of Removal of Appendix Cæci.—By P. G. Lodge.

On Obstructive Dysmenorrhœa.—By Alexander Duke.

British Medical Journal, April 21, 1900.

Lengthening of Hamstrings by Operation for Contracture after Burn.—W. F. Brook reports this case in which the biceps tendon was split for three inches near its insertion, divided, and sutured. The inner hamstrings were divided transversely at different levels three inches apart. The proximal end of the semitendinosus, which had been cut at the lower level, was sutured to the distal end of the semi-membranosus, which had been cut at the higher level. The other ends were shunted into their neighbors and sutured. The boy was admitted to the hospital in February, 1899. In February, 1900, he walked without a limp and without the slightest effort.

Calculi Impacted in the Ureters.—David Newman writes of the pathology, symptoms, and surgical treatment of this subject. The calculus may be impacted in one ureter, the other kidney being competent, or the calculus may be impacted in one ureter, the other kidney being incompetent. The symptoms depend upon whether the morbid processes involve one or both kidneys. The blocking of the ureter is generally preceded by renal colic coincident with blood in the urine. The operative procedure depends upon the position of the stone.

Large Sarcomatous Neuroma of the Internal Popliteal Nerve.—George Buchanan recounts the occurrence of a large sarcomatous tumor of the trunk of the internal popliteal nerve following a blow on the leg. The leg had finally to be amputated. The tumor was a round-cell sarcoma. This case showed that nerves may be extensively infiltrated and disassociated with comparatively little degeneration resulting.

Five Cases of Complete Forward Dislocation of the Knee-Joint Occurring Simultaneously.— Ernest V. Eames reports these five cases, the result of an accident at the Shipley collieries, Derbyshire. All but one patient recovered. They all feel "a change in the weather" in the injured member.

A Clinical Lecture on the "Riding Fragment" in Fractured Leg.—By C. H. Golding-Bird.

A Case of Enterectomy by End-to-End Suture in a Boy Aged Seven.—By F. C. Wallis.

A Case of Uræmia Closely Simulating Cerebral Hemorrhage.—By Cecil Firmin Lillie.

On Double Castration for Tuberculosis of the Testes.—By F. A. Southam.

Twin Pregnancy with Central Placenta Prævia.—By David P. Gaussen.

Twelve Cases of Mauser Bullet Wounds. — By George Ashton.

Sclerema Neonatorum.—By John William Taylor.

Münchener medicinische Wochenschrift, April 10, 1900.

The Catgut Question.—Carl Lauenstein believes that the question has come to the point of definite solution, since during the past twenty years a whole series of methods of preparation have come up for securing a germ-free article. If infection occurs, it must be secondary, from the hands, air, skin, or mucous membranes. Attention must be paid to the best methods of using the catgut suture. Aseptic catgut should be further subjected to antiseptic processes. The possibility of making it germ-free, added to the advantages of its being absorbed, make catgut the best suture and ligature material. It will be surpassed only by some material having equally good qualities, while not swelling up in the tissues nor offering a favorable medium for bacterial growth. Various methods of sterilization are given.

Periosteal Transplantation of Tendons in Paralysis.—Fritz Lange says that orthopædics is no longer a trade, but a science. It must be wrested from the bandage makers, manipulators, etc., just as surgery a few years ago was taken from the hands of the barbers. He presents numerous illustrations and diagrams to show how transplantation of muscle directly to the periosteum acts better than when active muscle is attached to the tendons of paralyzed muscle.

The Treatment of Pes Valgus.—A. Hoffa presents an illustrated article, a new method of treatment for pes valgus, which, in recent years, has been distinctly separated from ordinary flat-foot. He thinks that by shortening the tendon of the tibialis posticus a decided advance in the treatment of the affection will be made.

Bacteriology of the Mechanico-Chemical Disinfection of the Hands.—By Ferdinand Schenk and Gustav Zaufal.

The Determination of the True Size of Objects by Means of the Roentgen Process.—By Professor Moritz.

The Newest Method of Field Treatment of Bullet Wounds.—By von Bruns.

On Restricting the Antiseptic Operative Field.—By G. Walcher.

A Pocket Sterilizing Apparatus.— By Dr. Bofinger. (Illustrated.)

Surgical Suture and Ligature Material.—By H. Braun.

Asepsis Contra Antisepsis.—By Otto Lanz.

French Journals.

Rheumatic and Neuropathic States.—Maurice Faure treats of conditions secondary to the grippe with persistent infections of the naso-pharynx. He concludes that these infections may persist for a long time, being accompanied by fever, malaise, intense fatigue, night sweats, insomnia, and loss of flesh. Articular and nervous affections may be due to toxins secreted in the infected cavities. These manifestations disappear rapidly under the influence of orrhotherapy in weak repeated doses.—*La Médecine Moderne*, April 11, 1900.

The Rôle of Engorgements of the Liver in the Predisposition to Pulmonary Phthisis and Secondarily in its Course.—Dr. Guerder gives thirteen observations, and discusses the causes, symptoms, nature, pathogeny, and treatment. The latter consists in the application of revulsives over the liver region, in intestinal antisepsis, regimen, and rules of hygiene, all of which are dilated upon.—*Revue de Thérapeutique Médico-Chirurgicale*, April 15, 1900.

Acute Dermatomyositis.—L. M. Bonnet speaks of this severe disease, which may prove fatal within a few weeks or months. The history, etiology, symptoms, forms, course, diagnosis, pathology, pathogeny, and treatment are given, together with a full bibliography. The only treatment is symptomatic, directed to the pain. Internal remedies seem useless.—*Gazette des Hôpitaux*, April 14, 1900.

Concerning Some Renal Accidents Observed in the Course of Acquired Syphilis.—Gabriel Delamare discusses the nature and frequency of renal complications of syphilis, and whether malaria may be, in such instances as he brings forward, the underlying cause and syphilis the determining factor.—*Gazette des Hôpitaux*, April 12, 1900.

Polymorphous Dermatitis.—L. Brocq presents with colored pictures a case of painful pruriginous circumscribed polymorphous dermatitis, and discusses its relationship to Duhring's disease. Successful means of treatment have not yet been found.—*La Presse Médicale*, April 14, 1900.

The Journal of Tropical Medicine, April, 1900.

Ticks and Tick Fevers.—L. W. Sambon describes the life history of ticks, and the diseases caused by the several varieties, such as redwater fever, louping ill, the disease of Miana, the disease of Tete, and various diseases of Central and South America. Few measures suggested for the destruction of ticks are adequate or practicable. A valuable remedy for immediate use is the powder of the pyrethrum flower, which should be dusted between the sheets of the bed. When a tick has fixed itself on the skin, the only indication is to induce the voluntary detachment of the animal by the application of a drop of olive oil, turpentine, benzene, or petroleum on the parasite, rubbing its ventral surface with a feather or spill of paper dipped in oil. Forcible detachment gives great pain, and the rostrum remains embedded in the skin.

The Endemic Centres of Plague.—In a second article on this subject, Frank G. Clemow reviews the history of the hill plague of India. The relation of the centres of plague in the Himalayas to the epidemic which has raged in India since 1896 has been the subject of much discussion. Either the disease developed spontaneously in Bombay, or it was imported from elsewhere. Some published facts seem to point to a possible importation of the plague to Bombay from its endemic home in the Himalayas. The only other alternative suggestions are that it came either from Central Asia or from Mesopotamia or Persia. The author considers each of these possible sources of infection in turn.

Peculiar Condition of the Hair.—R. C. Bennett, of Trinidad, describes a peculiar condition of the hair in a negro child, illustrating his description with photographs. The hair grows luxuriantly and separates itself into thin rope-like strands, made up of closely interwoven meshes. The strands measure from six to twelve inches in length. The parts nearest the skull are black; the distal ends are a pronounced red, due to exposure to the sun. The condition is congenital. There is much superstition among the natives affected, and children are obliged to carry this abnormal mass until they are old enough to cut it away with their own hands. After cutting, the condition does not recur.

Upon the Part Played by Mosquitos in the Propagation of Malaria.—By George H. F. Nuttall.

A Sketch of the Leper Asylums, British Guiana.—By F. A. Neal.

American Journal of the Medical Sciences, May, 1900.

Senile Bronchitis.—Reynold Webb Wilcox discusses the bronchitis of the aged and the best measures for its amelioration. He condemns the employment of opium or any of its alkaloids, which, he says, leads simply to an accumulation of secretion in the lungs, killing the patient by asphyxia, or more gradually by a septicæmia, resulting from gradual absorption of putrid material. The best remedies are strychnine and ammonium carbonate. When the expectoration is markedly purulent and foul, much good may be effected by the administration of creosote carbonate in twenty-drop doses in sherry every four hours. The inability to exercise, existing in many cases, may be compensated for in a measure by massage. Finally the greatest care must be taken to improve the patient's general health by regulation of the diet, attention to the skin, the ordering of suitable clothing, etc.

An Analysis of Fifty-One Cases of Pneumothorax.—John Lovett Morse says that from seventy to eighty-five per cent. of all cases of this affection are tuberculous in their origin. The prognosis of traumatic pneumothorax is good, and that of the condition when secondary to abscess of the lung is fair. Tuberculous pneumothorax is twice as frequent on the left side as on the right. Its onset is usually rather acute, sudden pain and dyspnœa being the most common initial symptoms. Recovery occurs in about fifteen per cent. of all cases, but these generally terminate in death from pulmonary tuberculosis later. The pneumothorax is usually complicated by the presence of fluid, but it may be simple. Fluid is almost always present in cases lasting longer than a week, and it is more often purulent than serous.

The Acute Pneumonic Form of Tuberculosis.—Arthur W. Elting reports a case of this nature, and sums up the main clinical features of the disease as follows: The onset is often without a definite chill. The fever at first is regular, irregular, or remittent, and is practically always of a remittent character in the later stages. Marked dyspnœa and cyanosis are usually absent. The consolidation is of variable extent. There is pain in the side, with cough and a sputum, which is at first typically pneumonic, but in a week or ten days may assume a greenish tinge, and will then be found to contain tubercle bacilli. The leucocytosis usually associated with acute lobar pneumonia is absent, in some cases at least, in acute tuberculous pneumonia.

The Differential Diagnosis of Ectopic Gestation.—Edward P. Davis reports three cases illustrative of the difficulty of diagnosis in many of those cases. He says that shock referred to the abdomen occurring in woman capable of pregnancy should invariably cause a suspicion of ectopic gestation, and if the shock is pronounced, the abdomen should be opened and any abnormal conditions there found should be promptly treated.

A Critical Summary of the Literature on the Surgery of the Stomach.—By Charles H. Frazier.

A Case of Multiple Neuro-Fibromata of the Ulnar Nerve.—By W. W. Keen and William G. Spiller.

Two Cases of Tabes Dorsalis in Negroes—Husband and Wife.—By Albert Phillip Francine.

The Clinical Aspect of Plague.—By Frank G. Clemow.

Zeitsch. f. diätet. und physik. Ther., vol. iv., No. 1, 1900.

Therapeutic Use of Vegetable Diet.—Th. Rumpf reports his experiments with a subject fed on a vegetable diet. Some vegetarians take vegetables pure and simple; others add milk, cheese, and butter to their diet. All animal food is excluded. Vegetable diet has certain dangers, namely, an underfeeding, and in women often a chlorosis with marked weakness. The advantages of a vegetable diet lie in the fact that overfeeding, especially with proteids, is avoided, that the intestinal function is increased, and that large and free movements occur. The number of pulse beats per minute is lessened with vegetable diet. In one case Barlow's disease and in another a severe rickets followed the prolonged use of Lohmann's vegetable milk. In cardiac weakness a pure vegetable diet is contraindicated. Vegetable diet is most useful in chronic constipation.

Should Physicians Suffering from Pulmonary Diseases Seek Ship Service?—Emanuel Freund relates his observations as based upon a two years' experience. During the first five months the catarrhal symptoms, bad breathing, and cough disappeared. The winter storms caused exacerbations of the old catarrh. In all, a two-years' sea-voyage produced (1) a marked increase of the bronchial catarrh, (2) a weakness of the digestive apparatus, (3) a loss of body weight amounting to twelve pounds.

The Newer Methods of Treating Lupus.—O. Lassar discusses at length, with eighteen photographs, the methods of cauterization by superheated steam, phototherapy, and radiotherapy. All three have improved numerous inoperable lupus cases.

The Osmotic Pressure of the Secretions in their Relation to the Occurrence and Amelioration of Disease Processes.—By Alexander Poehl.

Nourishment of Prisoners.—By Felix Hirschfeld.

Zeit. für klinische Med., vol. xxxix., Nos. 5 and 6, 1900.

Pathogenesis of Eclampsia.—W. Stroganoff concludes that eclampsia is an acute infectious disease, caused by a volatile contagium which usually enters the system of the woman by way of the lungs. The causative agent possesses a weak degree of virulence, and in some women finds toward the end of pregnancy, during parturition, and in the early days of the puerperium favorable conditions for its development. The same may be conveyed to the fœtus and attacks boys and girls indifferently. The contagious element of the disease possesses great resistance and retains its virulence for about three weeks. The incubation of the disease is most generally from three to twenty hours. Being an infectious disease of a contagious nature, it occurs mostly in lying-in institutions and attacks healthy women. Primiparæ, twin cases, and nephritic subjects are particularly predisposed. Cases must be isolated and the rooms and attendants disinfected.

Experiments upon the Metabolic Processes in a Diabetic Patient, with Special Reference to the Sugar Formation out of Proteids and Fat.—Hugo Lüthe concludes that certain forms of proteids, namely, animal tissues, when given to diabetic subjects are not indifferent as to the elimination of sugar; indeed, after the use of a casein and pancreas diet the sugar elimination is greater than that following the ingestion of roast beef and the calf thymus. The sugar excretion is greatest after the use of roast beef. If but little proteids and no carbohydrates are used for food, then a great amount of fats must be oxidized. Daily observations and analytical tables accompany the article.

The Blood Pressure in Healthy Persons.—S. Jellinek concludes that (1) normal blood pressure varies within very wide limits, 80 mm. Hg. being the minimum and 185 mm. Hg. the maximum; (2) that in many instances the blood pressure of the right hand is greater (one-quarter) than the left; (3) external irritations and influences—baths, marches, shooting, etc.—do not show any fixed effect upon the blood pressure. In some there is increase, in others decrease of blood pressure, while in others again there is no visible change. (4) No relation could be ascertained between blood pressure and pulse count.

Leucopenic Anæmia.—A. v. Decastello and Ludwig Hofbauer say that in all cases of anæmia uncomplicated with glandular involvement, there is an increase in the percentage of lymphocytes and correspondingly a diminution in the quantity of the multinuclear neutrophile elements. Leucopenic anæmias associated with glandular disease (spleen, lymphatic glands) show a varying quantity as to the relative percentage between the multinuclear and uninuclear elements. Numerous cases of different anæmias without apparent changes in the lymphatic apparatus are tabulated.

Experimental and Clinical Tests with the Riva-Rocci Sphygmomanometer.—Gumprecht mentions the advantages of this instrument over others such as Hürthle's, Mosso's, Gaertner's, and Basch's. The idea of the instrument is based upon the obliteration of the pulse by means of a measured pressure. Its use with experimental and clinical observations at all ages, both in health and disease, is given at length with charts, diagrams, and illustrations.

Sensory Crises in Tabes Dorsalis.—F. Umber states that while gastric, enteric, laryngeal, vesical, cardiac, testicular, and ophthalmic crises have been occasionally reported, the disturbances in the course of sensory nerves, such as those of smell and taste, are little known and seldom observed. The full history of a case in point is given.

Pentosuria.—Manfred Bial describes two instances of chronic pentosuria occurring in his practice; only two other cases have thus far been reported. Unlike glucose there is no fermentation and no polarization to the right. Other tests and reactions are formulated.

Gonorrhœal Peritonitis.—By Metzner.

Archives Générales de Médecine, April, 1900.

Pathological Thirst in General and the Thirst of Bright's Disease in Particular.—M. Klippel distinguishes the following groups of pathological thirst: (1) Compensatory thirst, as, for example, in cholera or after hemorrhage; (2) necessary thirst from polyuria for the elimination of a substance such as sugar, or urea, or chlorides, found in excess in the blood; (3) the dyscrasic thirst from alteration of the blood; (4) the thirst of the nervous diseases. The thirst of Bright's disease is found three or four times in every ten cases of interstitial nephritis in the arteriosclerotic patient. There is a sensation of heat and dryness almost always present in the mouth and pharynx. The mouth is not healthy in appearance; the saliva is diminished. Thirst is more frequent in the arteriosclerotic with Bright's disease than in the patient suffering from parenchymatous nephritis, when the quantity of urine is much less. This variety should be classified under the dycrasic group.

Lesions of the Thyroid Gland in Tuberculosis.—H. Roger and M. Garnier conclude that in the thyroid gland, as in other parts of the organism, tuberculosis can cause lesions the most diverse, and at first sight the most unlike. On more careful examination, however, they are more simple than would appear at the first glance. There are, indeed, two kinds of lesions: the phenomena of degeneration caused by the bacillus or its toxins; the defensive reactions or processes of cicatrization wrought by the organism. The initial lesion is a cellular degeneration. If the bacilli are located at certain points of the thyroid the lesions of the cells will be followed by abundant diapedesis, and the leucocytes forming clusters about the colonies of microbes will give rise to tuberculous granulations. At the same time the diffusion of the toxin will cause in the rest of the gland diffuse or systematic sclerosis.

Curative Orrhotherapy of Traumatic Tetanus.—M. Loeper and R. Oppenheim state that the intracerebral injection in traumatic tetanus is not so successful as was first hoped. The statistics show it to be inferior to all other methods of treatment. This probably results from the dangers inherent to its method of introduction. Subcutaneous injection appears at present the most rational treatment for tetanus. The number and quantity of the injections should be proportional to the intensity of the process. The method will probably save a number of cases. Intravenous injection has been successfully tried.

Two Cases of Vertebral Ankylosis of Gonorrhœal Origin.—P. Lereboullet and H. Bernard believe that the history of these two cases proves that a true vertebral ankylosis can be caused by gonorrhœal rheumatism.

Practical Method of Direct Estimation of the Quantity of Hæmoglobin in the Blood.—By T. W. Tallquist.

Revue de Chirurgie, April 10, 1900.

Intra- and Peri-Hepatic Suppurations of Typhlo-Appendicular Origin.—Ed. Loison says that although the coexistence of appendicitis and of hepatic abscess is rare, still enough cases exist to show a causal relation between them. Microbes can be transmitted from the region of the appendix through the bile ducts, the hepatic artery, the portal vein, the lymphatics, and the peritoneum. Dieulafoy believes that in a closed appendix the colon bacillus acquires increased virulence and expansive force which enable it to migrate through the blood and lymph channels and invade distant organs. The author leans to the belief that impaired power on the part of the liver to destroy micro-organisms is the chief etiological factor in the production of the disease. True prophylaxis of hepatitis and peri-hepatitis will consist in removal of the appendix as soon as possible after the onset of appendicitis.

Advantages of Anterior Incision in Certain Cases of Resection of the Hip.—M. Rochet, comparing the advantages of anterior and posterior incision, concludes in favor of the former, as ankylosis in good position is more rapidly and easily obtained. Dressings are more easily applied, and with little disturbance of the patient, who can remain lying on the back during the process. The articulation has a relative firmness from the first dressing. The likelihood of secondary infection by inoculation of the wound is greatly diminished. The operation should, as a rule, be reserved for suppurating cases; still when there is painful osteo-arthritis, with night exacerbations and sensitiveness to the slightest movement or pressure, in spite of bandages and immobilizing apparatus, resection should be performed.

Epithelioma of Both Breasts.—A. Le Dentu and H. Morestin describe a case which occurred in a young woman aged twenty-seven years. There was an early stage of induration and tumefaction of both breasts, which came on very suddenly, each breast in two days' time becoming as large as the head of a child of six years. Acute mastitis was followed by a nodular stage, during which ascitic peritonitis developed; coincidently with the subsidence of the latter affection, the breasts became softened and smaller. In a fourth stage there was evidently a neoplasm of both breasts, but its course was long and torpid, in decided contrast with the precipitate onset. At the autopsy, the growth was found to be epithelioma.

Some Points in the Pathological Anatomy of Gastric Cancer.—B. Cunéo says that the extension of cancer of the stomach is distinguished by three peculiarities: early and extensive invasion of the submucous tissue, a tendency to extend toward the lesser curvature, and habitual integrity of the duodenum. Like all varieties of epithelioma, cancer of the stomach has a tendency to invade the lymphatic ganglia. Histological researches have shown that all the parastomachal glands should be extirpated, the endeavor being to remove them with the tumor. To extirpate the glands of the lesser curvature, this portion of the stomach will have to be resected as far as possible.

Scapulectomy, or Primary and Total Ablation of the Scapula, with Preservation of the Arm, in Cases of Malignant Tumors of the Bone.—By Lucien Picqué and Dartignes.

Uterine Fibroma with Multiple Pedicles.—By F. Terrier and E. Reymond.

Inoperable Cancer of the Vagina Treated with Local Applications of Methyl Blue.—H. R. Coston relates an instance of cancer of the uterus and vagina to within an inch of the vulvo-vaginal orifice, in which hemorrhage ceased and the condition improved under applications every second day of a three-per-cent. solution of methyl blue.—*Therapeutic Gazette*, April 15, 1900.

Society Reports.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

FIFTH TRIENNIAL SESSION.

Held at Washington, D. C., May 1, 2, and 3, 1900.

First Day—Tuesday, May 1st.

The first session of the fifth meeting of the Congress of American Physicians and Surgeons was convened in the Lafayette Square Opera House at 2:45 P.M., with Professor Henry Bowditch, M.D., LL.D., D.Sc., in the chair, and William H. Carmalt, M.D., secretary.

After introductory remarks and announcements, the scientific business of the congress was taken up.

Adaptation of Pathogenic Bacteria to Different Species of Animals.—This paper was by Prof. Theobald Smith, of Boston. The doctor showed that medical science and medical art were concerned chiefly with the phenomena of human disease. All that medical science desired to know was the series of causes or antecedents leading to any given disease and the series of phenomena which unfolded itself within the body during disease. Medical art wished to know where human ingenuity might enter to modify, suppress, or eliminate portions of this series, so as to interfere with the progress of the disease and bring it to a standstill. By general consent hygiene devoted itself to the external phenomena; pathology, to the internal. A small proportion of the infectious diseases of man and a large proportion of the infectious diseases of higher animals were transmissible, or at least inoculable upon smaller animals, producing in them diseases having more or less constant characters. The range of infectiousness varied considerably and arbitrarily without any reasons at present assignable. The range of infective power seemed to a certain extent to coincide with the readiness with which the bacteria could be artificially cultivated on various substrata; or, in other words, with their degree of saprophytism. Thus the plague bacillus, the colon derivatives, the rabid septicæmia group, and anthrax, were quite readily cultivated, and their range was very wide. The investigation of infectious diseases of animal life had brought before us another phenomenon which was of considerable importance. Certain bacteria causing disease among different species had certain affinities which caused us to classify them together, and which enabled us, at the same time, to separate them clearly from other pathogenic groups. One of the most important of these groups consisted of derivatives of the colon bacillus, which produced epizoötics among swine, guinea-pigs and field mice, and spermophiles, which had been found associated with disease in horses, cattle, and certain birds. The tubercle bacillus furnished us still another illustration. The avian type has been recognized as a variety for some years. Similarly the tubercle bacillus of cattle had certain uniform characters which had thus far been found in culture from the human subject. There was one other question which was more or less associated with the subject, namely, the fluctuation of the virulence of pathogenic organisms and the bearing of this upon the appearance of infectious diseases in epidemic form. The commonly accepted view of the gradual self-limitation of epidemic diseases was the exhaustion of susceptible material. The recrudescence was similarly ascribed to the reappearance of a young, susceptible generation. Thus, the reappearance of the eastern plague after an interim of months was ascribed by one observer to the new generation of rats. If we indulged in a little speculation along teleological lines we should see that the attenuation of virus limited to one host was not an unreasonable hypothesis. We could assume that all parasitism tended toward a more or less harmless symbiosis. Dr. Smith was inclined to think that the great specific energy of many disease germs was acquired in early geological ages, possibly in animals of very different type from those now living. But it was not improbable that the process of making pathogenic bacteria was going on now in the animal world, if we noticed only that these bacteria had been transported by some accident from their unseen habitat to species which happened to be susceptible. In the South the micro-organism was practically a harmless symbiont of the blood. North of a certain line it produced a highly fatal disease in the same species, which endangered and might entirely interfere with the normal transmission of the blood parasite itself.

After the reading of Dr. Smith's paper, the president announced that opportunity for general discussion would be given after the reading of all the papers.

The Physiological Resources of the Body in its Defence against Bacteria and their Toxic Products.—Dr. Samuel J. Meltzer, of New York City, read this paper.

A Study of the Mechanism of Agglutination.—Prof. Harold C. Ernst, of Boston, presented this paper. He said that in the early observations upon the agglutinating properties of the serum of immune animals the facts in the case were developed with motile bacteria, as with Charrin and Rogers' (1889) studies with bacillus pyocyaneus in cultures in the serum of immune animals, and Pfeiffer's reaction in cholera, typhoid, etc., and it was notably the case now that the most definite reactions were obtained usually with motile bacteria. After reviewing the literature on the subject, he said that the relationship between the agglutinating property and the bactericidal property was indefinite from the point of view of immunity. The rat's serum, though extremely bactericidal, did not agglutinate at all. In the dog, also with a bactericidal serum, agglutination occurred very remarkably. Nor were the origin or chemical properties the same. The studies already made seemed to support the principle that the agglutinating property did not lie in and was in no way connected with the flagella of the bacteria concerned; that agglutination was not to be accepted as a specific property connected with a condition of immunity, although this was a difficult idea to give up; that a homologous nature of agglutination could be considered a positive characteristic, for how, then, could be explained the clumping of typhoid bacilli by diphtheria antitoxin? Finally, no universally applicable explanation of agglutination had yet been offered.

The Relation of Bacteriology to Clinical Medicine.—This paper was by Dr. Richard C. Cabot, of Boston. He said that bacteriology was in the closest relations with clinical medicine through the help it gave us in clinical diagnosis. Such assistance was given through the demonstration of the bacilli themselves in secretions or in the products of disease; through the agglutination test, and through the injection of soluble products of the growth of certain bacilli (tuberculin, mallein). So far only two, or possibly three, such bacteriological tests could be said to be in general use throughout this country, viz., the search for the tubercle bacillus in sputa, the search for the diphtheria bacillus in the throat, and possibly the agglutination test for typhoid. Other such aids to diagnosis, which seemed likely to come into more general use, were the examination of the blood, the sputa, the urine, the fæces, the cerebro-spinal fluid, the urethral, vaginal, and uterine secretions, the nasal, pharyngeal, and conjunctival secretions. Next to typhoid, Malta fever seemed at present the disease in the diagnosis of which we were most helped by the agglutination tests. To other diseases the diagnostic assistance of the agglutination reaction had not extended. Individual observers had reported success in the attempt to apply the serum tests to diagnosis of tuberculosis and croupous pneumonia, but their results had not been extensively confirmed. To a limited extent we were able to reverse the use of the agglutination tests. Instead of using the well-identified bacillus to test the body fluids of a doubtful case, we could use the body fluids of a well-identified case to test a doubtful bacillus. Of the diagnostic use of tuberculin, it was only necessary to say that, despite the warnings of Virchow, it had passed into general use, and deserved to be utilized much more widely still. The few who objected to its use were for the most part those who had not tried it. The use of mallein was well established. Statements regarding prognosis were apt to present an unrivalled material for the study of the art of hedging. Bacteriology was helping us to make our prognoses less meaningless. The clinicians had realized how difficult it was to interpret the results of bacteriological examinations; for example, how to draw the properly limited inference from the announcement of a positive Widal reaction, to be enough and not too much alarmed by a positive reaction to tuberculin, or by the finding of the Klebs-Loeffler bacilli in a patient's throat. Especially was this true when relatively indefinite quantitative expressions entered into the bacteriologist's report. Only he who made the test could really appreciate what was meant in a given case by such phrases as "very numerous tubercle bacilli, very virulent streptococci, very motile organisms, very numerous malarial organisms, etc." The municipal laboratory of the city of Boston now offered to examine for physicians material suspected as coming from any of the following diseases: Typhoid, tetanus, tuberculosis, rabies, diphtheria, malaria, glanders, influenza, pyogenic organisms, gonorrhœa.

Bacterio-Therapeutics with Especial Reference to Tuberculosis.—This paper was read by Dr. Edwin R. Baldwin, of Saranac. The speaker dealt with the various uses of bacteria and serums in the prevention and treatment of disease, with a more detailed account of those in tuberculosis. Living bacteria were little used except in vaccination for variola and anthrax. Dead cholera, plague, and typhoid bacilli were useful in prevention but irrational in treatment. Diphtheria and tetanus were as yet the only conspicuously antitoxic serums of practical value. Streptococcus, pneumococcus, cholera, typhoid, plague, and recurrent-fever serums were either bactericidal or bacteriological, and of greater value in immunization than in treatment. There were many extracts of tubercle bacilli under the general name of tuberculin, which the speaker enumerated and described. No permanent immunity was produced by any of them, though the new tuberculins had some immunizing power in animals. The method was not applicable to man, nor safe, because it was likely to produce chronic poisoning, even in healthy subjects. Research at present aimed to discover and utilize the mechanism of relative immunity produced by injections of bacillus substance. The nature of the tuberculin reaction was of importance. Of the various theories promulgated, that which assumed a ferment action, chiefly produced by secretions from leucocytes, was most in line with present knowledge. Many bacterial extracts, nucleins, and digestive albumoses excited the same reaction as tuberculin produced. Tuberculin used therapeutically had only a limited application, and as it did not immunize for any length of time, it might not be better than other substances that could produce local hyperæmia. The production of local hyperæmia was rational in lupus, tuberculosis, peritonitis, and, to a limited extent, in pulmonary tuberculosis. Serums were not yet successful as to antitoxic properties. They might be bacteriological or bactericidal. There was still hope for some efficient serum or extract of tissues, though possibly it might not be antitoxic.

The Etiology of Malarial Fevers.—PROF. WILLIAM S. THAYER, of Baltimore, read this paper. He was of the opinion that the disease was acquired through the gastro-intestinal tract, especially by drinking water; through inhaled air; by the bite of insects. The experiments of Celli, Marino, Zeri, Grassi, and Feletti were strong evidence against the idea that the disease might be acquired through the gastro-intestinal tract; while a careful study of the literature, as well set forth by Norton, revealed the utter lack of evidence in support of such an idea. With regard to the theory that the disease was acquired by inhaled air, it could only be said that while some general facts spoke in its favor, no positive evidence in its support had ever been adduced. That the disease might be acquired through the bites of insects, and especially of mosquitos, had become an attractive hypothesis. It then might be considered as proven that the malarial parasite possessed an extra-corporeal cycle of life, which was completed in the stomach wall of mosquitos of the genus Anopheles, and that members of the genus Anopheles were capable of transmitting malaria from infected to non-infected individuals. The doctor then reviewed the bites of insects indigenous to certain localities in relation to the pathological effects, and especially referred to the class of mosquitos which infected the suburbs of Baltimore.

The Bacteriology of Dysentery.—PROF. SIMON FLEXNER, of Philadelphia, read this very interesting paper. He said that there were few subjects in medicine that had attracted more attention than dysentery. Its history dated from the earliest written records, and its ravages, unlike those of many of the pestilential diseases, had continued perfectly unabated to the present day. The most ancient writing upon medicine—the Papyrus Ebers—contains allusions to dysentery; the oldest Indian medical writers referred to it under the name *atisar*, while Herodotus spoke of its prevalence in Thessaly. Hippocrates, however, was the first to regard dysentery as an independent disease. The speaker said that he should hesitate to bring before this audience a subject so time-worn, were it not for the fact that the nature and more especially the etiology of dysentery were among the problems which still awaited a satisfactory solution. The imperfection of our knowledge of the nature of dysentery was not due to lack of opportunity for, or of energy in, its study. The literature contained some of the most distinguished names among clinicians and investigators, thanks to whose efforts its clinical history, its epidemiology, and, to a less extent, its pathological anatomy had received partial elucidation. Nor had the disease, in the past quarter of a century, escaped the attention of the bacteriologists, although it must be confessed that the results of somewhat extensive studies along these lines had been far less conclusive than might have been predicted. Given a disease that was never entirely absent from temperate and tropical regions, that appeared with epidemic severity, that permitted of easy access to the materies morbi, one would certainly have been tempted to predict that the success achieved in so many other and apparently no less difficult fields would probably be repeated. That the attempt to establish a common etiological factor for all cases of dysentery had thus far failed, this audience need not be reminded. That this failure emphasized the existence of several pathological states for which the term dysentery was employed merely as the collective designation, need not be defended here. But that these conclusions regarding the disease might, after all, not be in keeping with the facts, was at least open to suspicion. When we recalled the protean nature of other infectious diseases, among the most common of which were tuberculosis and typhoid fever, there could be no *a priori* objection to the hypothesis that the causative agency of dysentery need not necessarily vary for each of the many types of the disease that had, from time to time, been distinguished. For the purpose of his inquiry he should consider briefly the clinical and pathological types. That the lines of demarcation between the several clinical and pathological types should be inaccurate was not a matter of wonder. Both the beginning and the end of any given instance might vary very widely, and the symptoms and lesions of cases arising sporadically in temperate climates might agree with those of dysentery occurring endemically in the tropics or epidemically in both localities. The terms "catarrhal," "tropical," "epidemic," and "diphtheritic" were far from signifying sharp-cut entities. The clinical manifestations and pathological lesions of the catarrhal variety occurred in all kinds of dysentery and in all places where the disease prevailed. Ever since the time of John Hunter there had been those who, upon pathological-anatomical grounds, had separated the endemic from the epidemic disease, and the line had been even more sharply drawn during the past decade, since the discovery of the amœba coli in its relations to tropical dysentery. But the distinction between tropical dysentery, which was characterized by ulceration and thickening of the intestines—especially the colon, the lesions beginning in the submucous coat of the gut—from the epidemic disease in which a false membrane existed, usually associated with ulceration without any primary involvement of the submucosa, was far from being sharp and constant. In this country diphtheritis had not been commonly observed in the ulcerative and amœbic form of dysentery, while in Egypt the two pathological conditions were not infrequently found together.

ASSOCIATION OF AMERICAN PHYSICIANS.

Fifteenth Annual Meeting, Held in Washington, D. C., May 1, 2, and 3, 1900.

EDWARD G. JANEWAY, M.D., OF NEW YORK, PRESIDENT.

First Day—Tuesday, May 1st.

The President's Address.—DR. EDWARD G. JANEWAY, of New York, in this address spoke of the advancement made in the last few years along the lines of pathology and chemistry, and in looking back had but one regret, *i.e.*, that of lost opportunities. He advised the younger members of the association to work assiduously for the advancement of true pathology and true chemistry.

An Experimental and Clinical Study of Acid Intoxication.—DR. C. A. HERTER, of New York, the author, being unavoidably absent, his paper was read by the secretary. Experimental evidence showed that calcium oxalate was precipitated on the addition of ninety-five-per-cent. alcohol. By this means one was able to separate it in the urine. In certain diseased conditions, such as melancholia, nervous fears, and indigestions, the amount of oxalic acid was markedly increased. On a diet free from oxalates, such as milk, no oxalates appeared in the urine, but on a mixed diet, as much as 67 mgm. of the oxalate might be excreted in twenty-four hours. Much of the experimentation had been done on dogs. When a dog was fed on a sugar diet no symptoms made their appearance until after about six weeks; then the dog had attacks of nausea and vomiting with interrupted diarrhœa, and organic acids and oxalates appeared in the urine. This went to show that the oxalates were formed in the body. The author raised the question of where the oxalates were formed in the body. He claimed that they were produced in the stomach of the dog by a ferment. In health there were no oxalates formed, but in certain morbid conditions in which there was a deficiency of hydrochloric acid. in the stomach, oxalates were formed there, probably by an organized ferment.

Dr. Tyson, of Philadelphia, said that if one examined the urine of certain individuals, apparently in perfect health, either during the day or night, one would find oxalate of calcium in the urine. He agreed with the author that a milk diet eliminated the oxalates from the urine.

Notes on Diabetes.—Dr. James B. Herrick, of Chicago, read this paper. He spoke of the occasional low specific gravity of the urine in diabetes, and said it was even lower than the normal. In one case cited, a man who had been drinking beer all the morning came into his office partially intoxicated and asked for a urinal. He passed 1,100 c.c. of urine having a specific gravity of 1.010. This specimen gave the usual reaction for sugar. Out of twenty-seven cases, twelve per cent. had had a specific gravity of 1.010 or less, and some as low as 1.004. Hence all urine should be tested for sugar, regardless of its specific gravity. Dr. Herrick also spoke of casts in the urine during diabetic coma. He said that polyuria was often associated with nephritis. In some cases he had found a trace of albumin, with a number of granular casts. Just preceding the attack of coma, casts became very numerous. Formerly this had been considered accidental. He had seen cases in which casts appeared in the urine twenty-four hours before coma came on; and he thought, therefore, their presence might forewarn one of the coming attack. The pathology was unknown, but he thought it probable that the condition was due to a toxico-chemical change taking place in the excreting cells in the kidneys at or around the loops of Henle.

The Relation of Uric-Acid Secretion to Epileptic Attacks.—Drs. James J. Putnam and F. Pfaff, of Boston, presented this communication, which was read by Dr. Putnam. After examining the urine excreted in twenty-four hours, and over a period of time including several seizures, he had come to the conclusion that there was no difference in the amount of uric acid excreted before or after the seizures.

Report of a Case of Acute Ascending Paralysis, Showing Hæmatoporphyrinuria.—Dr. Charles G. Stockton, of Buffalo, read this paper. It was the case of a young woman, a servant by occupation, who was hysterical and anæmic. Her urine was much darker than normal, and contained a trace of albumin. Sulphonal and salicylates failed to give relief. She was admitted to the Buffalo Hospital in September, and the physical examination showed a higher pitch at the left apex of the lungs. She had several areas of anæsthesia over the breast and buttocks, and she complained of weakness and loss of sensation in the legs. The urine was claret-colored, and remained so until the end. Her temperature was 100° F. Ophthalmoscopic examination showed optic neuritis. The patellar reflex responded slightly. She grew rapidly worse, and finally died. No autopsy was obtained. The claret-colored urine was examined most carefully. No xanthin or indican bodies were present. The color was not due to sulphonal, he said, for she had not taken it for two weeks. It was due to the pigment depending upon hæmatoporphyrinuria, which, as he thought, bore a direct relation to the inflammation of the spinal cord.

Dr. J. J. Putnam said he had had a similar case associated with multiple neuritis and progressive anæsthesia, with claret-colored urine. The patient lived thirteen days. The autopsy showed no change in the spinal cord.

Dr. E. G. Janeway said that the discussion reminded him of a lady who had been in the habit of taking trional, from gr. x. to gr. xx. every night for a year, to make her sleep. She was taken suddenly with nausea and vomiting and developed a mitral insufficiency and a general neuritis. She recovered.

The Relative Infrequency of Acute Transmissible Diseases during the First Year of Childhood, with a Discussion of the Probable Reasons for the Same.—Dr. A. C. Abbott, of Philadelphia, read this paper. He had some very interesting charts showing the percentage of death rates of children from the first to the tenth year, deaths being considered from measles, scarlatina, and diphtheria. The deaths from measles in children one year old were 27.4 per cent., and in those five years old 64.8 per cent. In children three months old the deaths from measles were 2.7 per cent., and in those of six months 7.7 per cent. He thought this could be explained without considering acquired immunity, and that it was due to the period of nursing. He thought that the mother conveyed something to the child through her milk which caused the child to become immune.

Dr. George B. Shattuck, of Boston, did not agree with the author as far as diphtheria was concerned. He thought that there was some other cause besides that of immunity from the mother's milk which kept a three-months-old child from having the disease.

Recurrent Vomiting in Children.—Dr. J. P. Crozer Griffith, of Philadelphia, read this paper. He reported four cases. The first one was a mild case of vomiting, lasting one day, and followed by recovery. The second case was more severe. The child had been sick four or five days and was obstinately constipated. On the fourth day the bowels moved, but this did not relieve the symptoms. Some bloody mucus escaped from the child's mouth, the patient being too weak to vomit. He had advised morphine hypodermically, and when the child seemed at the point of death the symptoms abated and the child recovered. The third case was similar, but an operation was performed for a supposed appendicitis, and the child died. The fourth case was complicated by nephritis, abdominal pains, sighing respirations, and slow pulse. It terminated fatally. Dr. Griffith said, in closing, that the exhaustion in these cases was excessive, so that the physician felt death was inevitable, but the change for the better came suddenly. The attacks lasted from one to ten days and occurred at irregular intervals. He thought that there was a tendency to outgrow the disease, and that it was probably due to some toxicity of the blood.

Dr. Stockton, of Buffalo, said that the vomited matter was pure gastric juice. He thought it occurred most frequently during the third and sixth month, and was a neurosis. He had never seen any deaths reported.

Dr. Johnson said he had had a case of coffee-ground vomiting, followed by rapid prostration, cyanosis, and cold extremities. The patient seemed to be just on the point of death when he began to improve. The condition seemed to be due to precocity of the child and an inherited neurasthenia, and not due to cold or tonsillitis. In the treatment, rest was of the first importance. He believed in hypodermics of water and the administration of food by rectum.

Sanitarium Treatment of Pulmonary Tuberculosis and its Results.—Dr. E. L. Trudeau, of Saranac

Lake, read this paper. In speaking of the so-called pre-tuberculous stage, he thought that the x-rays would give additional evidence, for a slight shadow might be seen corresponding to areas of consolidation. Tuberculin raised the temperature and made the diagnosis. He generally gave 1 mgm. as an initial dose. The treatment could be summed up in the words, rest, food, restoratives. It was customary to immobilize a tuberculous joint, and the same should be done with the lungs. Dr. Trudeau gave a number of statistics showing the results of sanatorium treatment. He had had twenty-three per cent. of cases apparently resulting in cure, but, he added, "Time was the only test of cure."

Dr. Bridges, of Los Angeles, said that he thought three-quarters of the cases of pulmonary consumption could best be treated outside of institutions.

Dr. Solis-Cohen, of Philadelphia, asked what Dr. Trudeau meant by rest, whether he meant rest of the lungs or of the body as a whole. In his experience exercise of the lungs was beneficial.

Dr. Trudeau closed the discussion. He said that if the temperature was 99°–99.5° F. once or twice during a week, and there were slight disturbances of health, this was enough to make him suspicious of the presence of tuberculosis.

Phlegmonous Gastritis, with Specimen.—This paper was read by Dr. Francis P. Kinnicutt, of New York.

Dr. William H. Welch, of Baltimore, recalled a similar case, in which death had resulted from peritonitis.

Dr. Janeway said he had had a case which had been diagnosed as perigastritis, general peritonitis being absent.

AMERICAN SURGICAL ASSOCIATION.

Twenty-first Annual Meeting, Held in Washington, D. C., May 1, 2, and 3, 1900.

Surgery of the Stomach.—Dr. Robert F. Weir, of New York, introduced the general topic for discussion, viz., "The Surgery of the Stomach," by reading a paper on "Duodenal Perforation." (See page 749.)

Gastric Ulcer.—Dr. W. L. Rodman read a paper on gastric ulcer, non-perforating, with especial reference to hemorrhage. Passing over etiology, pathology, differential diagnosis, and prognosis, he spoke of the importance of intelligent medical treatment. From one-half to three-fourths of all cases resulted in cure thus in from four to five weeks. Kocher said that after five weeks there was danger, if the ulcerative process continued, of neoplastic change. Hence the speaker advised operation in cases which, after five weeks, refused to yield to treatment. He asked, should the ulcer be excised in cases in which hemorrhage was not prominent? It seemed doubtless the best treatment, because of neoplastic possibilities. The radical treatment was gaining in favor, but it must be conservatively used. The adhesions were of very great importance in determining whether partial gastrectomy or pylorectomy should be chosen. If they were very dense posteriorly, gastrectomy might be necessary. Gastro-enterostomy relieved hyperchlorhydria, and was of great value if shock was present, or if, when dense adhesions were present, the case could not stand partial gastrectomy. This was possible only in the absence of neoplasms. The indications for operation were: (1) Hemorrhage. The first time this occurred it must be treated medically. (2) If the patient was rallying from shock, operation should not be done, but venous infusion given. Only eight per cent. of cases resulted fatally from primary hemorrhage. (3) In a case in which there had been one free hemorrhage, with recovery, bleeding again two or three days later, operation seemed indicated. The speaker cited many cases to show that there should, at this time, be surgical intervention. Speaking of pylorectomy, he said it seemed the ideal operation when gastro-enterostomy was not necessitated by posterior adhesions, and when the neoplasm, if present, was localized and young. Gastro-enterostomy had a very useful future in multiple ulcer, and when the bleeding point could not be found. Excision of the ulcer was hopeful, and should be used unless adhesions were present. Ligation *en masse* promised well and should be practised by placing Lembert sutures on the outside as a first step. In closing, Dr. Rodman said that operation for acute hemorrhage was indicated with limitations, but for chronic hemorrhage the operative was the only course to pursue.

Perforating Ulcer of Stomach.—Dr. J. M. T. Finney, of Baltimore, discussed this subject. He spoke of the difficulty of adding anything new, and emphasized the importance of early diagnosis. The mortality of perforated cases was from 6.5 to eighteen per cent. in Johns Hopkins Hospital in cases treated medically. Since 1880, when Mikulicz first operated, two hundred and sixty-eight cases had been reported. There had been a rapid increase since 1896. The etiology was unknown, trauma and food being unimportant. Locality and sex were factors; it was more frequent in women (five cases) before the age of thirty years, than in men, in whom it occurs often after forty. He spoke of the importance of adhesions in protecting from subphrenic abscess, and of their influence in guiding pus, once formed, to remote quarters of the body. As to the site of the perforation, it was most frequently near the cardia, next at the pylorus, third, at the lesser curvature. The severity of the symptoms and the prognosis depended on: (1) the size of perforation; (2) whether, at the time of perforation, the stomach was empty or full; (3) the position of the patient (unimportant); (4) the nature of the infection, character and number of bacteria being of the utmost importance. Experiments with a case of duodenal fistula at Johns Hopkins Hospital showed that infected milk was discharged with the infectious organisms still active. Hence the speaker urged the necessity of using sterilized food, and of sterilizing the mouth for two days prior to operation. Hyperacidity seemed, under certain conditions, to favor development of germs. (5) As in typhoid, leucocytosis was of great importance when present. An important question was, Shall we use opium, and how much? The answer was, most emphatically, to use only as much opium as was absolutely necessary to ease the pain. Another question was, Shall we await shock? Equally emphatic was the answer, *i.e.*, to operate immediately. This was particularly true if the symptoms were growing more pronounced. Local anæsthesia, combined with a few whiffs of chloroform, if necessary, was of great importance in operating for diagnosis. Indeed, in this manner the entire operation was best done. The steps were as follows: the cardia should first be examined; second, the pylorus; third, the lesser curvature, and last, the posterior surface. He closed by speaking of the hopeful results of surgical intervention.

Malignant Diseases of the Stomach and Pylorus.—Dr. William J. Mayo, of Rochester, Minn., discussed this topic. He said that carcinoma was entirely a surgical disease, and emphasized the need of exploratory incision for early diagnosis. The curability of carcinoma depended largely on its histological structure: the greater the amount of stroma, the more favorable the post-operative prognosis. Colloid degeneration seemed very unfavorable, while the cylindrical-celled growth yielded the largest percentage of non-recurrence. The location was another factor in considering curability. The diagnosis at the cardia was easy, and the prognosis was bad, while the opposite was true at the pylorus. Lymphatic involvement, so called, was now known to be a simple septic glandular enlargement—the relation between the abdominal glands and the carcinoma being utterly different from that which existed between the breast and the axilla. Abdominal adenitis was, therefore, of little importance. The patient's condition was an indication of value, particularly if cachexia and ascites were present. These made the prognosis unfavorable. Every operation should be at first for diagnosis. The incision was median, and it was important that the pylorus should be freed enough to lift it from the wound. If necessary, the gastro-hepatic omentum should be cut. The conditions found might indicate a radical operation, palliation, or, the inadvisability of attempted relief. In the latter case, the wound should be closed by Halsted's method. Complete gastrectomy was the operation particularly for cancer of the body. We should be proud that this was first done by an American. Kocher's operation was preferable to Billroth's. The stomach should be cut away inch by inch and ligated as the operation proceeded. Suturing should be done in two stages. Czerny operated in two steps for extirpation, the operations being about three weeks apart. Curettage and cautery were not effectual. Gastro-enterostomy was the most useful of all gastric operations for palliative operation. Whether the suture or the Murphy button should be used depended on the operator. The peristaltic directions must be made to coincide. The speaker felt certain that the anterior portion of the stomach wall was the better to use in making the anastomosis, because of its easy access; for he did not agree with those who believed that the button might fall back into the stomach from the anterior wall, because of the formation of a funnel-shaped pouch which prevented it. Regurgitation of bile and vomiting were rare complications of this operation, and so rare as not to justify, at the preliminary operation, the introduction of a complicated technique, involving entero-anastomosis and other modifications.

THE AMERICAN GYNECOLOGICAL SOCIETY.

Twenty-fifth Annual Meeting, Held at Washington, D. C., May 1, 2, and 3, 1900.

First Day, Tuesday, May 1st.—Morning Session.

The meeting was called to order at 10 A.M., the president, Dr. George J. Engelmann, of Boston, in the chair.

Dr. Joseph Taber Johnson, of Washington, D. C., gave the address of welcome.

Cancer of the Vagina.—Dr. Pryor, of New York, read this paper. He reviewed the fact that cancer of the vagina was very rare. It usually involved the posterior wall of the vagina and extended underneath the rectum, then to the vaginal structures and to the uterus. He described the operation which he employed in two cases, giving as the first step a primary and preventive hæmostasis. By this not only the field of the operation was rendered dry, but migration of the cancerous cells was prevented. He avoided all injury to the cancerous field until hæmostasis was secured and the cancer had been charred by the cautery. He removed all the organs in which recurrence was apt to take place, and removed from above downward. He established an artificial anus near the site of the normal outlet of the rectum. The cancer was prone to spread by invasion of the tissues having a common source of blood. This operation sought the removal of all organs belonging to the vascular group in which the affected organ was placed. The speaker detailed the history of two cases operated on. The form of operation performed formerly was that of Olshausen, which was a blunt dissection of the vagina from the rectum. This was rather a failure. The steps in Dr. Pryor's operation were: (1) The general preparation of the patient; (2) the incision from the umbilicus to the pubes; (3) the ligation of the vessels and ligaments; (4) dissection of the bladder from the cervix and entrance to the vagina anteriorly; (5) removal of the vagina and the entire rectum; (6) ligation of the obturator artery to prevent anastomotic circulation being formed. The actual cautery was used for charring the cancerous mass. The vagina and rectum and the perirectal tissues were excised, and the formation of the artificial anus was established near its normal situation. The technique of the operation was illustrated by drawings, and the author emphasized the fact of the rarity of this form of malignant disease; he called special attention to the method of removing the rectum as high up as the sigmoid flexure, as well as almost the entire vagina.

Dr. Mundé considered it fortunate that these cases were rare. He had seen only two cases of primary cancer of the vagina in a long experience. He had curetted and cauterized. He did not consider that such bloody and radical work repaid for the slight benefit received by the patient, as recurrence was inevitable.

Dr. Sutton had seen but one case in thirty-four years, and had little faith in such radical operations. The pathology of cancer should engage our attention. Instead of a new method we needed to find the factor producing cancer.

Dr. E. Van de Warker felt that nothing had been gained by operation for cancer.

Dr. Montgomery said that the great frequency of recurrence of malignant disease, when it involved the vagina and extended into the parametrial tissue, and when it invaded the broad ligament, led him to believe questionable the operative treatment of these cases. It had been said that there was no plan of treatment by which a patient could be insured against relapse, and unfortunately we were unable even in the early development of the disease to say that it was not already carried into the parametrial tissue and beyond. He had frequently seen patients in whom he felt that an operative procedure would result favorably, in whom there was early return of the disease. He had seen other cases in which there was extensive destruction of the cervix, in which the question of the wisdom of an operation was a grave one, and yet in these patients several years had elapsed without recurrence. We were at present in a position of simple uncertainty; we could say in individual cases whether operation would afford a favorable opportunity for the recovery of the patient.

Dr. A. Lapthorn Smith said he had had little experience with cancer of the vagina, but considerable with cancer of the rectum. By removing the lower half of the rectum, drawing it down and removing all the glands that could be felt from below, he thought that he had removed all the disease, but the longest period that the patient lived was one year. Though little was gained in many cases, the uselessness of the operation ought not to be considered, but rather the number of women who were prevented by these adverse reports from being operated on; these being cases which possibly could have been cured.

Dr. Sutton said that in his experience the patients who were apparently in the best general health, but in whom there was a diseased blood condition, were almost universally the first to succumb to a return of the disease.

Dr. Byrne had had no experience with isolated cancer of the vagina. He was gratified to hear the gentlemen declare that there was absolutely no use in removing a cancerous uterus. This had been his feeling for many years, and he hoped that eventually the treatment which had been so successful in his hands might be given a fair and impartial trial.

Dr. T. A. Reamy would like to ask if the statements as made by these gentlemen meant that in no case was cancer of the uterus cured; or were the incurable cases confined to those in which the vagina and the lower portion of the uterus, the parametrial tissue, the lymphatic glands, and the region round about were involved?

Dr. Sutton replied that his remarks in a general way applied to all cancers in the vagina or uterus. He would make this reservation, that he had never seen a case of cancer of the uterus until it was well developed. As to seeing a case of cancer of the uterus when the epithelium was just beginning to break down, when it was almost impossible to make a diagnosis save by microscopical examination, he did not see one such case in a thousand.

Dr. E. Van de Warker said that he referred to simple epithelioma or cancer of the cervix, and to no particular stage.

Dr. T. A. Reamy must say that the gentleman was mistaken. It might be true that that was the history of the cases operated on and described by this distinguished man and his friend. We knew that these statements were not due to the fact that these gentlemen who had spoken in support of the statement were incompetent to do the operation thoroughly or successfully. He knew half a dozen women who had lived from six to ten years and two of them twenty years after having the cervix removed. The condition was proved to be cancer by the examination and report of the ablest pathologist and microscopists to whom he could have access.

Dr. George J. Engelmann thought that when it was said that cancer could not be cured, it was time to enter a protest. He granted that in a large percentage it could not be stayed; any man who would look at the diagram exhibiting the location and extent of the lymphatics would recognize that so soon as the disease had existed sufficiently long to involve the lymphatics to any considerable extent the disease was beyond the pale of operation, and in a large percentage no treatment would prolong the life of the patient. In order to tell how much benefit there was from cautery or knife in these excessive cases, it was only necessary to watch clinically the history of those left untouched, and it would be found that the patient lived longer when not disturbed; and therefore Dr. Engelmann spoke as radically as his friends. He had, however, seen cases in which the operation was done in time, in which the result was satisfactory. He had seen these results in the work of his friends, and had read the reports of other men all over the country of the same results, and therefore he protested again. In the earliest stage, the condition was primarily local.

Dr. Sutton said he had seen several cases of primary epitheliomatous growth of the vagina involving the rectum, and had had the opportunity to operate on two. It was reasonable to suppose that the growth would return much more quickly than it would in any other part of the body. Epitheliomatous growth, so far as his knowledge went, was much more rapid than scirrhous forms. If the operation advocated by Dr. Pryor did the most one could possibly do by ligating the vessels which led to the structures of the pelvis, and thereby retarded the disease, it seemed to him that it was a worthy operation. It might not be so radical as it seemed to be on paper. If we operated with the patient well exposed and in the Trendelenburg position, the vessels could be easily reached.

Dr. Pryor, in closing, said that possibly the next copy of the *Centralblatt für Gynäkologie* would tell us how to detect the cancer bacillus and point us to some antiseptic to apply to it; but up to that time we must be surgical. Cancer of the vagina and rectum must be viewed not as cancer of the vagina or of the rectum, but in the light of its complications. If the cancer could be operated for and a colostomy be done low down in the body, it provided a cloaca for retained fæces, and so seemed to him to be the operation of choice. As to the advisability of an operation apparently so severe as this, he took issue with Dr. Lapthorn Smith, and would not sacrifice the life of a woman with so grave a disease if his conscience indicated that she should be operated on, for fear some remote patient in the mountains might decline operation should the result be fatal. The operation was for cancer of the rectum and of the vagina, and was applicable to the graver forms of cancer in which the uterus may be involved.

Fecal Fistulæ.—Dr. I. S. Stone, of Washington, read a paper with this title. He said that one of the most distressing and annoying of post-operative sequelæ was fecal fistula. As was well known, the greater number closed spontaneously, yet it was occasionally found necessary to resort to some form of surgical relief. Perhaps the larger number of fistulæ followed in the wake of appendical abscess. It might be safely said that there was no routine treatment of fecal fistula. Mention was made of certain methods believed to be followed by the best results. A permanent fistula following an operation upon an appendical abscess might require anastomosis by exclusion. This operation had probably been the result of Dr. Senn's experimental work upon animals, and was especially required in fistula with a tortuous sinus not connecting with the intestine immediately under the external wound. In cases in which the cæcum and ascending colon were greatly thickened and firmly bound by adhesions, the surgeon might take a section of ileum as near the caput coli as convenient, and transplant it or make end-to-side anastomosis to the transverse colon. Reference was made to Dr. Kammerer's case, in which a very radical method was employed, and which the speaker described in detail; also to a suggestion by Greig Smith to cut down upon each side of the fistula (yet not through it) to the peritoneum without opening it, dissect about two inches of this away from the abdominal wall on each side or around the fistula as a centre, and then withdraw the peritoneum with attached and adherent bowel, far enough easily to close the fistula. Greig Smith took the position that peritoneal surfaces did not unite so firmly as though denuded, and claimed that these openings in the gut were closed safely and speedily by rough cicatricial coaptation. The pelvic surgeon frequently had to fear fistulæ resulting from uninjured bowel, which he encountered during enucleation of pus sacs, etc. These fistulæ were most difficult of closure, owing to their situation and to the fact that the function of the rectum served to perpetuate the fistula, since it was a receptacle or reservoir for gases and fecal matter. The speaker's successful experience with two cases of recto-abdominal fecal fistula of long standing was detailed, and the following conclusions were submitted: (1) that in all persistent fistulæ we must for obvious reasons remove any foreign body such as silk; (2) that all attempts at skin closure or by cauterization or curettage of persistent fecal fistulæ were generally successful. (3) In all cases in which a fistula connected with a superficial coil of intestine, the method of Greig Smith might be tried before resorting to radical operation. (4) In the deep-seated fistulæ requiring abdominal section choice must be made between excision and some form of anastomosis, for the case will rarely be found so simple as to permit inversion of the fistulous portion and direct suture. (5) In operating for such deep-seated fistulæ we must not fail to liberate imprisoned bowel and restore the normal peristalsis, permitting free motion of intestinal coils and directing the fecal current in its proper course. (6) Finally in recto-abdominal fistula, it should if possible be converted into a recto-vaginal fistula, and closure of the tract be secured before the temporary fistula was allowed to close.

Dr. Currier had seen but one case of fistula of the small intestine, and that remained obstinately open and the patient continued to lose ground. The patient was cured by section of the small intestine. In the cases including the small intestine nature could not be expected, according to ordinary anatomical and physiological conditions, to help much, and it was not therefore wise to wait. Radical operation involving portion of the bowel must be attempted as soon as possible. On the other hand, in the cases situated low down, and in which there was a discharge of fecal matter, he thought it was well not to be too hasty to institute operative procedures. He had seen a number of such cases in which by waiting nature had instituted a cure. Inasmuch as the applications which Dr. Stone had indicated were so varied and so severe, the speaker would advise giving nature a chance. This was a rule which he thought might well be laid down. He questioned whether the removal of silk or other foreign body in most cases would effect a cure. The silk, as a rule, was not applied to that portion of the bowel in which the fistula took place. He would say for himself that his general rule had been, when the condition seemed to be undergoing a rational process of development pointing to a cure, to wait and see if nature would not effect a cure, and not by attempting operative procedures possibly make the condition worse.

Dr. A. W. Johnstone said that, as a matter of justice to two dead men, he would state that the method outlined by Dr. Stone was taught by Lawson Tait to Greig Smith. The speaker assisted Mr. Tait the first time he closed a fistula in that way, which was his seventeenth operation. Ever since 1886 Dr. Johnstone had used that method in closing fistulæ of every description, and he succeeded on the third operation for closing ureteral fistula. He always used it on a vesicovaginal fistula, splitting the viscus and turning part of it in and part out. In ureteral fistula none but the very finest instruments could be used.

Dr. C. P. Noble said he had seen a goodly number of fecal fistulæ, and all had closed spontaneously except four. Three remained obstinately open; one recovered after operation. When the fistula was in the larger bowel and the case was not tuberculous, it was his experience that the prognosis was most excellent. In tuberculous cases the prognosis was very bad whether or not operation was done. In one such case operated on the result was a failure, and in quite a number the patients had died or the results had been unsatisfactory.

AMERICAN PEDIATRIC SOCIETY.

Twelfth Annual Meeting, at Washington, D. C., May 1, 2, and 3, 1900.

First Day—Tuesday, May 1st.

The Care and Treatment of Summer Diarrhœa.—The first session was called to order by the president, Henry Koplik, M.D., of New York, who gave an address upon "The Proper Care and Treatment of Summer Diarrhœa Cases." The speaker said in part, that he invited the society to a subject so broad and catholic that it could not fail to interest both physicians and laymen. The care of the poor children, whether sick or well, was assumed by the State in some instances, by private individuals in others. Improving the condition of these wards tended to our own betterment. The close housing of the poor during the colder months tended to the increase of accumulating filth and general dirt, to lack of fresh air for breathing, and to little personal cleanliness. If infectious diseases were not also increased the debilitated children were the more ready victims when they were exposed. In the summer the general health improved, but the tendency to intestinal disease increased, as there was an increasing liability to infection from improper or unwholesome food. In France one-half of the children below one year of age died each year from intestinal troubles. In three years eighteen thousand bottle-fed children died in Paris alone. The breast-fed did not escape entirely, but were less liable to intestinal infection. Nearly all children fed artificially got more or less cow's milk, and the many times it was handled gave many chances for infection, not only with animal filth but also dairy dirt, and particularly streptococci, which caused diarrhœa. The great medical congress of 1881 laid great stress on cleanliness. Soxhlet emphasized cleanliness in preserving milk. The greatest lights on the problem were those relating to cleanliness. It could be successfully accomplished in many ways. The foundation of infant feeding must be the mother's breast, yet this might vary from eighty-nine caloric equivalents to one hundred and twenty-six calories. The absolute quantity at the breast being unstable, our rules for artificial feeding must vary. Meigs showed that the proteids were usually low in mother's milk, and that the fats varied much. Leading minds differed as to how the variations should be accomplished: some diluted only; others, as Meigs and Rotch, reconstructed. Jacobi and others diluted, and added ingredients. The key-note of intestinal disorders was infection; therefore the sick children should always be separated from the well. We had as much responsibility in the intestinal infections as of prophylaxis in scarlatina or measles. The ignorant mother should be taught the possibility of carrying contagion, and that the utmost care should be exercised in washing thoroughly after changing the child's napkins, and that there be no rapid change from toilet oprations to feeding. The physician should have constantly in mind the distinguishing characteristics of stools, that he might know when streptococci had disappeared and when milk could safely be resumed. Cases might be treated as ambulatory, coming to a dispensary, or in hospitals and sanitariums. Those patients taken out of doors did best, as they had fresh air. The stools should be examined grossly and microscopically at a laboratory in connection with the dispensary. For ten years the speaker had so managed his intestinal cases; and two hundred infants daily, the year around, received their proper milk supply there at the dispensary. Increasing weight encouraged the mothers. Mothers should not be allowed to get prepared or modified milk except on a physician's order, as they usually overfed. Even water was furnished for the preparation of albumin water. It impressed upon the mother the necessity of attention to details. Examining the stools was not a fad. It was a sure way of determining the proper treatment and food. The speaker advocated, as the ideal management, the treatment of one or two cases only together, in barracks or camps or huts on high ground, not necessarily near the seas but inland. These tents or camps could be comfortable but very simple, warmed if need be by a stove. The mothers should live with the babies and take them once a day to the central camp, where the physician could see them and prescribe. Infections like measles and scarlatina were not likely to spread there, and intestinal infection would rapidly subside. Here was a new future for the summer management of the poor.

Studies of the Blood in Childhood.—This paper, by Drs. Alfred Stengel and C. Y. White, of Philadelphia, was read by title.

Intestinal Obstruction through a Loop Formed by Meckel's Diverticulum, with Ligamentous Attachment.—Dr. Irving M. Snow, of Buffalo, read this paper, and presented the specimen. The speaker stated that the cases were very obscure in many ways as to origin, formation, and symptoms. The case narrated was that of a boy, three years old, who fell from the doorstep and struck about the navel. A few days later he ate a quantity of grapes. The fall occurred on the 9th of the month; vomiting began on the 12th and lasted five days. There was pain about the navel, and opium was administered from the 14th to the 17th. The belly was slightly distended, but the temperature remained normal, and there was no abdominal tenderness. Vomiting of fecal matter occurred on the 17th. An intestinal injection with oil brought away a few grape-seeds and caused collapse. There was visible peristalsis of the intestines. At the autopsy no peritonitis was found. The ileum seemed to be snared close to the ileo-cæcal valve, and oil was found above the strangulation. One-third of the reported cases were of this character, but the condition was rarely seen in childhood. The obliterated portion of the omphalomesenteric duct created an arcade that readily caught the gut. The exact nature of the case was not recognized until after death.

In the discussion, Dr. Caillé, of New York, said that every case of chronic intussusception that had vomiting should be submitted to exploratory laparotomy.

Dr. S. S. Adams also favored early operation, basing his remarks on a recent experience. It was well known that usually hospital cases resulted fatally from delay. The case mentioned had the characteristic straining and screaming, but no tumor. Rectal examination proved nothing. Three drops of tincture of opium had been given, which completely narcotized the child. Next day, salt injections failing to relieve, operation was done. A profuse stool occurred while under anæsthesia, but the abdomen did not collapse. Four inches of intestine were found invaginated. The child made a complete recovery, though only five months old. Very few recovered without operation.

Dr. W. S. Christopher alluded to a case of his, of a child four months old, nursed at the breast, which suddenly showed symptoms of intussusception without cause and without fever. Blood was passed from the bowel, but there was no vomiting. There was neither tumor nor tenderness. At the operation one and a half inches of small intestine were found in the colon. Recovery was complete, the child nursing half an hour after operation, and six hours from the onset of the attack. Six months later the same symptoms occurred. The belly was again opened, and air injected with great force into the bowel. It did not budge, but this constituted a direct experiment not often possible. The invagination was reduced and the appendix removed. Recovery was complete as before. No double case has been found thus far on record.

Dr. W. L. Carr also emphasized the necessity of early operation even in the absence of symptoms. He recalled three cases during the past year without tumor, but with symptoms of ordinary colitis. One intussusception was found unexpectedly at an operation.

The Pancreatic Digestion of Casein.—Dr. B. K. Rachford, of Cincinnati, read a short paper on this subject. His experiments consisted in collecting fresh pancreatic juice from rabbits, also bile from rabbits, and placing the same in tubes with ordinary fresh cow's milk filtered and neutralized. These tubes were placed for five or six hours in a water bath at 38° C. Lactic acid and ammonia were used to complete coagulation of the milk, and the remainders were washed, dried, and weighed. Maltose was prepared by boiling one of the Liebig foods. As a result of these experiments it was found that maltose aided the pancreatic digestion of casein. It was also found that the presence of rabbits' bile facilitated the action of pancreatic juice. It increased the diastatic action when starch accompanied the casein. Dr. Jacobi had long taught that starchy gruels aided in digestion of the milk casein. The experiment with lime-water showed that it increased proteolytic action of milk in the stomach. Lime helped the activity of the rennet. In milk feeding, lime water not only neutralized acidity, but stimulated pancreatic digestion in the intestine. Sodium bicarbonate greatly increased the proteolytic power of pancreatic juice on casein. It also neutralized the fermentative acids of milk. Hydrochloric acid was found to retard proteolytic action. Bile and hydrochloric acid caused the pancreatic juice to act with greater intensity. The intestinal contents lost their acidity at some distance from the stomach. The fact that acid so strongly aided pancreatic action should greatly influence its use in infant feeding; besides being an intestinal antiseptic it aided the pancreatic enzymes. Greasy and fatty stools came from deficient bile supply.

In discussion Dr. Rotch stated that cereals, while having no retarding action, had but slight proteolytic action, and besides called up amylolytic action. He would be against their use. He did not regard the presence of fat in the stools as abnormal.

Dr. Caillé spoke highly of hydrochloric acid, which he had used for fifteen years in all cases in which the tongue was coated, especially in children two years old or more. When the tongue became clean, the acid should be stopped and iron given.

Dr. Fruitnight gave testimony in accord with the last speaker. He esteemed hydrochloric acid highly from many years' use of it.

Dr. A. C. Cotton spoke of the fact that fat as such was rarely found in the stools. Not all light flocculent masses were fat. It could be surely recognized only by chemical analysis.

Dr. Holt had seen little efficacy from any of these drugs. He claimed more for stomach washing. The use of drugs was purely empirical. Drugs played no part if the food was proper. Proper food should be given, the stomach washed, and the child kept in the fresh air.

Dr. Blackader confessed that the use of acid was contrary to our knowledge of physiology, as it was found late after eating, not immediately. Washing was troublesome. Catarrhal processes were present and demanded alkalies. Acids disappointed. The society should not emphasize the use of drugs, but the broad principles of management.

Dr. Rotch noted that it was necessary to dilute cows' proteids, as they went farther than those of human milk. Drugs should seldom be used.

Dr. Rachford called attention, in closing, to the fact that this was but an announcement of experimental facts and not a treatise on treatment in general. They threw light on pancreatic juice and what influenced it. Bile with pancreatic juice emulsified fats; this was destroyed when in contact with strong alkalies, and the fat was absorbed, not emulsified. Cream in the stools did not appear with its albumin and soap covering, but as butter fat. When hydrochloric acid was absent, it was needed and should be given. Clinical use in proper cases abundantly proved that it was not empirical treatment. Acid at most was an addition. It would not take the place of proper selection of food and of cleanliness.

Clinical Observations upon the Operative Treatment of Tuberculous Peritonitis.—Dr. Augustus Caillé, of New York, read this paper. Two points were of interest, the behavior of cases before operation and their behavior after operation. The cases narrated were mostly from the babies' wards of the Post-Graduate Hospital. In all cases examinations were made of the urine, blood, fæces, and puncture fluids. As an example, he gave the case of a boy, aged six years, with abdomen swollen, tense, not painful. Fluid was present. Rectal irrigation and creosote had been used for some time. Dr. Curtis operated and found the usual pathological nodules of tuberculous infection. Two years afterward the boy was well. The general abdominal cavity had not been encroached upon. Another case was that of a boy two and a half years old, who gave a negative history except a tumor on each side of the abdomen. These were found to be large tubercles, not adherent. No other glands were theninvolved. Eighteen months afterward small tumors could be felt there. In a third case, that of a girl aged five years, fluid was encysted as high as the umbilicus. At the operation adhesions and miliary tubercles were found covering the intestines. A sinus persisted for a year and closed. When it did so râles were found over the right lung. The sinus was curetted and cured and the lung also healed. She was now well. J. C——, another patient, had flatness due to a cyst, as high up as the umbilicus. It was opened and dressed with ten-per-cent. glycerin and iodoform. He was now healthy but pale. A girl, aged nine years, had pain in the abdomen for six months, with eight or ten stools each twenty-four hours. The blood and urine were normal. After two years' treatment an operation was done and disclosed adherent tuberculous peritonitis. The diarrhœa and paroxysmal pain had lasted two years. The speaker gave the following *résumé:* Diagnosis was based on pain, fluid, loss of weight, etc. Febrile rise was always found if careful observations were made. Bacilli were rarely found in fluids. The pain might be intestinal. He regularly employed the tuberculin test in human subjects. These cases showed the futility of medicine in tuberculous peritonitis. Early operation was always to be advocated. He was sceptical about complete cures.

Discussion.—Dr. Fruitnight mentioned the case of a young woman, aged twenty years, with an ulcer of the palm, which the microscope showed to be tuberculous. She had also recurrent peritonitis. He thought early excision of the lump in the hand might have spared the woman the general infection.

Dr. Rotch spoke of sixteen cases of tuberculous deposits found in patients dead of diphtheria. It showed how important in every way was tuberculosis to a pediatrist; particularly, that it should be kept out of the alimentary tract. If the case was one secondary to lung infection, laparotomy would do little good; if primary, it might cure. Certainly it would not give bad results. In one case followed for seven years the patient was now well. Secondary cases were the rule; hence bad results. Laparotomy was really more definite and at times less harmful than castor oil. One should never hesitate to make an exploratory incision. The bacteriologist had not kept up with the surgeon here. Many cases that we felt uncertain about were doubtless tuberculous. Cases without effusion did well. The vast majority of abdominal tumors were tuberculous. Tuberculous mesenteric glands must be removed to prevent general infection. When the trouble was secondary to tuberculosis of the lung it was a general, not an abdominal disease. He was strongly in favor of tuberculin for diagnostic purposes.

Dr. Cotton agreed that tuberculosis was paramount to any disease of childhood and very difficult to diagnose. He asked how far we could insist on an exploratory incision for diagnosis only.

Dr. Rotch replied that it should be done as a routine.

Dr. Johnston called attention to the absence of leucocytosis in differentiation from ordinary peritonitis.

Dr. Caillé, in closing, reiterated his statement that medicine was of no avail here. The abdomen must be opened. The other causes for ascites, as heart disease or cirrhosis, were easily eliminated.

The meeting adjourned to Wednesday at 9:30 A.M.

AMERICAN NEUROLOGICAL ASSOCIATION.

Twenty-sixth Annual Meeting, Held at Washington, D. C., May 1, 2, and 3, 1900.

First Day—May 1st.

President's Address.—This was delivered by Dr. E. D. Fisher, of New York.

Christian Pseudo-Science and Psychiatry.—This was the title of a paper read by Dr. Smith Baker, of Utica. He reviewed the claims of healers and the cures they were said to have effected, and gave an analysis of the condition of mind and body commonly induced by the Christian Science healer. He found it to consist of a variety of imperative conceptions very difficult to manage. The conclusion reached was that these cases required a most comprehensive study of both the psychical and physical state in order that the proper cultural treatment could be instituted and maintained. This was the only method which would thoroughly cure.

Imperative Ideas in the Sane and their Management.—Dr. Edward B. Angell, of Rochester, read a paper on this subject. He said that imperative ideas were to be distinguished from fixed ideas, or delusions. The former involved the element of conscious and painful resistance in the *ego* against their acceptance; the latter were appreciated as real conditions and were accepted as true. In imperative ideas or obsessions the psychical reaction in feeling was against the idea; in the fixed idea or delusion it was in harmony with it. Imperative ideas were largely emotional in their character and related to abnormal sensations of a somatic character. They were dependent, however, for their manifestation upon a state of mental feebleness, an instability of mental synthysis. These ideas might affect either the sensorium, the motor sphere, causing impulsive acts, or produce vasomotor disturbances. The subjects of this mental vice might be divided into two groups—those whose mentality was dependent upon hereditary, congenital, and acquired defects of organization, the degenerates; secondly, those who through accidental causes became unduly subject to emotional disturbances, the weak-willed. In treatment it was the primary emotional state one should counteract. The morbid idea might be replaced by a real one through strong sensory stimulation. The idea might be altered by attaching to it some association, ludicrous or painful, in character. Isolation of the patient, education through diversion, and increase of the power of attention toward normal feeling and action, constant yet not too stimulating change of scene, all entered into proper treatment. In some cases hypnotism, which had enabled us to learn much regarding these morbid mental phenomena, might be utilized to advantage.

Dr. Smith Baker said that persistent mental stress on the part of parents was likely to predispose the child to imperative ideas. He was in favor of educational methods in preference to hypnotism.

Dr. P. C. Knapp, of Boston, did not agree with Dr. Angell's views as to the relationship between obsessions and imperative ideas. He did not approve of hypnosis in the treatment of such cases, but preferred educational methods.

Dr. S. Weir Mitchell, of Philadelphia, referred to a case of mania of repetition, in which the patient would repeat certain acts several times, and associate the number of times with the thought of various relatives. This was relieved by sudden pinching by her attendant at the time of the act, thus substituting another form of sensation for its relief. After many years of experience he was opposed to the use of hypnotism alone as a method of treatment. He knew of no case in which a cure had taken place by hypnotism alone, unassociated with other means.

Dr. B. Sachs, of New York, believed that imperative conceptions, so often morbid, were closely related to the psychological, and were often based upon some definite reasoning. They did not arise spontaneously. Hypnosis not only did not cure but originated such concepts.

Dr. J. J. Putnam, of Boston, thought that the original idea passed over into a mechanical symbol which influenced the patient. The use of suggestion without hypnotism was of value, but hypnosis itself was very valuable in certain cases.

Dr. W. Browning, of Brooklyn, said that imperative movements were somewhat similar. One type simulated melancholia and differed in the results of treatment. It could be successfully overcome by enlarging the mental sphere of the individual.

Dr. Angell, in closing the discussion, said that if the ideas were carefully analyzed much could be accomplished toward effecting good results. It was sometimes difficult to establish the difference between fixed ideas and imperative ideas. The latter were usually amenable to treatment. Hypnotism was of value as an educational method. American men and women, however, were not as susceptible to hypnotism as the French and German.

Wernicke's Conduction Aphasia with Autopsy.—This was the report of a case by Dr. Howell T. Pershing, of Denver.

Bullet-Wound of the Spinal Cord.—Dr. Joseph Sailer, of Philadelphia, reported the case of a Cuban officer who was shot through the spinal cord, the bullet injuring the fourth and fifth lumbar and the first four sacral segments. Three years after the injury a laminectomy was performed for the relief of fulgurant pains, and a pachymeningitis was found. The operation was successful. During convalescence allocheiria appeared and persisted for three days.

Dr. Weir Mitchell thought that the most remarkable feature in the case was the disappearance of the gluteal muscles. He had been the first to describe the symptom of allocheiria. It was at the time of the war, over thirty years ago.

Dr. J. W. Putnam, of Buffalo, referred to the case of a patient who had fallen and injured the spine, producing pain and rigidity in the cervical muscles. This was followed two years later by paraplegia and anæsthesia. There was deformity at the sixth and seventh vertebræ. Operation revealed fracture of the sixth cervical spine and thickened dura. Improvement followed. There was restoration of bladder function and sensation improved. Irritation applied to the lower extremity was referred to the seat of the injury.

The "Babinski" Reflex.—Dr. G. L. Walton, of Boston, read a paper on this subject, in conjunction with Dr. W. E. Paul. He had examined the plantar reflex of one hundred normal individuals, seventy infants, two hundred cases of nervous disease other than that of the pyramidal tract, one hundred cases with other than nervous disease, two hundred hemiplegics and diplegics, and thirty cases of pyramidal spinal disease. The following conclusions were drawn: (1) In health either of the following conditions might appear on taking the plantar reflex: (*a*) flexion of all toes; (*b*) flexion of some (generally outer) toes; (*c*) flexion of all toes on one side, and of some (generally outer) on the other; (*d*) entire absence of movement on both sides (about ten per cent.); (*e*) flexion of all or of some (generally outer) toes on one side, with absence of movement on the other (at least ten per cent.); (*f*) occasionally (in sensitive individuals) quick, semi-voluntary, indeterminate movements, sometimes of flexion, sometimes of extension. (2) In early infancy no constant or characteristic movement of the toe appeared, though extension was rather more frequent than flexion. (3) The Babinski reflex obtained in about seventy per cent. of hemiplegics and diplegics, and in approximately the same percentage of cases with disease involving the pyramidal tract in the spinal cord. (4) The Babinski reflex (deliberate and constant extension of the great toe, with or without extension and separation of other toes) was never present in health, and our observations led us to doubt its existence in either functional or organic nervous or other disease not implicating the pyramidal tract. (5) This reflex was oftenest the earliest to appear in pyramidal tract disease, *e.g.*, at the onset of a hemiplegic attack before the establishment of the exaggerated knee jerk and ankle clonus; it may persist during a period when other reflexes are absent, *e.g.*, when knee jerk and ankle clonus were wanting on account of ankylosis, contracture, and muscular wasting, as in long-standing diplegia, or of degenerative sequences, as in combined systemic disease. This reflex furnished, therefore, a most important practical aid in diagnosis. (6) This reflex very exceptionally appeared in cases not conforming to recognized types of pyramidal disease (meningitis, hydrocephalus, poisoning as by alcohol or uræmia). These instances were too few materially to impair the diagnostic value of the phenomenon—in fact, the Babinski reflex alone should here rather lead us to suspect pyramidal involvement as by œdema or indirect pressure.

Clinical Study of the Reflexes.—This was the title of a paper read by Dr. Joseph Collins, of New York. It was based on the study of two hundred cases. This and the preceding paper were discussed together.

Dr. Weir Mitchell said that the whole physiological literature on this subject came from this side of the ocean, since the Jendrassik method was first expounded. All muscle jerks were capable of re-enforcement as well as tendon jerks. He called attention to the fact that it was impossible to re-enforce the skin reflexes.

Dr. Knapp said that we did not know why the skin reflexes were so persistent in tabes. As to the normal plantar reflex, it was usually present unless affected by disease.

Dr. B. Sachs differed from the views of Dr. Collins and believed that the condition of the reflex did not depend on the tonus of the muscle. The Babinski reflex was most unreliable in children.

Dr. W. G. Spiller, of Philadelphia, referred to two acute cases of cerebral hemorrhage with hemiplegia, in which on the paralyzed side the knee jerk was absent and the Babinski reflex present. Both patients died. He was therefore inclined to look upon such a combination of symptoms as indicating a bad prognosis. Babinski's sign was of value only in connection with other symptoms.

Tumor of the Superior Parietal Lobule.—This was the report of a remarkable case by Drs. Charles K. Mills and W. W. Keen, of Philadelphia. The tumor was accurately localized and removed by operation. There were localized paræsthesiæ, astereognosis, and later hemiplegia. None of the general symptoms of cerebral tumor was present. The eye symptoms relating to the fields were suggestive of hysteria. The patient made a good recovery and was restored to usefulness.

Dr. Spiller stated that the growth was endothelioma.

Dr. Walton mentioned the case of a patient without any of the general symptoms of tumor. There were twitching of the hand and temporary paresis, later followed by hemiplegia. Subsequently, optic neuritis developed in one eye.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

Twenty-second Annual Meeting, Held at Washington, D. C., May 1, 2, and 3, 1900.

President, Samuel Johnston, M.D., of Baltimore.

Opening Session—Tuesday, May 1st.

President's Address.—After returning thanks to the members of the association for the honor conferred upon him, the president spoke of the future policy of the association. He believed that new members should be elected by a two-thirds affirmative vote of the entire membership. Old members should be encouraged to continue in active work. Scientific and clinical work should go hand-in-hand. One should avail himself of all possible advances in diagnostic ability—as, for instance, the determination of leucocytosis as an initial feature of malignant disease. More attention should be paid, in teaching students in rhinology and laryngology, to operative work on the cadaver. Members of the association were looked to as teachers, and consequently great care should be taken in the selection of new candidates. The aim should be not mere numerical strength, but skill in attainment. In the programmes of the future it might be well to limit the number of papers, but more attention should be given to discussion. The former should be grouped in two general classes, scientific and clinical. No opinion should go out from the meetings as official unless it was founded on facts. Mild measures, especially as concerned the use of the cautery, saw, and trephine, should be strenuously urged. A committee of censors, to be elected annually, should be established which should pass on all matter to be published in the annual Transactions. In conclusion, a feeling tribute was paid to the memory of two active fellows who had died during the year—Dr. Max Thorner, of Cincinnati, and Dr. Joseph C. Mulhall, of St. Louis.

Fractures of the Nose.—This paper was read by Dr. T. A. De Blois, of Boston. He said that "broken" noses, so-called, were not, as a rule, really fractured. They were rather cases of bony displacement and dislocation. They might be classified according to the degree of injury and also according to the relation of the parts involved. There might be a dislocation (not fracture) of the nasal bones, *i.e.*, a solution of bony continuity, or there might be a fracture of the nasal process of the superior maxilla or of the zygoma. Injuries might also result during parturition or from nursing or sleeping, from the constant impact of the nose, delicate at this period, against the mammæ or the pillow. Then again there were the cases occurring from falls, blows, and collisions. In the "upper-cut" blow of the boxer, there was injury to the septum, followed by swelling, possible abscess, and detachment from the subjacent parts. The "side" blow gave a double dislocation of the nasal bones, while in the direct "front" blow the internal nasal border was driven downward and outward. Treatment consisted in the reduction of the dislocation, which might require a general anæsthetic. These flat noses might be properly manipulated so as to dispense with external apparatus. For an internal splint, a bit of stiff rubber tubing inserted by means of a closed pair of scissors (well greased so as to facilitate their withdrawal) might be of service. The elastic recoil of the rubber slowly acting will often force a dislocated nose into place, though some few days might be required to produce the full effect. Plaster-of-Paris bandage made an excellent external splint. Illustrative clinical cases were then described.

Dr. De Blois also exhibited an illustration of an abnormality of the uvula, which was double, one mass seeming to come from the anterior and the other from the posterior faucial arch. The former was amputated, leaving the latter appearing as a perfectly normal organ.

Dr. Emil Mayer, of New York, inquired of Dr. De Blois if he had not found the rubber internal splint irritating to the nasal mucosa. He himself preferred to use gutta-percha, which could be accurately moulded to fit each individual case, and was less collapsible. Elongated forceps could be used for the replacement of recent cases.

Dr. De Blois replied that the rubber was to be retained only temporarily, until perfect reduction had been secured.

Dr. W. E. Casselberry, of Chicago, recommended the use of a general anæsthetic for perfect diagnosis and reduction. Deeper injuries were very painful, and in children without an anæsthetic proper examination was impossible. He commended the external plaster-of-Paris dressing. The objection to all forms of special apparatus was that they were rarely at hand when wanted, and were difficult to keep in position. Plaster could be moulded over the nose, carried back to the line of the ears, being made thinner posteriorly, and secured by tapes passing above and below the ears behind the head. Such splints had to be worn ten days, and were, of course, a disfigurement. For internal splinting nosophen gauze applied under cocaine acted admirably. For fractures low down in the nose, the ordinary vulcanized tube answered very well.

Dr. Jonathan Wright, of Brooklyn, called attention to the statements found in the writings of the fathers of medicine respecting the treatment of nasal injuries. The fingers of a child, thongs attached to plugs on the concave side of the injury, etc., had all been advocated. In a recent case, one authority had inserted a plug made from the lung of a sheep. All the ancients objected to the use of absorbent material as rapidly tending to become foul.

Dr. John O. Roe, of Rochester, commended the use of a thin metal splint externally with an internal dressing. An anæsthetic should be given when the injury was at all severe. Adhesive plaster was an admirable retaining material.

Dr. H. L. Swain, of New Haven, Conn., called attention to the mechanics of the nasal arch, saying that if one could bring the two nasal bones into proper approximation, they would support each other. If the patient could be seen frequently, he would dispense with all apparatus.

Dr. F. C. Cobb, of Boston, had had as good results without as with apparatus. The behavior of the nose during the first two days after the receipt of injury would determine whether or not apparatus might be safely dispensed with.

Dr. W. K. Simpson, of New York, advocated the use of the Bernays sponge specially shaped to fit the inside of the nose. It offered ideal requisites for this purpose, being easy of introduction and hæmostatic by the equable pressure it exerted.

Dr. W. F. Chappell, of New York, had used the sponges, attaching them by iodoform collodion to a thin plate of gutta-percha, a device which had, in his hands, proven of great value.

Atrophic Rhinitis.—Dr. J. E. Logan, of Kansas City, Mo., read this paper. He reviewed the various theories of the pathology of this condition, condemning the introduction of the very large number of clinical terms which had been used to describe it. Four theories as to causation seemed worthy of special consideration: (1) hypertrophy, cutting off the blood supply by pressure, thus inducing atrophy; (2) suppurative rhinitis in children; (3) bacterial causation; (4) sinus disease. For himself, he was inclined to attach importance, on the basis of his own experience, to the last-named theory. He narrated the histories of several cases in which opening and curetting of the ethmoid cells cured the atrophic rhinitis. One unexplained fact in these cases was the real source of the immense amount of secretion.

Dr. Cobb had observed in his own ethmoid cases marked atrophy on the side of the sinus disease. In persistent sinus discharge he had noted a steadily increasing atrophy of the intranasal structures.

Dr. Wright stated that post-mortem examination did not show that close connection between atrophic rhinitis and sinus disease that had been claimed by Grünwald and others. In his own personal experience, the inferior and not the middle turbinate was the structure primarily attacked. The etiology of atrophy here was hard to determine. There was no analogous process in any other part of the body. He was inclined to attach much importance to the recent views of Cholerva and Cordes, who looked upon the process as the result of a rarefying osteitis, commencing with a bony hypertrophy, the little canals in the bone containing an artery and vein becoming occluded by the bony growth. As a result the blood supply to the mucosa was shut off. How this process actually began was a matter of much less importance. Recent anthropometric investigations had confirmed Hopman's view as to the causative relation of a short antero-posterior nerve dimension, and still more strongly Fraenkel's contention as to the special occurrence of the affection in the brachio-cephalic type of skull. This latter observation, however, might be referable only to certain geographical areas, especially in Germany and Switzerland, and not applicable to American patients. No one cause was alone applicable in every case. In his own experience, seventy-five per cent. of the cases had occurred in women, and the sexual life might be an important factor.

Dr. Swain called attention to the fact that the rarefying osteitis had been marked as the cause of intranasal œdema and polyp formation, but he realized that intranasal conditions might differ in different types of skulls. The brachio-cephalic type of naris might cleanse itself with more difficulty than would other types.

Dr. J. E. Boylan, of Cincinnati, inquired if Dr. Wright had ever seen patients spontaneously recover after the menopause.

Dr. Wright answered that he had noted a cessation of symptoms, while the objective atrophy remained.

Dr. Casselberry declared that we must not overlook the associated atrophy of adjacent parts; there was also an atrophy of the lymphoid structures, a nonsensitiveness of the parts, and either a lack of development or an early shrinkage of physiologically associated tissues. The bony walls of the sinuses were especially thin in these cases. All of these lesions strongly suggested to him the theory of a tropho-neurosis.

Dr. Simpson had seen cases persisting beyond the menopause with as much virulence as before.

Recurring Membranous Rhinitis due to the Bacillus of Friedlander, with Report of a Case.—This paper was read by Dr. Emil Mayer, of New York. The clinical history of the case described was a later chapter of the case previously reported before the American Medical Association by Dr. McReynolds, of Dallas, Tex. After the case came under Dr. Mayer's observation exhaustive microscopical and bacteriological tests were made, proving to his own mind that the membranous formation was due to the bacillus of Friedländer. Some thirteen or more previous cases were on record and were carefully analyzed by Dr. Mayer, who gave a complete *résumé* of the literature of the subject.

At the close of the session Dr. Boylan exhibited a hypodermic syringe for the application of cocaine to the pharyngeal vault for adenoid operations.

Dr. J. H. Bryan, of Washington, showed an aseptic syringe for nose and ear work and improved drainage tubes for the frontal sinus; Dr. R. P. Lincoln, of New York, a wax model of a recurrent tonsillar tumor with illustrative plates; Dr. Mayer, a hollow intubation-tube introducer for use in laryngeal stenosis, the intubation tube itself being retained by an arm screwed in through the tracheotomy incision.

Dr. T. R. French, of Brooklyn, exhibited photographs of a chair to be used in the employment of the upright position in ether operations on the nose and throat.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS.

Fourteenth Annual Meeting, Held at the Raleigh Hotel, Washington, D. C., May 1, 2, and 3, 1900.

President, James Bell, M.D., of Montreal.

First Day—Tuesday, May 1st.

Chronic Pyelonephritis and its Pathogenic Relation to Diseases of the Opposite Kidney.—Dr. John P. Bryson, of St. Louis, Mo., read this paper, and his observations suggested the following conclusions: (1) Post-operative observation in a number of cases of primary unilateral nephrectomy, as well as secondary nephrectomy after nephrotomy and drainage, seemed to confirm the belief that long-continued unilateral pyelonephritis had a pathogenic effect upon the previously unaffected kidney of the other side. (2) This pathogenic relationship seemed to hold good even when the primarily diseased organ was adequately drained either by the ureter or by a renal fistula. (3) Observations, as yet inadequate, seemed to show that the pathogenic effects upon the organ secondarily diseased manifested themselves primarily in the tubular epithelium, determining a parenchymatous nephritis. (4) Suppurative pyelonephritis seemed to add the element of amyloid degeneration to the secondary nephritis; but whether this change took place in the kidney before other viscera well known to be commonly affected in this way by chronic suppuration became involved, was wholly undetermined. (5) The mechanism of this secondary nephritis was not yet determined. Whether it was caused by the "reflex" action through the nervous system, or by the absorption of toxins or bacteria from the primarily diseased kidney carried by the blood stream to the other kidney, increasing its burden of elimination, and thus irritating the tubular epithelium, seemed to be a question for the experimental laboratory. (6) So far as our information went at present, it served to increase the probable benefit of frequent observation of the segregated urines, which might serve not only to localize the disease, but to determine the time of surgical interference by giving warning of the beginning of crippling of the previously healthy kidney. (7) Repeated observation of differentiated urines had a distinct prognostic value in surgical intervention, even to the extent of influencing the choice of nephrectomy and nephrotomy.

Some Observations upon Hydronephrosis.—Dr. A. T. Cabot, of Boston, read this paper. He instanced the history of a boy, eleven years of age, who during the past nine and a half years had had repeated attacks of severe abdominal pain. During these attacks it was noticed that there was a swelling in the left renal region which diminished with the subsidence of the pain. These attacks were accompanied by fever and vomiting. During later years the attacks lasted a number of days. The diagnosis of hydronephrosis, already made, was concurred in and operation advised. The operation showed it to be a case of ruptured hydronephrotic sac with a pseudo-hydronephrosis around it. The rent in the dilated kidney was closed in the hope that the urine would re-establish its passage through the ureter, as had happened often before. This hope was not gratified. At the end of twenty-four hours the pseudohydronephrotic sac filled and became very painful; then the hydronephrotic sac was again opened and a drainage tube was introduced, which was followed by complete relief, and the boy gradually recovered his strength. In this way he lived for two years without pain, when he entered the Massachusetts General Hospital for the relief of the urinary fistula. Before proceeding to operation it was thought wise to increase the secretion of the kidneys, which were acting insufficiently. As the hydronephrotic kidney was discharging all of its urine through the fistula, it was possible to collect the secretion from each organ separately, which was done. It was interesting to note how much good work was done by a kidney in which the secreting substance was stretched out to a mere shell on the surface of a hydronephrotic sac; also, how decidedly this work could be increased by the diuresis produced by the exhibition of large quantities of water. By this simple diuresis the total amount of urine was increased from eighteen to seventy ounces, and the amount of urea was increased from 11.07 gm. to 16.73 gm. Having improved the condition of the patient, the hydronephrotic sac was exposed and stripped off from the surrounding tissues. When the hilus was reached, the ureter was readily recognized, and the following condition was made out: The ureter, of normal size, after leaving the pelvis of the kidney, pursued the ordinary course toward the bladder for a distance of an inch, when it turned backward and upward to loop itself over an accessory artery which ran from the aorta and entered the kidney at a point somewhat below the origin of the ureter. This loop was S-shaped, and while the canal was of nearly normal size above the point where it hung over the vessel, below that point it became very narrow with extremely thin walls. The ureter could not be followed with a probe, and it was shown that this undeveloped condition of the ureter continued down toward the bladder. It was then decided to remove the kidney; this was done, and the patient made a good recovery.

Dr. L. Bolton Bangs, of New York, said that two years ago he operated upon a gentleman who seemed to be in an extremely dangerous condition; he was septic from a prostatic abscess which had opened into the rectum; there was a residual abscess left which drained through the perineum. There was an extensive pyelitis, and the man seemed to be dying from a suppurative left kidney. There were evidences of the right kidney being distinctly enlarged; it could be felt. The left kidney seemed to be the one most dangerous to the patient, and it was decided to operate upon him. The left kidney was drained through the loin, and the patient made an excellent recovery. There did not seem to be any evidence of disease of the right kidney, although what would have been the result of a careful microscopical research he could not say; so far as was evidenced by his general condition and the urinary findings there was no disease of that kidney. He wore a tube in his right groin. He had gained ten pounds in weight; he travelled; he was becoming plethoric; he was not incommoded by his sinus, and he refused positively to have anything done further. In this case there was apparent recovery of the diseased kidney, which, so far as an examination could determine, was diseased before operation. Hydronephrosis was not a simple infection; it manifested itself in many ways, and this was an interesting question, bearing, as it did, on the etiology and treatment. One year ago he had had a lad brought to him who gave a history somewhat analogous to that read by Dr. Bryson. The urine was segregated by Harris' method, and it was determined that the case was one of hydronephrosis of congenital origin. The patient was running down so rapidly that it was decided to do a nephrotomy for drainage purposes. As the large sac was cut down upon, he was much astonished at the gush of blood that followed. The finger in the kidney sac revealed a large kidney which bled freely while it was being palpated. The sac was held open and deluged with hot water, which stopped the hemorrhage. He was thus drained for one year. He recovered, and many observations were made upon him as to the urine and the elimination of different things. When urotropin was administered by the mouth, each kidney would eliminate formaldehyde, as determined by appropriate tests. This showed that the statements made regarding urotropin were true. The question of secondary nephrotomy came up; as the work of excreting urea was being well done, he refused to do a nephrotomy until it was demonstrated that the other kidney could do extra work if required. Two weeks ago he did a nephrotomy. Instead of dividing the muscles, he separated them and came down upon the ureter and kidney with comparative ease. The operation proved to be quite a formidable one; the kidney tissue bled much, and he had simply to wrap the kidney up for a few minutes and squeeze it while the adhesions were being separated. He had to leave a portion of the tunica propria. The patient suffered a good deal from the shock, and had to be given salines repeatedly. Within the first twenty-four hours ninety-eight ounces of urine was excreted. A large amount of urine was excreted by that kidney, this urine being of a low specific gravity; when the saline was stopped, the amount was reduced to fifty-three ounces, and one day but nineteen ounces was excreted; it then ran up to twenty-seven and thirty ounces and thereabouts. The saline solution was given per rectum. He could not account for the condition of hydronephrosis.

Dr. George Chismore, of San Francisco, recalled a case that had been reported to this society early in its career. The patient was a young man who was seen early in 1870 with Drs. Keyes and Van Buren. He had severe illness, lasting several months, with symptoms mainly referable to his bladder; this was followed by lumbar abscess, which was opened; this abscess filled again, and was again opened, and at last he made a recovery. The condition of the remaining kidney certainly was an interesting question. In 1877 the patient was apparently in the last stages of consumption. In addition to his renal and bladder trouble he had a large fistula, apparently of tuberculous origin. In course of time this healed spontaneously. There had always been albumin in the urine, and there was to-day a certain amount of it present. After a lapse of nearly thirty years, he was still living.

The Pathogeny of Gonorrhœal Pyelonephritis; Presentation of a Gonorrhœal Kidney.—Dr. Bransford Lewis, of St. Louis, Mo., presented this specimen. He stated that it was possible for the infecting agent to reach the kidneys in three ways: (1) ascending infection by continuity along the mucous membrane of the urinary tract; (2) ascending infection through the lymphatics accompanying the ureter; (3) metastasis or general infection. The specimen presented was infected along the mucous membrane of the urethra, bladder, ureter, and thence into the renal tubules. He stated that gonorrhœal nephritis from an infection occurring through the lymphatics and blood systems was an established fact. Many authors, including Souplet, Jacquinet, Balzer, and Geraud, looked upon albuminuria, aside from that for which pus would be accountable, as one of the principal symptoms of the disease. In four hundred and twenty-four gonorrhœal cases, Balzer and Souplet found albuminuria ninety-nine times; in twenty-one of these cases they were uncomplicated otherwise, but in seventy-three of them there was orchitis. In this series it had been noticed that albuminuria was especially liable to occur in the cases in which there was the complication of orchitis; from this was deduced the belief that the danger of renal complication was augmented in proportion to the extent of surface involved in the complications of the urethral gonorrhœa. The greater the surface involved, the larger was the port of entry for the general infection.

Dr. Young, of Baltimore, and Dr. James P. Tuttle, of New York, discussed this paper.

The Modern Urethroscope: its Value and Limitations.—Dr. W. K. Otis, of New York, read this paper, and demonstrated many urethroscopic instruments. One instrument referred to was adapted to the Klotz form of tube by placing at the distal end a small, flat foot, at the outer extremity of which was a smooth pin. This pin fitted into a hole in the tube plate, and on revolving the instrument a quarter of a circle the foot swung under a shoulder riveted to the plate and was securely fastened. This joint was firm and easy of manipulation, readily allowing the illuminator to be attached or removed at any time during the examination. The fault of this instrument was that it still permitted the escape of a large amount of extraneous light, which soon became annoying to the eye of the operator. On this account he abandoned this instrument, and in 1892 devised one on an entirely different principle, using a lens as a condenser instead of the reflected light from a concave mirror. This instrument consisted of a metal tube or cylinder, an inch and a quarter in length by one-half an inch in diameter, closed at one end. A quarter of an inch from the open end was a plano-convex lens, so arranged that it could easily be removed for cleaning. On the interior surface, near the closed end of the tube, an elbow was let in, a quarter of an inch in length and half an inch in diameter, through which the source of illumination was introduced, a row of holes being bored at its base to allow of ventilation. The handle of the instrument was a piece of hard-rubber, with electrical connection running through it to the lamp placed on top. This handle fitted into the elbow by means of a bayonet joint, bringing the lamp immediately behind the plane side of the lens. A thumb-screw switch in the handle placed the lamp under control so that it could be turned off at pleasure. The instrument was attached to the urethroscopic tube by a stout wire an inch and a half in length, with hinged joints at each end which swung in opposite directions, and furnished with set-screws, thus allowing it to be put in any position, though when once adjusted it was rarely necessary to move it. This instrument had stood the test of some eight years' continuous use, and had demonstrated its superiority over all others designed for the practical examination and treatment of the urethra under direct ocular inspection.

(To be continued.)

Therapeutic Hints.

Anaphrodisiac.—

℞ Lupulin	10 gm.

For ten powders. S. Take one at bedtime.

Elixir of Paraldehyde.—

℞ Paraldehyde	10 gm.
Syr. menthæ	20 "
Elix. aromat	40 "
Aquæ destil	80 "

M. S. Teaspoonful once or twice daily.

Hemorrhoids.—

℞ Exalgin	0.30 cgm.
Ext. bellad	0.10 "
Ceræ alb	1.0 gm.
Ol. theobr	3.0 "

For one suppository.

Stomach Pains.—

℞ Morphin. hydrochlorat	0.02
Syr. simp	30.
Aq. chloroformi sat	60.
Aq. aurantii flor	60.

M. S. Dessertspoonful at onset of attack.

—*Journ. des Praticiens.*

Basedow's Disease in Childhood.—

℞ Strontii bromidi	6 gm.
Strontii iodidi	12 "
Aq. destil	40 "
Aq. menth. pip	20 "
Syr. menth. pip	20 "

M. S. Teaspoonful three times daily.

—Socquart.

Severe Aphthæ.—Paint with

℞ Ac. salic	2
Spirit. vini	10
Glycerini	25

Gastric Catarrh.—

℞ Acid. hydrochlorici (C. P.)	2.50 gm.
Acid. azotici	0.80 cgm.
Spir. vini rect. (90 per cent.)	18. gm.
Aquæ font	150. "
Syr. limonis	100. "

M. S. A teaspoonful in a half glass of water after meals.

—*Le Progrès Méd.*

Headache in Neurasthenia.—

℞ Zinci valerianat., Ferri sulphat., Ext. rhei, Asafœtidæ	āā gr xviij.

M. ft. pil. No. xx. S. One t.i.d.

Drink for Diabetics.—

℞ Acid. citrici	1 gm.
Glycerini, Sp. vini gallici	āā 50 "
Aq. destill	500 "

Aphthæ.—

℞ Sodii borat	4
Tinct. benzoin	4
Syr. rubi idæi	40

Touch with aid of a brush six times daily.

Chapped Lips.—

℞ Paraffin	80 gm.
Vaselini	80 "
Ext. æth. alkannæ	0.50 cgm.
Ol. bergamottæ, Ol. limonis	āā 1 gm.

Melt in a water-bath and make into sticks.

—*La Médecine Moderne.*

Picric Acid in Chronic Urethritis.—Begin with half of one-per-cent. solution and gradually increase to ten-per-cent. strength. Apply by means of a Guyon injector. Contraindicated in the acute stages.—Desnos and Guillon.

MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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NATIONAL QUARANTINE.

AT present there is enough of intention on the part of Congress to effect some legislation in national quarantine matters, as is manifested by the different bills presented, but so far the indications for practical results are not very promising in view of the fact that there is not much time left for the different parties in interest to fight over the varied issues at stake. It is not so much the ends aimed at that invite criticism, for these in the main are laudable enough—as regards national quarantine as a whole—but the means by which they can be brought about. The question of actual result must narrow itself down to one of pure expediency.

So far there are three important bills before the House which deserve consideration regarding the prospects of passage. The one fathered by Senator Spooner is virtually the same as that under the same name that was before the last Congress. Its effect is practically to relegate all quarantine to State and local authorities. Mr. Ray has introduced its counterpart in the House. Another bill has been presented in the House by Mr. Mahon, and still another by Mr. Vest in the Senate, the latter being backed by the Marine-Hospital service. The prospects for the passage of either are narrowed to the possibilities of reconciling the interests of parties who appear to be diametrically opposed to each other. Virtually it comes to the question whether the local authorities with States' rights as their plea shall have control, or whether the general government as more directly represented by the Marine-Hospital service shall effect the unification of the forces. In one way it must be confessed that in the attempts to better present conditions the bills favoring widely varying interests are cumbersome in the extreme, and are very liable to fall by their own weight. They would seem in a general way to verify the danger of too many cooks for the broth. Thus Mr. Spooner's bill advocates the creation of a commission of public health composed of representatives from every State and Territory, and an executive or controlling body consisting of nine members, also from different sections of the country. With the very laudable purpose of educating the public on sanitary matters and of securing uniform legislation in the different States, the commission is loaded with so many special directions for work, so much conference with local authorities, and withal so much detail and red tape regarding other details, that, should an epidemic actually appear, there would be more time spent in getting ready to act than in doing the real thing necessary. Mr. Mahon's bill is obviously open to the same objection, only perhaps in a more marked degree, as by its provisions the country is divided into health districts, each having its respective head. While none of the measures is positively objectionable in either bill, the difficulties in making them work harmoniously in the required direction is apparently very great. In times of emergency the surest means to the end are the speediest and simplest. In trying to accomplish too much we may gain nothing in the end.

Almost by a natural conclusion it would appear far safer, instead of striving after vague and impossible reforms, to content ourselves by improving such systems as we may have at hand. From such a point of view the bill of Mr. Vest advocating the imposition of extra duties and increased powers on the Marine-Hospital service is worthy of very favorable consideration.

The bill amends a section of the law of 1893 so as to provide that upon the arrival of an infected vessel at any port not provided with proper facilities, the Secretary of the Treasury may send her to the nearest national or other quarantine where proper facilities exist, and, after the treatment of an infected vessel (or the inspection of a vessel not infected) at a national quarantine station, she shall receive a certificate which shall entitle her to entry at any port named in the certificate.

At any port where sufficient quarantine provisions have been made by State or local authorities, the Secretary of the Treasury may direct vessels bound for that port to undergo quarantine at the State or local station.

The bill adds also a very important section to the present law—empowering the supervising surgeon-general of the Marine-Hospital service, with the approval of the Secretary of the Treasury, to designate and mark the boundaries of quarantine grounds and anchorages, and officers of vessels or other persons trespassing on such grounds or anchorages are to be subject to arrest and to a fine of not more than $300, or imprisonment for not more than one year, or both.

There is nothing in the law forbidding the establishment of a State quarantine, notwithstanding a national quarantine be established, and this will only prevent the annoyance of a subsequent inspection, with a charge for the same, by the local quarantine, after the vessel has been thoroughly inspected and given a certificate by the national quarantine officer.

The provision relating to vessels arriving within the limits of any collection district of the United States without a bill of health, is meant to apply particularly to fishing-smacks and other small craft which leave Havana and other Cuban ports, and, under the guise of fishing, come within the collection districts of Florida and there land any sick who may be aboard, and smuggle aguardiente, rum, and tobacco, thus holding communication with the shore and being liable to convey infection. These small vessels are particularly dangerous, inasmuch as they are manned by laborers recently from Spain and who are, therefore, not immune to yellow fever, and lie in the portions of Havana harbor particularly exposed to yellow-fever contagion. The effect of this section will be not only to prevent the introduction of contagious disease, but also to suppress smuggling.

Another section authorizes the Secretary of the Treasury to establish quarantines at points of danger either on the coast or on the Mexican or Canadian borders. The necessity of having this authority is self-evident. Under the present law, to establish a quarantine requires either that there should be no State quarantine regulations in existence, or the demonstration and proof of inability or negligence to enforce such regulations as the Secretary of the Treasury has made, meanwhile leaving opportunity for disease to enter while the subject is under investigation or dispute.

Aside from the good features of the Marine-Hospital bill already noted it is gratifying to know that no attempt is made to legislate on any matters save those that relate to maritime and border inspection. Altogether it would appear that the latter bill, being the simplest and most practical one, has the best chance for its passage.

RELATIVE EARNINGS OF THE PROFESSIONS THROUGHOUT THE WORLD.

THE law is probably the most profitable of the so-called learned professions. There are more and larger prizes to be gained by an acute and eloquent disciple of the legal art than are open to the medical man or the minister. In this country and in Great Britain the incomes of the foremost advocates and of attorneys in lucrative practice for the most part overshadow the yearly earnings of the best-known physicians and surgeons, and to a still greater extent those of our spiritual advisers. Occasionally one hears of very large fortunes being left by prominent doctors—Sir William Gull, Sir Andrew Clarke, Dr. Pepper, and Sir William Jenner are cases in point; but these are exceptions, and sums accumulated by medical men cannot be compared either in number or magnitude to the colossal amounts amassed by members of the legal fraternity. When, however, the average incomes of these three classes of the community are considered, their relative position in the United States and in Great Britain will be found to differ. Viewed thus in the United Kingdom the clergyman is at the top of the list, the lawyer second, and the doctor last; while here the lawyer or doctor gets a larger share of the "loaves and fishes," and the minister has to be content with the crumbs.

An article in *Medicine* for April refers to a recent editorial in the Chicago *Times-Herald*, discussing the relative incomes of Chicago doctors and lawyers, which says: "It is doubtful if the average income of lawyers in Chicago is $1,500, but that is because the average is reduced by the large number of failures and of lawyers who scarcely make their board during the early days at the bar. There are a few law firms in Chicago which make from $50,000 to $100,000 a year; perhaps twice as many from $25,000 to $50,000; many more from $5,000 to $25,000; perhaps five hundred from $2,000 to $5,000, and the multitude from $2,000 down to nothing. Of physicians the same is true on a reduced scale. We doubt very much if the average income of doctors in Chicago is $2,000. The city is full of young M.D.'s without enough practice to give them a personal atmosphere of disinfectants. One or two successful specialists may make as high as $50,000; but the fingers of one hand would probably keep track of the regular practitioners who can count on $25,000 a year."

The average income of a physician in large cities on this continent may be placed at $2,000, in the smaller towns at $1,500, and in the rural districts at $1,200. Two or three New York physicians are said to make over $100,000 a year, five or six about $50,000, but the average income, although rather higher than in Chicago and in other American large cities, does not greatly exceed $2,000 yearly. The minister averages in the city perhaps $1,200, and in the country certainly not more than $800 yearly. As regards living expenses, both the lawyer and minister have an advantage over their professional brother. In New York, for example, office accommodation suitable to a physician is very dear, in a good neighborhood costing not less than $70 or $80 a month, which with board and lodging and other necessary disbursements will represent a sum of $120 monthly, a sufficiently weighty burden for a struggling youthful practitioner to bear. The young minister has no rent to pay, while the legal neophyte can regulate his outlay in this respect according to the length of his purse. Nevertheless the lot of the medical beginner compared with that of a pastor in a like situation has its compensations. He is at least more or less independent. The minister, on the contrary, is as a rule permitted to exercise his own will but to a limited degree, and often is doomed to go through a lifetime of toil, subservient to the caprices of censorious elders and deacons. An excellent description of the trials of an American country minister, and the various unpleasantnesses with which he has to contend at the hands of his congregation, is given in the "Damnation of Theron Ware," the best novel written by the late Harold Frederic.

When all is said that can be said, the first few years of medical practice are years of arduous effort, full of disillusionment and disappointment. The late Sir Andrew Clarke told Dr. Osler: "From the vantage ground of more than forty years of hard work he could say that he had striven ten years for bread, ten years for bread and butter, and twenty years for cake and ale." The truth undoubtedly is, and especially in the large centres of population in America, that the opportunities for a physician to obtain adequate compensation for his services are yearly becoming less. This is not due to any deterioration in the quality of the present-day practitioner or an evidence of falling-off in medical or surgical skill. The fact is irrefutable that the medical profession in this and in all civilized countries stands on a higher plane in the matter of training and knowledge than ever before. The reason for the decrease in medical incomes is indubitably almost wholly owing to the more eager competition among regular practitioners, to hospital and dispensary abuse, and to the lamentable increase in quackery. The supply of medical men is greater than the demand; the market is flooded, and the most potent remedy we can suggest for this evil is that, as has been many times advised in the MEDICAL RECORD, a uniform high standard of medical education should be established in every State.

THE DINNER TO PROF. A. JACOBI.

THE complimentary dinner which will be tendered to-night to our esteemed townsman, Prof. A. Jacobi, in celebration of his seventieth birthday, will give proper expression to the kind and appreciative regard in which he is held by his hosts of friends. Few men have been spared to labor so effectively as physician, educator, and civic reformer for nearly half a century, and few indeed have during such a period lived to better purpose. The kindly words which will be spoken and the hearty good wishes that will be offered by those who may gather at the festive board will at the best be but faint reflections of the host of his distant friends everywhere, who, while absent in body, will be present in spirit. On behalf of these making the large and unseen majorities, and representing the profession at large, we tender our hearty congratulations.

News of the Week.

A Threatened Milk Famine in Syracuse.—A despatch to the New York *Sun* states that the milkmen of Syracuse, N. Y., have determined to serve no more milk in that city until a recent requirement of the board of health, enforced by the commissioner of public safety, forbidding the issuance of licenses except to dairymen who can show certificates of the tuberculin test of all their cattle, has been rescinded. The associated dairymen, who furnish the city's milk, adopted resolutions and signed a compact binding them to this course. The dairymen assert that their herds have been injured by recent tuberculin tests, many cows which have been tested having been found dead without apparent cause. They say that the test is still an experiment, and that they will not submit to the health board's requirements. They will sell milk at their farms to such persons as wish to go there and buy, but they will not bring it into the city until the rule has been repealed.

The Health Board and the Schools.—The principal of a private school in this city has recently made a public complaint of remissness on the part of the board of health, alleging that the department neglected to notify him of cases of contagious disease in the families represented in the attendance of his school. An investigation has been ordered by the sanitary superintendent. It is stated, however, that there is no law making it the duty of the board of health to notify the principal of a private school of illness in the families of his scholars. There is a law, however, enjoining upon the principals of all schools, public and private, not to permit any child or minor having scarlet fever, diphtheria, smallpox, or any contagious disease, or any child in any family in which any such disease exists or has recently existed, to attend the school until the board of health shall have given its permission.

Dr. Otto G. Ramsay, of the Johns Hopkins University, has been appointed to the chair of gynæcology at the Yale Medical School to succeed Prof. B. Austin Cheney, who has recently resigned.

Dr. William C. Braisted, U.S.N., surgeon on the *Detroit*, has been decorated by President Castro with the Order of Bolivar for services rendered the wounded of the Venezuelan forces at the taking of Puerto Cabello in November of last year.

Medical Practitioners in Great Britain and Ireland.—The recently issued "Medical Register" for 1900 contains 35,836 names as contrasted with 35,057 names last year; ten years ago it contained 28,348 names. Complaint is made, however, that the lists are very faulty, the names of many dead men being on the roll.

Latin Diplomas Forbidden in Germany.—It is reported from Berlin that Emperor William has empowered the Prussian minister of education, Dr. Studt, to forbid hereafter the use of Latin in all university and faculty degrees, assigning as a reason the importance of a "more general use of the German tongue." An order to this effect has just been issued.

Cholera Accompanies Famine in India.—A despatch from Bombay, dated April 27th, states that cholera is raging fearfully at the great camp at Godhrá, where thousands of stricken natives are receiving relief. A hundred and fifty corpses were removed in one day, but one hundred others had to be left because it was impossible to procure bearers.

Glanders on an Army Transport.—The transport *Siam*, which sailed from San Francisco March 11th with a consignment of three hundred and eighty-six horses and mules, arrived at Manila on April 26th, and was placed in quarantine owing to the fact that seventeen cases of glanders have developed among the animals on board.

Priority in the Serum Diagnosis of Typhoid Fever.—Dr. Albert S. Grünbaum, of Vienna, writes to *The Lancet* making a claim of priority in the discovery of the agglutination test of typhoid fever. In support of his contention he produces a document signed by Nothnagel and Mannaberg in which it is certified that Dr. Grünbaum at the commencement of the year 1896 made systematic experiments with the material of one of the wards in the Vienna General Hospital on the agglutination of typhoid and cholera bacteria by serum taken from sick and healthy persons. It is stated further "that in March, 1896, therefore long before the publication of M. Widal on this subject, he had observed in two cases of typhoid in the ward that their serum, in considerable dilution, agglutinated typhoid bacilli. Dr. Grünbaum was fully aware of the diagnostic utility of this observation, and he delayed publishing it only on account of regard to the necessity of confirming the reliability of the reaction on a larger number of cases of typhoid. Dr. Grünbaum therefore discovered the agglutination reaction of typhoid serum independently, and to acknowledge this is a matter of justice." In these rapid times scientific workers have presented to them the disagreeable alternative of perhaps speaking too quickly, as Koch did, or of running the risk that some one else will anticipate the publication of the discovery and take the credit, as may be the case in this instance.

Honor to a Surgeon.—The Victoria Cross has been conferred on Surgeon-Major William Baptie, of the British army, for attending the wounded under fire at Colenso and for bringing in a wounded officer from the battlefield. Major Baptie was under a heavy fire all the time, and his horse was hit three times.

Dr. Edward J. Messemer was tendered a dinner on April 21st by the dispensary staff of Mt. Sinai Hospital, in honor of the twenty-fifth anniversary of his connection with the dispensary. Over thirty of his professional friends were present, Dr. Henry S. Stark occupying the chair as toastmaster. Congratulatory addresses were made by Drs. Mannheimer, Max Rosenberg, and Nathan Oppenheim, and original poems were read by Drs. Brickner and Rheinthaler.

The City Hospital for Consumptives.—Dr. Alfred Meyer writes that in Dr. Henry's bill, to which we referred recently, there is no provision for the appropriation of money by the State for its maintenance. The bill provides that a hospital which is for residents of this city may be built outside of the city limits but at the expense of the city, which is authorized to issue corporate stock therefor to an amount not exceeding $350,000. The State will not be at any expense whatever for the establishment or maintenance of the city hospital.

The Omega Upsilon Phi is the name of a fraternity established at the University of Buffalo in 1894, its membership being limited to medical students and practitioners. A chapter has recently been established in the medical department of the University of Cincinnati. The order now has chapters at the University of Buffalo, the University of Denver, the New York University, Trinity University (Toronto), and the University of Cincinnati. There are also three graduate chapters. The Grand Scribe of the order is Dr. H. J. Knickerbocker, of Wilson, N. Y.

The International Tuberculosis Congress was held at Naples last week, from the 25th to the 28th of April. It was opened at the San Carlo Theatre in the presence of the King and Queen of Italy, the Prince and Princess of Naples, the Duke of Genoa, the Premier, General Pelleux, and the minister of public instruction, Dr. Baccelli. The latter delivered the inauguration speech, and a delegate from each country represented at the congress followed. All the diplomats, including United States Ambassador Draper, attended the session.

The Board of Health of Havana, which was appointed by General Ludlow just before he left the city, has resigned, the reason alleged being that the municipal authorities pay no attention whatever to the recommendations of the board.

Philadelphia Medico-Legal Society.—At a stated meeting held April 24th, Dr. J. Madison Taylor read a paper on "Hypnotism and Some of its Medico-Legal Aspects."

Pathological Society of Philadelphia.—At the annual conversational meeting, held April 26th, Prof. Theobald Smith, of Harvard University, delivered an address entitled "Comparative Pathology and its Relations to Biology and Medicine." After the meeting a reception was tendered Professor Smith at the University Club.

Philadelphia County Medical Society.—At a stated meeting, held April 25th, Dr. Joseph Head read a paper entitled "Consanguineous Marriages," in which he contended that such unions are not in themselves necessarily harmful, but that, in general, better results are to be obtained by their avoidance. Dr. Henry Beates, Jr., read a paper entitled "Some Facts concerning Medical Education Elicited by the Application of the Law Governing Practice in the State of Pennsylvania." A discussion on "Medical Education" was then opened and participated in by Dr. W. W. Keen, Dr. H. C. Wood, Prof. John S. Stahr, president of Franklin and Marshall College; Prof. Isaac Sharpless, president of Haverford College; Professor E. D. Warfield, president of Lafayette College; Prof. W. W. Birdsall, president of Swarthmore College; Dr. John B. Roberts, James Tyson, and Martin B. Tinker. The discussion revolved principally around the question whether the fourth year of the course in a literary college should be accepted as the equivalent for the first year of a course at a medical college, and the general consensus of opinion seemed to be in the affirmative, providing that all of the work of the first year at the medical school was previously done at the literary college.

Smallpox in Winnipeg.—A despatch from Winnipeg to the New York *Times* states that smallpox is becoming epidemic in that city. Eighteen cases had been reported to the health authorities up to April 27th, and a special meeting of the city council has been held to devise means for stamping out the pest. Health Officer Inglis says the disease is of the most malignant type, and that many of the cases now in quarantine will terminate fatally. A meeting of all the doctors in the city will be called, and a house-to-house visitation made. The physicians who treated the early cases are blamed for not having recognized the disease and reported it to the authorities.

Yellow Fever in Mexico.—It is reported from Vera Cruz that several cases of yellow fever have occurred among people recently arrived there, and the fever has broken out at Salina Cruz on the Pacific coast. Unusually hot weather for this season is believed to be the cause. The fever has also appeared again at Tehuantepec, where Sir Wetman Pearson has offered the authorities a suitable site for a hospital.

American Nurses in Paris.—We are informed that in June there will be established in Paris a permanent bureau for American trained nurses, under the direction of Mrs. W. H. Booth, formerly superintendent of nurses at St. Luke's Hospital in this city. The address of the bureau will be Rue Vaugirard, No. 102, Paris, France.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending April 28, 1900. April 20th.—Passed Assistant Surgeon L. Morris detached from the *Brooklyn* and ordered to the *Baltimore.* Passed Assistant Surgeon J. Stoughton detached from the *Bennington* and ordered to the *Castine.* Assistant Surgeon T. M. Lippitt detached from the *Baltimore* and ordered to the *Oregon.* Assistant Surgeon J. C. Thompson detached from the *Castine* and ordered to the *Bennington.* Assistant Surgeon A. G. Grunwell detached from the *Yosemite* and ordered to the *Brooklyn.* Passed Assistant Surgeon J. F. Leys detached from the *Essex* on reporting of relief, and ordered home and to wait orders. Assistant Surgeon C. H. Delancy detached from the *Amphitrite* and ordered to the *Essex.* April 21st.—Assistant Surgeon J. C. Thompson will return to the United States by the *Bennington.* Passed Assistant Surgeon A. Farenholt will return to the United States by the *Concord.* April 23d.—Passed Assistant Surgeon M. R. Pigott detached from the Naval Academy and ordered to the *Chesapeake* same day. Assistant Surgeon K. Ohnesorg detached from the Naval Academy and ordered to the *Newport* same day.

Obituary Notes.—Dr. G. R. C. Todd, of Barnwell, S. C., died on April 28th. He formerly lived in Kentucky and was a graduate of the now extinct medical department of Transylvania University, Lexington, Ky., in the class of 1850. He was a surgeon in the Confederate army during the Civil War, and afterward settled in South Carolina. He was a brother-in-law of Abraham Lincoln.

Dr. George E. Frothingham died at his home in Detroit on April 25th. He was born in Boston in 1836, and was a graduate in medicine of the University of Michigan in the class of 1864. He was formerly a member of the faculty at that university, and enjoyed a wide reputation as an ophthalmologist.

Dr. William E. Eggert, a homœopathic physician in Santa Fé, N. M., died on April 26th at the age of seventy-six years. He was a surgeon in the Union army during the Civil War.

Dr. Charles H. Bronson, a homœopathic practitioner of Brooklyn, died on April 24th at the age of seventy-six years.

Correspondence.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

The Progress of the War.—Everything—and not least the recall of General Sir William Gatacre to England—that has occurred since my last letter points to a prolongation of the war, and the sensible person, whether Boer or Briton, is he who recognizes this and makes the fullest preparation for a winter campaign. Both in Durban and Cape Town it is pathetic to see the manner in which hot and cold fits succeed each other in influencing the public mind, while such authentic reports as come through from Pretoria—neither frequent nor full, by the way—show that the Dutch, like the English, are alternately jubilant and despondent. The ups and downs of the fortunes of war have a most marked effect upon convalescing patients. The seriously sick remain sick, of course, whoever is winning, but those who have turned the corner and are simply in hospital to regain their strength have shown themselves remarkably susceptible to the influences of hope and fear, getting better when their side wins and worse when it loses. This curious but very natural phenomenon has been frequently observed during the war, and attention has been called to it by many medical men.

Firing on Hospitals.—The British have protested in the course of the war very vigorously against what they allege to be a Boer habit of firing upon ambulance wagons and hospitals. I know that many members of the Royal Army Medical Corps implicitly believe that this has happened, and that statements to the same effect have been made by officers in the British army who would not condescend to traduce a brave foe. Still, I do not believe these enormities to have occurred. Hospitals have been hit by shells, ambulance wagons have come to similar grief, and even the laagers of women and children have been fired upon, but never of set purpose. The excitement of war increases the liability present in the minds of all men with a *parti pris,* to inaccurate observation, and I am convinced from the evidence offered by the complainants that such occurrences of the sort as are known to have happened have been simply unfortunate accidents. The Boers have throughout treated the British sick and wounded with humanity, and the offences alleged against them by some would be in contrast with their conduct in the war and their general character.

The Health of the Boer Prisoners.—The sickness on board of the transports on which the Boer prisoners are confined, though not so severe as it was at the end of March, has not yet subsided, and the population of Simonstown is apprehensive of the spread of disease from the prisoners to the town. Over one hundred Boer prisoners were down with typhoid fever in the first week in April, and deaths were still occurring daily. The prisoners receive the best medical care and attention that the British can give.

Lord Roberts' Impending Advance.—Before Lord Roberts gives the word for the next great advance toward Pretoria he will certainly make some systematic and probably successful attempts to drive back the various Boer commanders which are operating to the east of Bloemfontein and thus bring up the right wing of his force. To do this mounted men are urgently required, and the supply of horses is still very limited with the invading army; but the veterinary surgeons give a much more hopeful report on this matter than might be expected. They appear not to anticipate any great epidemics of horse-sickness, but rather believe that if the supply of remounts is regularly maintained so that the animals are not grossly overworked, the other conditions are not unfavorable to their remaining healthy. It is generally believed at headquarters that when Lord Roberts does advance his army will have its centre at Bloemfontein, its advance guard at Karll Siding (where there has recently been fighting), its right wing at Ladybrand and its left wing at Boshof. In this case the right wing will have far the most difficult ground to traverse. The sources of the Modder River will have to be crossed, and throughout the march from ridge to ridge over a succession of water-courses it will be easy for an insignificant number of Boers to hold commanding situations. Many old campaigners are hoping out loud that Lord Kitchener, who is responsible for all the transport and commissariat arrangements with Lord Roberts' army, will recognize the extreme difficulty of the eastward advance, for they think that he has asked too much of the men hitherto. Sir Redvers Bullers has recently been censured by his chief, but his men have always been well cared for; on the other hand the troops under Lord Roberts have marched and fought under the most difficult circumstances upon half-rations, while the ambulance arrangements for their wounded have been faulty. It is possible to lose as many men by treating them injudiciously as by exposing them to fire. If Lord Kitchener should give way to the feeling that to be a hard man is to be a strong man he may impede his chief's advance seriously, as well as fill the hands of the Royal Army Medical Corps to an inconvenient extent with young soldiers suffering from nothing but hunger and overexertion.

The Casualties in the British Army show sufficiently that the Royal Army Medical Corps has had an enormous lot of work to do, and the fact that with its small numbers it has been able to cope with the results of all the casualties in such a way as to win the good opinion of every one is very significant. Up to the end of the first week in April the official figures of British casualties were as follows: Officers killed, 211; officers died from wounds, 48; officers died from disease, 47; officers died from accidents, 3; non-commissioned officers and men killed, 1,960; non-commissioned officers and men died from wounds, 465; non-commissioned officers and men died from disease, 1,485; non-commissioned officers and men died from accidents, 34; total deaths, 4,253. Officers wounded, 627; non-commissioned officers and men wounded, 9,883; total wounded, 10,510. Officers missing and prisoners, 168; non-commissioned officers and men missing and prisoners, 3,722, total, 3,890. Grand total of casualties, 18,653. To these must be added 29 officers and 1,828 men who have been invalided home sick, distinct from wounded. The proportion of deaths from disease is mounting a little as the year goes on, and this must be expected, for protracted camp life has its own dangers to be added to the ordinary dangers of disease. The proportion of deaths from wounds is also going up.

Under False Pretences.—It is stated, and by this time probably the statement has been telegraphed to the United States, that the members of the Chicago Ambulance Corps have taken up arms for the Boers instead of remaining with the hospital as they were understood to be pledged to do. If this be true, there will be still greater need of British surveillance at Delagoa Bay, for such recruiting ought to be stopped. The numbers of the Chicago Ambulance Corps are not large, and the result of their step—if it has been taken—will be of no consequence, but it is to be hoped that the story will be contradicted The ambulance corps of a non-belligerent nation present at the seat of war is understood to be neutral in sentiment and inspired only by humanity. If on either side the soldiers get the idea that the ambulance arrangements are used as a mask to offensive action, they can hardly be blamed if they do not regard the Red Cross with the sanctity which perfect international arrangements should secure for it.

Plague in Cape Town.—There are five cases of plague in the quarantine station at Cape Town, but all are progressing favorably, or were by the third week in April. So far there has been no spread of the disease, and it is certainly most devoutly to be hoped that there will not be. All the larger towns of South Africa contain at the present moment double, if not quintuple, their proper population, and all the medical men, military and civil alike, have more work than they can do quite properly. An epidemic of plague under such conditions would produce a situation whose horrors will not bear pondering over.

Count Gleichen, a relative of Queen Victoria on her mother's side, was very severely wounded at the Modder River engagement, but is now back at duty. A Mauser bullet entered through the anterior margin of the right sterno-mastoid muscle behind the angle of the jaw, and emerged on the left side of the neck two inches from the middle line at the level of the sixth cervical vertebra. All important structures escaped, numbness of the palm of the left hand being practically the only symptom.

Hero-Worship Extraordinary.—Rudyard Kipling is now in Bloemfontein. He has made a tour of the hospitals, and his visits are described as being very good for the patients, who worship him, and are always immensely heartened by a few words from him. It is said that on one occasion he gave a bottle of opium to an officer, who in handing a dose to a dysenteric patient, mentioned the name of the provider. The soldier tried to keep it as a memento instead of swallowing it.

The Welsh Hospital, under the charge of Major Cockerill, R.A.M.C., left England on April 14th, and embarked on the steamship *Canada*. Several of the medical staff had already started for Africa.

Mr. Samuel Osborn, chief surgeon to the metropolitan corps of the St. John Ambulance Brigade, has gone up to Kimberly and will join Lord Roberts at Bloemfontein preparatory to the next advance. It is probable that Bloemfontein, which is an exceedingly pleasant and healthy place, will be made the site of the base hospitals which can hardly remain at Wynberg, as the lines of communication become more extended in the direction of Pretoria.

A Victoria Cross for Major Babtie, R.A.M.C.—The queen has been pleased to signify her intention to confer the coveted decoration of V.C. on Major William Babtie, C.M.G. of the Royal Army Medical Corps, for conspicuous bravery at the battle of Colenso. I have already described Major Babtie's heroism to your readers in a letter which you published in your issue of February 17th, and I then anticipated the honor for Major Babtie. The act of courage for which he was recommended for decoration is thus described in the official gazette: "At Colenso, on the 15th December, 1899, the wounded of the 14th and 66th Batteries, Royal Field Artillery, were lying in an advanced donga close in the rear of the guns without any medical officer to attend to them, and when a message was sent back asking for assistance, Major W. Babtie, R.A.M.C., rode up under a heavy rifle fire, his pony being hit three times. When he arrived at the donga, where the wounded were lying in sheltered corners, he attended to them all, going from place to place exposed to the heavy rifle fire which greeted any one who showed himself. Later on in the day, Major Babtie went out with Captain Congreve to bring in Lieutenant Roberts, who was lying wounded on the veldt. This also was under a heavy fire."

OUR LONDON LETTER.

(From our Special Correspondent)

MIDWIVES AGAIN—CHANGES IN THE BLOOD IN DISEASE—ANTHRAX—LIVERPOOL TROPICAL EXPEDITION—COLLEGES OF PHYSICIANS AND SURGEONS—DEATHS OF SIR WILLIAM PRIESTLEY, M.P., M.D., AND SIR DOUGLAS MACLAGAN, M.D.

LONDON. April 13, 1900.

THE midwives bill nearly slipped into the report stage through another accidental interference with the programme of the House of Commons. Government business included an adjournment for the Easter recess and was got through with amazing alacrity The supporters of the midwives were waiting for their chance and seemed likely to get it, when the House rather unexpectedly emptied, and a count-out ensued. It is now understood that the bill cannot come forward until Whitsuntide, but the opponents need to keep a sharp lookout for accidents. I was told the other day that the General Medical Council will meet a little earlier than usual so as to be able to see the bill as it has emerged from the committee on law. It can be of little advantage to any one for them to see it, unless they take on a degree of activity of which they have hitherto appeared incapable. Energy is required, not talk. Unless the council moves it will lose the little confidence it has retained. Some people fancy it will move for fear the expense of supervising midwives will otherwise be saddled on it. The bill will injure a good many reputations. The discussions have already done something in that way to individuals as well as public bodies.

On the 3d inst. the Pathological Society began a discussion on the changes in the blood in disease. Dr. Sidney Martin opened it with a careful paper summarizing the changes (1) in coagulability, (2) in the corpuscles, and (3) in the presence of toxic substances. Coagulation could be ascribed to the interaction of lime salts with one another and the proteids of the blood. The fibrin ferment was considered by many as a lime compound of nucleo-proteid. The changes in corpuscles affect the number of both red and white. So, too, there are changes in size and shape. The pale, watery blood of chlorosis coagulates rapidly, that of pernicious anæmia slowly. In the latter the corpuscles showed no rouleaux formation, but exhibited great variations in size and shape. The white corpuscles show greater variations in number than the red. They are increased in some infective diseases, in gas poisoning, and under the influence of quinine and salicylates. There is great increase in leukæmia, in which too myelocytes appear derived from the marrow. As to toxic agents in the blood, Dr. Martin thought their explanation lay in an auto-intoxication. Such poisons led to the formation of anti-microbic and antitoxic substances respectively.

Professor Sherrington also read a paper on the subject, in the course of which he dwelt on the great and rapid changes in the volume of the blood, such as occurred in injuries or surgical operations, especially those involving the abdominal cavity or in collapse from any cause. The reduction in volume might be enormous in the course of a few hours. The reduction fell entirely on the plasma. Hence the thirst, often distressing, after abdominal operations. The blood was inspissated and its specific gravity increased; he had seen it rise twenty degrees in a few hours. The frictional resistance of the blood would increase with this viscosity, and this would impose a heavy burden on the heart to overcome it. The gravity of such a strain on the ventricle was manifest in the algid stage of cholera. Death was often due to the inability of the heart to meet the extra demand put upon it in that stage, and a similar strain was imposed in collapse due to traumatism. The drinking of a certain quantity of fluid would then not only allay the thirst, but assist the circulation and so diminish the tendency to collapse.

After these two papers, of which only some salient points are noted above, the discussion was adjourned until the May meeting.

The Home Office has determined to give assistance to practitioners in obtaining bacteriological evidence in cases of suspected anthrax in which the infection is believed to have taken place in a factory or workshop. The directions laid down savor so much of red tape that it is to be feared the good intention may often be frustrated. The approval of the medical inspector in each case has to be sought, on receipt of which the material has to be collected and sent with a report to the bacteriologist appointed

The report of the Liverpool expedition under Major Ronald Ross is an interesting production. It contains an account of the numerous facts from which the conclusion is derived that the mosquito is a purveyor of malaria. But the term malaria is rejected by Major Ross, and so, of course, is malarial fever. Nor does he hold with paludism. Hæmamœbiasis is proposed, but I doubt if it will obtain much favor. "Gnat fever" is suggested as a popular term. and is certainly preferable, and may serve to popularize more correct notions. So, of course, the word mosquito is also rejected for the English synonym gnat.

The College of Physicians has re-elected Dr. Church as president. His address commemorated the deceased fellows of the year, according to custom. The College of Surgeons has elected two members of twenty years' standing to the fellowship, and awarded its prizes—the Jacksonian to Dr. Lambert Luck and the John Tomas prize to Mr. Mummery. Both colleges sent telegrams of congratulation to the Prince of Wales on his happy escape from assassination.

The death of Sir William Priestley was announced yesterday. He had been ill for some time, and inquiries showed that the end was approaching. He was born June 24, 1829, took his M.D. at Edinburgh in 1853, having previously joined the College of Physicians here, of which he was made a fellow in 1864, about two years after he had been appointed professor of obstetric medicine at Kings College. This position, with that of obstetric physician to the hospital, he held until in due course he retired to the consulting rank. He was physician accoucheur to the late Princess Alice and to the Princess Christian, and enjoyed for many years a large practice as a leader in his specialty. In 1893 he was knighted, and three years later was elected without opposition member of Parliament for the Universities of Edinburgh and St. Andrews. He was not a voluminous writer, but his contributions to medical literature were of value. His Lumleian lectures, "On the Pathology of Intra-Uterine Death," were printed in 1887, and he contributed articles to Reynolds' "System of Medicine" and to Allbutt's Gynæcology. In the *Annals of Natural History* for 1850 there is an account of British carices from his pen, showing that his scientific pleasure was not of a restricted character.

Edinburgh has also lost one of her foremost professors, for Sir Douglas Maclagan died on the 5th inst. "full of days," for he had reached the age of eighty-eight years, and full of honors. He made his chair of forensic medicine famous, and was consulted by the crown in many a *cause célèbre.* He was indeed the leading toxicologist for a long period. He also did much to raise the position of public health, the teaching of which was attached to his chair. He was president of the College of Physicians of Edinburgh in 1864, and in 1884 was elected to the same office in the sister college. This unusual honor from the two colleges had only once before been conferred, and that was on his father, Dr. David Maclagan, surgeon to the Queen in Scotland and physician to the forces in the Peninsular war. Sir Douglas received his knighthood in 1886. He had retired from active work for some years. Outside his professional work he was an able writer, and even indulged in poetry, his "Nugæ Canoræ Medicæ" being known to most Edinburgh men, and maintaining his reputation as a versifyer, which was as considerable as that which he possessed as a musician. In fact his general attainments were so extensive that even in a learned society like that of Edinburgh they were regarded with admiration.

THE SALICYLATES IN PNEUMONIA.

To the Editor of the Medical Record.

Sir: Since Dr. Andrew H. Smith published his article last year regarding the treatment of acute lobar pneumonia by creosote, the salicylates, etc., I have successfully treated six cases—some with salol, others with salicylate of ammonium or of sodium. If there be any preference, it is in favor of ammonium salicylate, as less irritating to the digestive apparatus. This method of treatment has great value in certain cases. I can recall several which terminated fatally in former years that I am sure would probably have been saved by this treatment. These cases tolerated large doses and made quick recoveries.

William Crawford Johnson, M.D.

Frederick, Md.

SANATORIA FOR CONSUMPTIVES.

To the Editor of the Medical Record.

Sir: In your editorial of April 21, 1900, you say in regard to sanatoria for consumptives: "But these institutions are one and all for the benefit of persons in easy circumstances. Up to quite recent times, says Dr. Goghill, writing in the *Nineteenth Century Magazine*, February, 1899, 'no attempt has been made on the European continent, and, it may be added, nor in this country, to provide like resorts for the necessitous.'"

May I call your attention to the fact that the Adirondack Cottage Sanitarium has been making such an attempt for the past sixteen years, and that its object is purely philanthropic. Although its work has apparently not come to your attention or that of Dr. Goghill, I hope it has not been without some slight influence on bringing about the recent action by the State for the care of consumptives. I enclose the fifteenth annual report.

E. L. Trudeau, M.D.

Saranac Lake, N. Y., April 21, 1900.

Lumbar Puncture in Meningism and in Sydenham's Chorea.—C. Bozzolo reports several cases of meningism and meningitis in which this procedure was resorted to, but afforded only temporary relief, the disease going on to a fatal termination. In three cases of chorea, however, it calmed restlessness and induced refreshing sleep, and restored co-ordination of movements. The symptoms of the disease returned after an interval of improvement, but repeated puncture again produced a beneficial effect. In a fourth fatal case the puncture was of no value, nor did it render any assistance to the diagnosis, as the liquid extracted was in every way normal and absolutely sterile. Cultures of the nerve substance, however, showed the staphylococcus pyogenes aureus.—*Rivista Critica di Clinica Medica*, March 31, 1900.

Medical Items.

Enzymes and Immunity.—Charles T. McClintock states that after looking over all the evidence, which is voluminous, it appears to him to be fairly well proved that the body does destroy disease germs and organisms with enzymes. As to toxins, the evidence is not so conclusive, although many facts indicate the probable truth of the enzyme explanation. The writer believes that modern investigators are pursuing the right methods and little by little are learning how the tissues combat disease-producing agents.—*Medicine*, April, 1900.

Dysmenorrhœa.—Edward E. Montgomery divides dysmenorrhœa into obstructive, congestive, inflammatory, and nervous. In the first three forms the most effective method of treatment would consist in the institution of measures with a view to the correction of the condition. Fibroids should be removed. Dilatation and curettage should be performed for obstruction and inflammatory conditions. In the neurotic cases, the rest treatment and change of scene are invaluable. Arsenic, quinine, strychnine, good diet, and large quantities of water are most advantageous in these cases.—*International Medical Magazine*, April, 1900.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended April 28, 1900:

		Cases.	Deaths.
	Smallpox—United States.		
Alabama, Mobile	April 14th to 21st	12	
District of Columbia, Washington	April 14th to 21st	2	
Florida, Jacksonville	April 14th to 21st	1	
Illinois, Aurora	April 1st to 7th	1	
Chicago	April 14th to 21st	4	
Indiana, Evansville	April 14th to 21st	5	
Indianapolis	April 1st to 21st	8	
Kansas, Wichita	April 14th to 21st	11	
Thirty-three towns and counties	March 1st to 31st	456	5
Kentucky, Covington	April 14th to 21st	7	
Lexington	April 14th to 21st	2	
Louisiana, New Orleans	April 14th to 21st	75	19
Maine, Portland	April 14th to 21st	..	1
Michigan, Detroit	April 14th to 21st	1	
Nebraska, Omaha	April 14th to 21st	2	
Ohio, Cleveland	April 14th to 21st	15	
Pennsylvania, Philadelphia	April 21st	1	
Pittsburg	April 14th to 21st	2	
South Carolina, Greenville	April 13th to 20th	3	
Utah, Salt Lake City	April 14th to 21st	3	
Washington, Spokane	April 14th to 21st	3	
Wisconsin	April 14th	1	
	Smallpox—Foreign.		
Austria, Prague	March 24th to 31st	5	
Belgium, Ghent	April 1st to 7th	..	2
Egypt, Cairo	March 18th to April 1st	..	16
England, Liverpool	April 1st to 7th	8	2
London	April 1st to 7th	2	
Southampton	April 1st to 7th	1	
France, Paris	April 1st to 7th	..	2
Gibraltar	April 1st to 8th	4	1
Greece, Athens	April 1st to 7th	4	2
India, Bombay	March 13th to 27th	..	301
Calcutta	February 24th to March 3d	..	21
Kurrachee	March 11th to 25th	24	12
Mexico, Chihuahua	April 1st to 14th	..	2
Vera Cruz	April 7th to 14th	..	6
Russia, Odessa	March 24th to April 7th	9	3
St. Petersburg	March 18th to 24th	30	3
Warsaw	March 18th to 31st	..	2
Spain, Madrid	March 24th to 31st	..	8
Straits Settlements, Singapore	March 3d to 10th	..	3
	Yellow Fever.		
Costa Rica, Limon	April 20th	1	
Mexico, Vera Cruz	April 7th to 14th	..	2
	Cholera.		
India, Bombay	March 13th to 27th	..	11
Calcutta	February 24th to March 3d	..	70
	Plague—Insular Possessions United States.		
Hawaii, Honolulu	March 26th to April 9th	4	3
	Plague—Foreign.		
Brazil, Rio de Janeiro	April 20th	6	6
India, Bombay	March 13th to 27th	..	1,428
Calcutta	February 24th to March 3d	..	411
Kurrachee	March 11th to 31st	292	223

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Original Articles.

BOTTINI'S OPERATION FOR THE CURE OF PROSTATIC HYPERTROPHY.

REPORTS OF CASES.

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IN my former paper, frequently referred to, published in the MEDICAL RECORD, January 14, 1899, I have given detailed histories of the first twelve patients on whom I had performed Bottini's operation until the end of 1898. Since then, up to the time of closing the present report, April 1, 1900, I have had twelve further cases, thus making a total of twenty-four. In these Bottini's operation was done thirty times; that is to say, it was repeated in four instances (Cases I., VII., XX., and XXIII.), and done three times in one case (XIV.). In the first eleven cases a small battery without amperemeter and imported instruments were used; in the last thirteen, instruments of American manufacture and a battery with amperemeter were employed. In nine cases (IV., V., VI., VII., XII., XVI., XX., XXI., XXIV.) a cure was effected; and this could be proved to be lasting as shown by final examination made between three and twenty-five months after operation in six. Two patients did not present themselves again although requested to do so by me. Seven of my cases (I., X., XIII., XV., XVIII., XIX., XXIII.) were much improved by the operation, and this result was shown to be lasting by examination made six months to two and a quarter years after operation. Two (Cases XI., XIV.) were improved and have remained so to date, twelve and nineteen months respectively after operation. One patient (Case XI.), who was at first completely cured, to-day shows a recurrence of a number of his former symptoms, although his general condition is excellent, and the catheter has been dispensed with since the day of the operation. It must be remembered, however, that this patient was the last of the series operated upon with the help of the old battery without amperemeter, so that I am unable to say whether any of the four cuts made were carried out with the knife heated to a sufficient degree. Certainly the patient's condition is improved by the operation. Another patient, Case XIII., who also was originally cured, and considers himself so to-day, has been classed as "much improved" only, because he shows a residual urine of about thirty-three per cent. at the present time. This is the case in which the urine cleared up perfectly, but in which only one cut was made with the current at full strength. Then there were two deaths directly due to the operation (Case III., acute sepsis, and XVII., suppuration in cavum Retzii); and two deaths with Bottini's operation as the remote cause (Case IX., suprapubic cystotomy, followed by sudden death eight days after Bottini's operation; and Case XXII., phlebitis of the lower extremity followed by probable pulmonary embolism). Three patients have died since the operation was performed (Case II., six weeks after operation, of pyelo-nephritis of long standing; Case VIII., of persistent suprapubic fistula and chronic pyelitis; death, due to pyelitis, occurred three months after operation; and Case XII., a patient who was absolutely cured, urinating up to his death better than he had ever done as long as he could recall—of pernicious anæmia, nine months after operation). In other words, my cases show thirty-eight per cent. of cures (so far); twenty-nine per cent. much improved; eight per cent. improved; and a mortality of eight per cent. directly due to the operation, and eight per cent. indirectly due to the operation.

With regard to the mortality, it will be seen that death occurred equally often as the direct and indirect result of Bottini's operation. In counting deaths it is clear that if a patient, although he may have had some slight rise of temperature for many weeks or months, undergoes the operation and promptly develops a chill with high fever, to which he succumbs after a day or two; or if with the posterior incision the bladder is perforated; or if after a too deep anterior incision suppuration of the cavum Retzii with its sequelæ appears as a complication—death must, of course, be counted as directly due to the performance of Bottini's operation, at least so far as statistics are concerned.

If, on the other hand, constant vesical spasms after the operation wear out the patient, and he then asks for immediate relief, which, for special reasons, is granted—suprapubic cystotomy being done—and the patient then suddenly dies a few moments after general anæsthesia was discontinued; or if, in a patient who has been laid up for some time with an obstinate cellulitis of the hand previous to operation, a phlebitis of old varicose veins of the thigh sets in a few days after Bottini's operation, and the patient dies eight days later, although his bladder functions had been perfectly and most beautifully restored by the operation, such an occurrence certainly must be looked upon as but indirectly attributable to the operation, although, when making up our statistics, we should have to count such case among the deaths after Bottini's operation.

If, however, a man with a pyelonephritis of long standing successfully pulls through the operation, is discharged from the hospital, and then, some weeks later, develops more serious symptoms of pyelonephritis, under which he finally dies in another hospital—such a patient cannot be said to have succumbed to Bottini's operation. It would be unfair, in estimating the value and risks of the operation, to put such a case in the category of deaths due to the operation. Or, if a man who was repeatedly operated upon for prostatic enlargement by other surgeons, a man in whom vasectomy, perineal prostatectomy, suprapubic cystotomy, castration, and Bottini's operation had been successively done, and who at last carries a wide-open suprapubic fistula—I say, if such a patient submits to Bottini's operation for a second time, makes a rapid convalescence, is up and about, kept in the wards because he has no home, and dies eight to ten weeks later of an aggravation of his old trouble the pyelonephritis, such death is surely not ascribable to Bottini's operation. One might as well attribute it to the castration or prostatectomy that had been done.

In estimating the value of these personal statistics, it is but fair to bear in mind what I have said before, that these cases were not selected; they were operated upon as they came along. Had I been guided by a desire to be able to present still more favorable statistics, I should have certainly refused operation in quite a number of the twenty-four cases. I should have had fewer deaths, but also not the satisfaction of having saved the life of a patient (Case XVI.) for whom there was absolutely no help except by Bottini's operation, and in whom, besides, death would have been a real torture. It should further be borne in mind that in this series are included *all* cases so far operated upon by me; also the very first ones in which I proceeded without any personal experience. Then, too, one of the fatal issues was due directly to the anterior incision, which, as I have stated, I have since abandoned. We are, therefore, justified, I think, in expecting to reduce the mortality considerably in the future.

Before proceeding to give the full reports of my second series of cases, I shall here append a brief synopsis of the past history of my first twelve cases, together with a report of their present condition, one and a half to two and a quarter years after operation.

CASE I.—Age fifty-eight; has been suffering for one year; urinates every fifteen to thirty minutes day and night; excruciating pain when bladder is empty. Residual urine, 25:300 c.c. (1:10 oz.). Operated upon twice.

First operation, October 7, 1897; Schleich's solution No. I.; bladder empty; Bottini's original incisor used; insufficient storage battery.

Second operation, December 18, 1897. Freudenberg's modified incisor, imported small battery.

January 14, 1899 (the date of publication of my former paper), the patient was classed as "much improved."

March 26, 1900 (two and a quarter years after second operation): The patient considers himself cured; has no pain whatever; feels splendid, just as if he had never been sick; is back to work. He urinates every two to three hours during the day; nights twice or three times. Bowels in good order. He has gained more than ten pounds since the operation. When calling at my office he had urinated about an hour before; upon request he then voided 55 c.c. (about 2 oz.); residual urine 225 c.c. On irrigation the water soon returns clear. The urine is slightly turbid; acid. Prostate per rectum is hard; its upper border can be reached; length of urethra, 20 cm. He still refuses a third operation, which was advised fifteen months ago.

CASE II.—Age seventy-three; patient in desperate condition; chronic pyelo-nephritis. Operation December 23, 1897. No improvement. He died six weeks later, in spite of operation.

CASE III.—Age sixty-four; bilateral pyelitis, chronic sepsis. Death from acute sepsis, thirty hours after operation.

CASE IV.—Age sixty-four; his trouble started seven years ago, but has become much worse within the last four years; he urinates three to six times during the night, oftener in the daytime. Incomplete retention; he uses catheter three times in twenty-four hours. Chronic cystitis; kidneys free. Residual urine, 10:200 c.c. ($\frac{1}{3}$:6$\frac{2}{3}$ oz.).

Operation February 26, 1898, under eucaine anæsthesia; bladder empty; three cuts, posterior, left lateral lobe, anterior. Freudenberg's incisor; small battery.

November 18, 1898: Frequency of micturition three to four times during the day, nights once; no pain whatsoever. He has gained in weight. He voids 150 c.c. (5 oz.) in a good stream; 300 c.c. injected are passed up to the last drop. There is some cystitis. Catheter dispensed with since operation.

Last examination January 4, 1899: the same good result.

With my request of March, 1900, to present himself at my office for examination, the patient failed to comply.

CASE V.—Age fifty-nine. There has been increasing frequency of micturition for the last four years, which has become much aggravated since two years. There is incomplete retention; some incontinence. He urinates every half-hour to hour day and night; much pain; frequent catheterization; chronic cystitis; no kidney lesion; residual urine, 150–180 c.c.

March 28, 1898, Bottini's operation; eucaine anæsthesia; bladder empty; two cuts, one posteriorly, the other through projecting growth in posterior urethra. Incisor; small battery.

October 18, 1898: He urinates once every six hours; at times slight incontinence. Catheter not used since operation. No pain. He has gained in weight.

March 24, 1900 (written communication); Two years after operation: "urinates three to four times during the day; sleeps through the night; general condition, 'tip-top'; catheter never used again; passes normal quantity of water; urine absolutely clear; stream good; no pain; is relieved as far as his bladder trouble is concerned."

CASE VI.—Age fifty-two; incomplete retention; urinates every fifteen to thirty minutes in the day-time; nights every hour to hour and a half; much pain; catheter not used; cystitis; pyelitis surely present; residual urine 150:175 c.c.

Operation May 7, 1898: Eucaine anæsthesia; bladder filled with 150 c.c. (5 oz.) sterilized boric-acid solution;[1] three incisions, one posteriorly and one through each lateral lobe. Incisor; small battery.

October 24, 1898: Urinates four to six times in twenty-four hours; no pain; has gained in weight. Residual urine, 325–75. Of 350 c.c. (about 12 oz.) every drop is passed with two short intermissions; no sign of cystitis or pyelitis; urine cleared up completely.

Final examination March 29, 1900 (twenty-three months after operation): Urinates three to four times during the day, nights once; no pain; urine passes in a forcible, good stream; toward the end he has to strain. He emptied his bladder about one and a half hours ago. He now passes 150 c.c. of beautifully clear urine; residual urine 50 c.c. Of 200 c.c. nitrate-of-silver solution, 1:5,000, injected, every drop is passed. The patient states that he sometimes voids more than 12 oz. at a time. He has gained considerably in weight and feels excellent; is steadily at work.

CASE VII.—Age sixty-eight. His suffering dates back nearly one and three-quarter years. Incomplete retention; he urinates every fifteen to sixty minutes during the day; twice in the latter part of the night, always with pain; has been using the catheter once or twice a day for the last fifteen months, always before retiring; chronic cystitis; no renal lesion. Residual urine, 30:300 c.c.

Operation June 8, 1898: Eucaine; three cuts, one backward and one through each lateral lobe. Incisor; small battery.

September 29, 1898: Empties his bladder every three or four hours during the day, nights once; no pain. General condition improved; no residual urine; urine still slightly turbid; catheter laid aside.

Last report (in writing), March 24, 1900 (one and three-quarter years after operation): Has gained seven pounds since operation. He urinates five times during the day, nights not at all. Quantity in twenty-four hours 1,500–1,600 c.c. (50–53 oz.). To use the patient's own words in response to my queries: "The stream gives me entire satisfaction. General condition is first-class in every respect; my health is fine since the operation; I feel now that life is worth living."

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[1] From this time on I have done all my operations with the bladder filled, as in this case.

Case VIII.—Age sixty-eight. The following operations were done by other surgeons before he came to me: Ligation of both vasa deferentia; six months later, removal of left half of prostate through perineum; fifteen months later suprapubic cystotomy. One week later, bilateral orchidectomy; seven weeks later, on May 12, 1898, Bottini's operation. He has persistent suprapubic fistula. He then, by request of the former attending surgeon, was placed under my care.

June 11, 1898: Second Bottini operation, done by me. First result good; greater part of urine passed through normal channel; later, fistula opens again. Patient kept in hospital. August 25, 1898, patient died under symptoms of septic pyelitis (report of house surgeon, who had taken charge of the case during my absence from the city).

Case IX.—Age sixty-four; he has been having bladder trouble for the last nine years. Incomplete retention; a great deal of pain; catheterizes himself three times in twenty-four hours; cystitis; quiescent chronic nephritis; no pyelitis. Residual urine 30: 300 c.c. (1 : 10 oz.).

June 15, 1898: Operation; eucaine anæsthesia; three incisions, one posteriorly, one through each lateral lobe. Six hours later chill with rise of pulse and temperature. Slow improvement. Kiss' instrument; small battery had been used. June 23d, suprapubic cystotomy on account of continuous spasm. Patient died a few minutes after having reached his bed. No post-mortem.

Case X.—Age sixty-six; incomplete retention; frequency of urination every ten to sixty minutes during the day; three to five times in course of the night; calls very sudden; wears urinal; chronic cystitis; no kidney affection. Residual urine, 30: 30 c.c. Bladder scarcely holds 90 c.c. (3 oz.).

Operation June 22, 1898: Eucaine; three cuts; posterior, through right lateral lobe, and anterior. Kiss' incisor; small battery.

October 31, 1898: Urinates in a strong stream without pain, every two or three hours during the day, night three times; has gained in weight. While at my office he passed 85 c.c. (3 oz.), residual 10 c.c. (⅓ oz.). On irrigation, the water soon returns clear. Of 100 c.c. injected, every drop is passed; urinal put aside three weeks after operation.

Patient has not presented himself for examination, so far.

Case XI.—Age sixty-two; trouble for the last five years; incomplete retention which becomes complete now and then. Micturition every twenty to thirty minutes during the day; half-hourly during the night, very painful. Catheter is used three times in twenty-four hours. Chronic cystitis; slight pyelitis; residual urine 100: 50 c.c.

Operation September 22, 1898: Four cuts; local anæsthesia. Incisor (Kiss), small battery. Difficulty experienced in removing instrument. When at last withdrawn, it is found that the knife, in re-entering the groove of the female part, has become bent sideways at an angle of fully 45°.

November 11, 1898: Urinates six times during the day; nights three or four times; total amount about 2,000 c.c. (70 oz.). Vesical capacity 360 c.c. (12 oz.); stream excellent; not a particle of residual urine. Patient looks well; has gained in weight; catheter has been laid aside.

November 3, 1899: Urinates more frequently—five to six times nights; every one or two hours during the day; stream less forcible; largest amount voided at one time 150–180 c.c. (5–6 oz.). Upon request urinates 150 c.c. (5 oz.); residual urine not quite 50 c.c. Slight cystitis. Of 250 c.c. of boric solution injected 175 c.c. are passed, leaving a residual urine of 75 c.c. Prostate large and hard.

Final examination, April 13, 1900: The patient reports that he urinates every one to two hours during the day; nights three to five times; has no strain. When calling he had urinated over three hours ago; he passes 200 c.c.; residual urine 20 c.c.; of 250 c.c. of boric-acid solution injected, 175 are voided. He states that he is subject to colds, when his condition is always worse. He looks well, has gained in weight; bowels normal. Does not take medicine of any kind; has not used catheter since operation. His general condition is splendid. In view of the change that has taken place since the operation, this case, which was originally classed as cured, will now have to be relegated to the "improved" cases.

Case XII.—Age fifty-two; increased frequency of urination since the last six weeks; nights five to six times; often during the day; has had poor stream all his life; urine passes in drops, has to strain a good deal; pains in glans. Residual urine 30 : 100 c.c. (1 to about 3 oz.); is intensely anæmic, has lost fifteen pounds within last nine months.

Operation October 4, 1898: Four cuts; incisor and storage-battery of American make.

October 30, 1898: He empties his bladder two to three times during the day; nights once or twice; does not remember ever having had a better stream of urine than at present.

Some time after his discharge from the hospital, the patient came under the care of a colleague, who kindly furnished me with the following notes:

"Mr. I—— continued to suffer from an intense anæmia with very irregular temperature, the same rising later as high as 106° F. at times. He had the same symptoms until his death on March 6, 1899, save occasional periods of delirium. Blood examination showed no plasmodium malariæ, no increase in white blood corpuscles, no change in size of red blood cells, no free pigment. The blood culture made at the time of the autopsy also proved negative. Post mortem revealed absolutely nothing save an intense anæmia of the entire system. During the remainder of his life he had absolutely no symptoms referable to either bladder or kidney. He frequently remarked on the great ease with which he could pass his urine. Urinary examination was also negative."

Case XIII.—J. S——, forty-seven years of age; married; had been suffering from bladder trouble for the last two years. Micturition had become more frequent and required straining. There was pain before, during, and after the act; also some after-dribbling. The urine appeared clear. Two months after the onset of these symptoms the patient consulted his family physician, who pursued internal treatment. Another physician was consulted, who introduced a sound and diagnosed prostatic enlargement. Then some hæmaturia appeared; the pains increased and also the frequency of micturition. The patient saw another physician still, who found residual urine, advised him to use a catheter at night, and employed irrigation for the catarrh that had meanwhile appeared. Dissatisfied with his condition, the patient called on a fourth doctor, who suggested bilateral castration as the only means of curing the trouble; if not accepted, the use of the catheter, which, it was added, he would probably not be able to discard for the remainder of his life. The patient thereupon continued treating himself for about a year, becoming much reduced in general health. The thought of what he considered his fate, to use the catheter for the remainder of his comparatively young life, or submit to emasculation, greatly depressed him.

At this stage the patient was referred to me by a colleague, that I might determine whether Bottini's operation would be advisable. He called on November 5, 1898. At that time he urinated under a good deal of burning pain, every half-hour to hour during the day; six to seven times during the night. He used the catheter regularly every evening before retiring and also irrigated his bladder. He stated that he had had a chill five months ago, followed by fever; the latter was of short duration, however. Complete retention had never occurred. He urinated, voluntarily, 75 c.c. of a turbid urine; residual urine 80 c.c. It took some time before the bladder was cleaned out, so that the water returned clear. Of 150 c.c. injected, the patient was able to pass not quite 100 c.c. in a fine stream. His prostate appeared much enlarged per rectum; its upper portion could be just reached by the tip of the finger.

Report on urinary examination: chronic cystitis, kidneys not involved.

November 8th, cystoscopy: Pathognomonic groove at vesical neck nicely developed; both lateral lobes equally enlarged; post-prostatic pouch and trabecular bladder well marked; no stone.

November 11th, Bottini's operation: The new storage battery with amperemeter was again used. According to advice given, it had been charged for eight hours with two fifty-candle-power lamps. Four incisions were contemplated; however, the posterior cut only could be carried out with the full strength of the current; on the return trip of the knife through the right lateral lobe, which was next divided at an angle of 45°, the needle dropped ten points; the two other cuts then were omitted. A like accident will not happen to me again. We have since found a way of charging the battery in such a manner that it can be absolutely relied upon for the full strength of current during the entire operation. (See above.) Besides, I superintend the charging personally.

The day following the operation the patient micturated much more easily than before; then absolute retention set in, accompanied by a slight rise of temperature, 101.6° F., but no chill. Regular catheterization became necessary and was performed every eight hours. To avoid the pain that was caused by the introduction and removal of the catheter, it was left in permanently on the third day and not removed until six days later. From that time on improvement was noted and the capacity of the bladder gradually increased. The patient was given urotropin and strychnine, also salol; no vesical irrigation was done.

On December 6th, the bladder holds 16 ounces at a time, which is voided in one single act. He urinates 74 to 96 ounces within twenty-four hours, with little pain and at regular intervals of two to three hours, night and day. The stream is full and strong up to the last. He had urinated last at 8 o'clock in the morning with his stool, and had retained his urine until 12 M., when he passed 575 c.c. in a good continuous stream, with the normal jerks at the end. The catheter then introduced found 70 c.c. of residual urine; 250 c.c. of a two-per-cent. boric-acid solution thereupon injected is passed to the very mark of the graduated glass. The urine was still slightly turbid. The patient was told to continue urotropin and strychnine three times a day and to reduce the quantity of liquids ingested.

When seen again, on December 17th, he stated that he urinated seven to eight times in twenty-four hours; nights once. At the time of the nocturnal micturition 17 to 18 ounces is passed in a good stream, and without pain. The catheter has not been used again since the operation. The patient urinates 250 c.c. in a good stream; the catheter introduced about three minutes later finds 5 c.c. of residual urine. On irrigation the water soon returns clear. His general condition is much improved, and he has gained in weight.

Under date of December 31st, the record says: The patient is doing nicely. He urinates six to seven times in twenty-four hours; nights once or not at all. Average capacity of the bladder, 15 ounces; there is no pain. He had urinated at 8 in the morning, and when calling at my office at 9, passed 50 c.c. The catheter then introduced does not find a drop of residual urine in the bladder. Of 300 c.c. injected, 280 c.c. is passed. The patient stated that he thought, if he had tried, he could have probably passed the entire amount. He has returned to business and works hard all day.

February 18, 1899: The patient feels splendid and has gained considerably in weight. He urinates four times during the day, nights once or not at all, and is entirely free from pain. He does not have sudden calls for micturition. He urinates 300 c.c. in one good continuous stream with normal jerks toward the end. The urine is absolutely clear. The catheter immediately introduced does not find a drop of residual urine; 200 c.c. of the two-per-cent. boric-acid solution then injected are passed up to the mark of the graduated glass.

June 3d: Everything is in the best of order. He urinates three or four times during the day; nights once or not at all.

November 27, 1899: The same good condition prevails. He urinates four or five times during the day in a good stream; nights twice. When calling at my office, had just urinated. He passed 75 c.c. Residual urine found, 10 c.c. Of 250 c.c. then injected, every drop is voided in a good stream.

March 29, 1900 (one year and four months after the operation): Patient feels well; he urinates five or six times during the day, nights once; no pain; good stream. While at my office, having urinated three hours ago, he passed 500 c.c. of absolutely clear urine; residual urine 250 c.c. Of 300 c.c. (10 oz.) of nitrate-of-silver solution, 1 : 5,000, 200 are passed. Patient has gained considerable in weight; considers himself cured; bowels normal; catheter no longer used.

This case very nicely illustrates that the posterior cut alone, if properly carried out, may sometimes be sufficient to relieve the patient. Nevertheless, no conclusion should be drawn from such a single case, but the rule of making one posterior incision at the median line, and one each through the two lateral lobes, should be followed. I feel confident that the originally achieved ideal result would have continued had all three incisions been done with equal thoroughness. I intend to propose a second operation if the amount of residual urine should increase.

CASE XIV.—H. J——, seventy-one years of age. Eighteen years ago retention set in for the first time, but ceased after one week's use of the catheter. During the last fourteen years he has recurring desire to urinate when walking down-stairs. There is gradually increasing frequency of micturition. He has had diabetes for fifteen years, with varying quantities of sugar, and is also suffering from constipation. The patient went to Wildungen to take the baths in 1892, where the doctor advised him to use the catheter twice a day on account of his prostatic enlargement and vesical catarrh. Since then he has used the catheter twice daily and never urinated a drop voluntarily. He has never had a chill or pains in the lumbar region. After the use of the catheter there has frequently been some discharge of blood. Lately the trouble has become much aggravated; he has to use the catheter every three or six hours; nights rarely less than twice. He requires the longest catheter in the market, one that measures fifteen inches (38 cm.) from tip to eye. Recently the meatus has become inflamed and infiltrated, which produced a stenosis. Since then his condition had become much more troublesome. When calling at my office on January 9th, 1899, he stated that it had been impossible for the last twenty-four hours to introduce the web catheter, always used thus far. I found the prostate very large and hard; its upper border could not be reached with the finger. I succeeded in introducing a Trendelenburg prostatic catheter sound (No. 14) a description of which was first published by me in the *New York Medical Journal* for August 6, 1892, and relieved the retention. January 11, 1899, the patient was admitted to the German Hospital, where meatotomy was performed, and after that catheterization was regularly carried out.

January 23d, cystoscopy: Great difficulty was experienced in introducing the instrument. The condition found was: a large median lobe; right lateral lobe larger than the left; sacculated bladder. The examination was followed by a hemorrhage, which, however, was not alarming.

Bottini's operation was performed on January 25th, with the bladder filled with 200 c.c. of sterile boric-acid solution. When the introduction of the incisor, after two unsuccessful attempts, was finally accomplished, the beak of the instrument well hugging the prostate, the latter's tip could be palpated about four and a half inches (11.5 cm.) above the sphincter and muscle. Four incisions were made, the posterior one 4 cm. in length; the one through the right lateral lobe at an angle of 45°, 4 cm., the one through the left lateral lobe at 90°, 3.5 cm., and the anterior cut with the handle of the instrument depressed, 2 cm. long. The patient was unable to urinate just after the operation; there was no general disturbance, although he suffered much from vesical and rectal tenesmus. Catheterization being difficult, the permanent catheter was introduced and left in place for five days. On February 20th, the patient was still unable to urinate voluntarily, but catheterism was certainly much easier. He soon left his bed.

On February 21st, a second Bottini operation was performed. Introduction of the incisor was markedly easier; again four incisions of same length as those at the first operation were made. There is no general disturbance, but voluntary micturition does not begin. On the twenty-sixth day following this operation, on March 19th, after the discharge of exceedingly large eschars, the patient passed water voluntarily for the first time within the last six and a half years, first in small quantities, which, however, rapidly increased.

On March 28th he urinated 50 c.c. without having the desire. The catheter found 500 c.c. residual urine. A Nélaton catheter passed with the greatest ease and the irrigation water promptly returned clear.

Upon reflecting on my failure, thus far, in relieving the patient of the greater amount of residual urine, I sorely felt, for the first time during my work on the prostate with Bottini's operation, the need of an instrument that permitted of making incisions longer than 4 cm., this being the limit of the one then in my possession. I therefore had constructed for me an incisor allowing of an incision 8 cm. in length.

As soon as the instrument was completed, I proposed a third operation to the patient, to which he readily acceded. It was done on April 4th. On firmly hugging the prostate the beak, to my dismay, suddenly slipped into a distinct groove, an accident which naturally frustrated my plan of reducing the urethra to 21 cm., since I could not know how many centimetres the instrument had slipped forward. Under the circumstances I contented myself with a posterior cut of 3½ cm., one through the right lateral lobe at 45°, of same length, and one through the left at 90°, 2 cm. long. There was absolutely no reaction; the permanent catheter introduced immediately after the operation was left in place for three days. After its removal the patient was regularly catheterized twice to three times a day, first with Mercier's, then with Nélaton's soft-rubber catheter. Commencing with the eleventh day, large escharotic pieces were discharged.

The patient soon began to urinate spontaneously, using the catheter only before retiring. Average amount of residual urine 500–600 c.c.

On April 27th he urinated every one to two hours, day and night. Spontaneous micturition at office upon request, without inclination, gave 50 c.c., residual urine 450 c.c. Nélaton catheter entered with greatest ease. Irrigating water returned clear after the first washing. Of 500 c.c. injected, only 100 could be passed.

May 13: Diabetes has become aggravated (eight per cent.). Average amount of urine in twenty-four hours over four quarts. On June 30th, under proper treatment, the amount has been reduced to 1,060 c.c. in twenty-four hours. He uses catheter only once; feels comfortable; urinates spontaneously four to five times during the day and about the same number of times during the night. Largest amount of urine passed in one act 180 c.c., residual urine 530 c.c.

October 10th: Length of urethra 25½ cm. (10 inches). Amount of urine voided in twenty-four hours, 1,500 c.c. He irrigates his bladder every morning. Residual urine, 400–500 c.c. He has no desire to pass water after that for eight or ten hours. Greatest amount voided at one time, 80–100 c.c. His bowels move regularly, and his general condition is much improved.

December 26th: He urinates spontaneously between 1,100 and 1,150 c.c. at irregular intervals within twenty-four hours. He has no pain and is not annoyed by a frequent desire to urinate. Residual urine always between 600–650 c.c. He enjoys good rest during the night without the call to rise. Largest quantity of urine passed spontaneously, 150 c.c. The call is never urgent; he can retain the urine sometimes for longer than two hours. The patient considers himself very much improved.

Final examination April 4, 1900: Quantity of urine passed in twenty-four hours 2,400 c.c. (80 oz.); greatest amount voluntarily voided at one time 150–250 c.c. He catheterizes himself twice daily, after which he has rest for seven to eight hours. Residual urine between 500 and 700 c.c. No irritation at neck of bladder; he is able to retain; bowels normal; marked gain in weight. He is well satisfied with his present condition.

In reviewing this case, I cannot help thinking, as mentioned before, that a far more favorable result could have been obtained at the time of the first operation, had I been in possession of an instrument so constructed as to permit me to make the incisions long enough to cut through the prostate in its entire length and thus to reduce the urethra to its normal length. "Insufficient length of the incisions," then, is evidently the cause of the imperfect result in this instance. There can be no doubt that this would have been a fit case for prostatectomy, had not the very marked diabetes and the senile condition of the patient presented an absolute contraindication to such an interference. With my present knowledge, I feel convinced I should achieve a better result in a similar case with a large fibrous prostate. As indicated above, I should compare the length of the urethra with the measurement of the prostate per rectum just before the beginning of the operation, and make my incision to correspond to this difference if not to exceed it by 1 cm. I also would slowly go over the same route with the galvano-caustic knife twice in immediate succession.

Case XV.—J. H——, seventy-eight years of age. Nine years ago he had first complete retention. He was first seen by me in 1896. He then had to rise three to six times during the night, and urinated every two hours during the day under considerable straining. There was slight after-dribbling; residual urine 50–60 c.c. The prostate was very large. He was then comparatively well for the following three years. I saw the patient again on December 29, 1898, when he complained of intermittent complete retention, the last onset having occurred December 26th; the one previous to that five to six months ago. He has his bladder washed out about twice a week; otherwise the catheter is not used. His condition has become much worse during the last few weeks, especially as regards frequency of micturition. His nights' rest has been greatly disturbed, the call coming eight to ten times. There is slight epididymitis. He urinates 35 c.c., residual urine 25 c.c., turbid. The bladder holds not quite 200 c.c. Prostate palpated per rectum is very large; its upper border can just be reached; it is somewhat tender and compressible. Treatment: regular irrigation, increasing doses of salol; urotropin.

January 12, 1899: His condition has improved; micturition less troublesome. There is no pain. Micturition, nights four to five times; during the day about every two hours. He urinates 90 c.c.; residual urine. 100 c.c.

January 29th: Cystoscopy; introduction of instrument very difficult. In passing the prostate the beak distinctly slides over a very irregular surface; there is hemorrhage, which necessitates change of water in bladder. There is a large median lobe; the right lateral lobe distinctly projects into the lumen of the bladder; left lateral lobe smaller. Complete retention follows examination, but is relieved by silver catheter with large curve. The patient remained in bed for five days, after which the same condition as before cystoscopy prevailed.

February 11th: Bottini's operation was performed at the German Hospital, four incisions being made: posterior, 3½ cm. through right lateral lobe at an angle of 45°, through left lateral lobe at 90°, of same length; anterior incision, 2 cm. The bladder had been filled with 150 c.c. of sterilized boric-acid solution. Reactive swelling of gland was very marked. Retention set in; catheterization was very difficult; relief was obtained by Trendelenburg's prostatic catheter sound.

February 12th (thirty hours after operation): Rise of temperature up to 103° F., with corresponding pulse. Both slowly subsided in the course of a few days.

February 13th: Introduction of soft-rubber catheter on metal guide was successful; it was left in place for six days; after that regular catheterization, which became gradually easier. The patient commenced to urinate spontaneously on the 22d of February. Vesical irrigation was carried out twice daily. He left the hospital on March 15th.

March 20th: He can retain urine for fully three hours; micturates three or four times during night in a good strong stream, without pain. When calling at my office he had passed his water an hour and a quarter previously and had no desire to urinate; on request, however, he passed 90 c.c.; residual urine was withdrawn by Mercier catheter, which entered without difficulty after a Nélaton had refused to pass, 30 c.c. Catarrh is still marked. Of 250 c.c. of boric-acid solution then injected, 210 c.c. are passed. Medication, urotropin and strychnine.

March 27th: Frequency of micturition during the day is every three hours; nights three to four times without pain. In comparing his former condition with the present the patient states as follows: Formerly there was a burning sensation during micturition; long waiting before the water would appear; no stream. Now, the burning sensation is very slight; he does not have to wait, and water passes in a good stream. He had not urinated for two and a half hours before calling, and then passed 175 c.c. in a good long stream; residual urine, 75 c.c. Vesical catarrh was still marked. Of 250 c.c. injected, 40 c.c. were retained. Continued regular irrigation of bladder with nitrate of silver was ordered.

May 1st: He urinates every two or three hours, nights two to three times, retains easily 250–270 c.c. He passed about 120 c.c. three hours ago; now 175 c.c., residual urine 50 c.c. Length of urethra, 24 cm.

June 8th: The patient feels splendid, has no pain and no annoyance. Of 200 c.c. injected, 150 are passed, leaving a residual urine of 50 c.c. The patient is perfectly satisfied with his condition and would consider himself cured, if frequency of urination could be still somewhat reduced and if he did not see that his urine is still slightly turbid. He has gained considerably in weight.

Final examination March 27, 1900 (thirteen months after the operation): Patient urinates every two or three hours daily; nights four or five times; no pain; stream much better than before operation. He has no desire to micturate, but on request passes 55 c.c. (nearly 2 oz.), residual urine 80 c.c. (2⅔ oz.). Very slight cystitis; irrigation water returns clear at once. Of 180 c.c. 100 are passed. Length of urethra is 23 cm. Prostate is of medium consistency; its upper border cannot be reached; catheter has not been used since he was discharged from after-treatment at the time of the operation. The patient—although the father of three doctors—is absolutely opposed to taking any medicine internally; therefore, he also refuses urotropin. He has no pain; would consider himself entirely well if he urinated less frequently.

This case certainly belongs to the class of "much improved." As stated, the length of his urethra still measures 23 cm. Here too, therefore, the insufficient length of the incisions was the reason that perfect urinary drainage was not established by the interference. I suggested to the patient that he have a second operation performed. This, however, he refused, stating that he is entirely satisfied with his present state.

Case XVI.—M. M——, fifty-eight years old; has had urinary trouble for the last three or four years. A year ago he urinated every two hours during the day; four or five times at night, with considerable pain in urethra; some tenesmus; no lumbar pains; no chills. He has been treated with medicine. There was steady aggravation of all symptoms, until, about two weeks ago, he had to urinate every three or four minutes during the night and every fifteen minutes during the day. Absolute retention; overflow; regular catheterization. He now catheterizes himself four or five times during the day. On December 18th there was hæmaturia for the first time, following the intravesical interference.

The patient called at my office for the first time on December 19, 1898. He was unable to urinate spontaneously, having drawn off his water in the morning before leaving home. Nélaton catheter withdraws 625 c.c. There is a good deal of catarrh. The prostate is large and soft. The patient is very weak and extremely emaciated. Pulse is irregular, about 122; temperature, 103.6° F.

Urinary analysis: Chronic cystitis with alkaline fermentation; renal hyperæmia or possibly a more marked renal lesion, but no pyelitis. It is not easy to make a definite diagnosis, as it is difficult to account for the continuous fever. The lungs are not affected; there is no tuberculous family history; there are no symptoms of typhoid. Blood test for plasmodium and Vidal negative. With regard to malaria it is not absolutely reliable, since quinine had been given before. His temperature is reduced after about one week's time by the continuous use of methyl blue and quinine.

December 23d: Resection of the vas deferens was done on both sides. No particular improvement was noticed during the following two weeks. Overflow as before. Regular catheterization. The bladder contains never less that 480 c.c. (16 oz.).

January 4, 1899: Cystoscopy. Some difficulty is encountered at the neck of bladder when the instrument is introduced. Marked trabecular bladder; deep characteristic groove at the internal fold. Left lateral lobe larger than right; there is no median lobe; no stone. Internal medication of methyl blue is continued.

January 6th: Bottini's operation. After repeated attempts, the incisor enters the bladder. On hugging the prostate with the beak the rectal diameter of the same seems alarmingly reduced. Had not all the characteristic symptoms been seen, everybody would have doubted the presence of prostatic enlargement. Not knowing exactly what best to do under the circumstances, but eager to get through with one operation, the posterior cut was made 3½ cm. long; the one through the left lateral lobe at an angle of 45°, and the one through the right lateral lobe at 90°, 3 cm. each. The anterior cut was omitted, because in the attempt at turning the beak toward the symphysis, the instrument suddenly slipped out of the bladder. When removed, much thoroughly burned prostatic tissue was seen to adhere to the knife. Immediately after the operation the patient complained of a great deal of pain and had some rectal tenesmus. A few drops of urine were passed per urethram; there was much pain in perineum. At 6 P.M., temperature, 104° F.; pulse, 116. Attempt at entering the bladder with a catheter was unsuccessful, although the instrument could be introduced pretty far. Another effort at 9 P.M. met with the same result. The patient felt an urgent desire to empty the viscus; therefore, aspiration was done above the pubes, about 600 c.c. being drawn off. From hour to hour there was continually increasing swelling of the right part of the scrotum, extending up to the right inguinal canal. Diagnosis: perforation of urethra; urinary infiltration. Operation at 11 P.M. (fourteen hours after Bottini's operation) under superficial general anæsthesia. Multiple incisions were made in scrotum; the subcutaneous tissue was thoroughly infiltrated and blue (methyl blue). Burnt shreds of tissue were found in the median incision just above the anus; the urethra here was perforated. Introduction of tube from perineum into bladder was unsuccessful. Drainage of scrotal wounds; moist dressing.

January 10th: Temperature almost normal; pulse still slightly elevated. Since the last operation, the patient has emptied his bladder through the perineal wound in short, frequent intervals, over which he has no control, except that he feels the desire to urinate. He rests on a rubber air bed-pan. With the help of very careful nursing, I succeeded, to my delight, in saving this patient's life. For a long time his pulse ranged around 120; the rectal temperature never rising above 100° F. On February 15th his pulse for the first time fell to 96, his temperature being about as usual, 98.4° F.

March 3d: Pulse 88. His condition now slowly improved. He left his bed at the end of February and by the middle of March was able to walk around. Meanwhile the perineal wound had slowly contracted so that, on March 15th, not quite ten weeks after the operation, he urinated spontaneously for the first time in the normal way, about two ounces. On March 22d the report states that he urinates every hour to hour and a quarter, about 120 c.c. (4 oz.) at a time, 30 c.c. (1 oz.) still passing through the wound. On March 28th he weighed one hundred pounds.

April 2d: The patient urinates every two to two and a half hours.

April 3d: Weight one hundred and one-half pounds.

April 7th: A typical attack of gall-stone colic set in, with a pulse of 128; temperature, 103° F., which, however, slowly yielded under proper treatment, so that everything is normal again on April 9th. On April 10th he left for his home in the northern part of this State, accompanied by his faithful nurse. The perineal wound had completely closed; he urinated every two or three hours in a satisfactory stream, without pain. The catheter had been laid aside since the operation.

March 16, 1900 (fourteen months after the operation): The patient reports that he urinates every hour during the day; nights seven or eight times; the stream is satisfactory; the perineal fistula has remained closed; he has gained in weight; the bowels are normal. He has had no local treatment since he left my care.

It will be readily understood that the experience I had with this patient immediately after the operation greatly embarrassed me, although the final result was most gratifying. It is plain that the too great length of the cuts here produced the perforation of the urethra. As stated before, I did an unintentional internal perineal urethrotomy. I believe and hope that, with my present experience, such an accident will not happen again. I had, up to that time, never made the posterior cut shorter than 3 to 3½ cm., neither had I encountered a gland of such sponge-like compressibility as this one. It was, furthermore, imperative that the obstruction be relieved without delay, lest the life of the patient, who was greatly reduced, should be lost. I believe that an incision of 1 to 1½ cm. in length would have been ample in this case, and, most probably, would have effected a cure with less distress to the patient.

In this particular instance Bottini's operation not only entirely relieved the patient, but directly saved his life. Any colleague, seeing the patient at the time I undertook the treatment, would have agreed with me that he was nearly dying. It was only on account of the intense suffering of the man, night and day, that I was induced to try Bottini's operation.

CASE XVII.—H. U——, seventy-nine years old, well preserved; absolute retention of urine for the last twenty-two years. In the beginning he used the catheter once a day; later twice, then three times, and up to about a year ago every six hours. At that time he had a severe hæmaturia. Since then the call to urinate has become rapidly more frequent, so that now he is obliged to use the catheter every hour to hour and a half, day and night; introduction of the instrument at times is very painful. Amount of urine discharged, about three quarts in twenty-four hours. On March 23, 1899, when calling at my office, 200 c.c. of urine were drawn off by means of a soft-rubber catheter which entered the bladder without difficulty. The latter did not prove irritable on irrigation. On rectal palpation the prostate was found to be soft, the right lateral lobe being larger than the left. He has prostatorrhœa. Length of urethra, 23 cm.

Urinary analysis: Chronic pyelo-nephritis; chronic cystitis with alkaline fermentation.

Cystoscopy shows the characteristic groove pointing obliquely toward the right of the patient. The right lateral lobe does not appear very large in the picture; toward the median line a perpendicularly rising mass is distinguished, evidently a large median lobe; marked trabecular bladder. Toward the right lateral vesical wall there is a dark yellowish spot, about the size of an almond, the meaning of which cannot be distinctly determined. Sudden pressure repeated at short intervals on the suprapubic region of the patient does not alter its position. Drawing off the liquid in the bladder and forcibly injecting new fluid through that tube of the irrigating cystoscope which ends with a wide opening at the lower end of the shank to the side of the prism, does not move it either. The examination is much interfered with by a continuous hemorrhage from the prostate, which at once destroys the transparency of the injected fluid. A superficial ulceration, its surface covered with adherent mucus, is suspected. Doubt as to the correctness of this assumption is entertained, however, on account of the fact that mucus covering vesical ulcers generally appears white on cystoscopic examination, and not yellowish.

March 31st: Bottini's operation. After the incisor has been introduced, and turned around its axis for 180°, its handle cannot be well raised; the tip cannot be felt with the finger in the rectum. Conclusion: The middle lobe has been turned down and backward. On pulling the incisor firmly forward, the beak suddenly slips forward and toward the right of the patient into a groove; its tip can then be reached per rectum. It evidently rested in the deep groove between the right lateral and middle lobe of the gland. Posterior incision as well as that through right lateral lobe at an angle of 45° and through left lateral lobe at 90°, 4 cm. long. Before carrying out the anterior incision, which is made 2 cm. long, the handle of the instrument is well pressed down, so that such prostatic tissue as might possibly press down and backward the posterior part of the urethra should be thoroughly divided. There is profuse hemorrhage. Immediate introduction of a Mercier catheter is impossible.

Seven hours after operation the temperature rises to 102° F.; pulse, 88.

April 1st: Temperature not exceeding 101.6° F.; April 2d, it is below 101° F.; pulse, 80. The patient is unable to urinate voluntarily. During the first thirty-six hours after operation catheterization is regularly carried out two to three times in twenty-four hours, with the prostatic catheter sound. On the second day after operation there appeared a slight, progressive œdema in the suprapubic region, which slowly spread over the penis and scrotum down to the gluteal region.

April 3d: A Nélaton catheter on metal guide is successfully introduced and left in place; 157 ounces (4.710 c.c.) of urine are passed through the same in twenty-four hours. There is pain on pressure in the suprapubic region, and a slight resistance is palpable.

On April 4th drainage is less satisfactory; there is much vesical pain, which, however, yields under the administration of opiates. The soft-rubber catheter is exchanged for Mercier's and left in the bladder. The pulse at one time suddenly rises to 120, but soon drops again. Temperature not over 102° F.

April 5th: Pulse irregular; temperature lower, but soon increasing. Infiltration above symphysis. Suprapubic incision into cavum Retzii under eucaine was decided upon and set down for 2 P.M., when pulse and temperature suddenly rose after a chill and the patient's mind began to wander. Further interference was suspended. The patient continued to sink, and died on April 7th, at 1:30 A.M.

Post-mortem examination demonstrated a suppurative inflammation of the cavum Retzii and a far-reaching pericystitis, but no urinary infiltration. The bladder was found to contain a stone of about an almond's size. The galvano-caustic incisions are plainly visible. The posterior cut runs in the groove between the right lateral and median lobe (which latter is of tremendous size), and the left lateral incision transversely through the median lobe. The specimen is of great interest.

The unfortunate result in this case was evidently due to my still having carried out the anterior incision. Death clearly resulted from a suppuration in the cavum Retzii, due to infection by contiguity—not by perforation of the anterior bladder wall, since a careful examination at the autopsy failed to reveal any trace of perforation. It will be remembered that in my Case IX. I also observed pain on pressure above the symphysis. On traversing the cavum Retzii, when performing suprapubic cystotomy, on the eighth day after the operation, a very slight œdema only was found to be present. Recollecting this experience, I hoped at first that the complication might prove no more serious in this instance. Increasing evidence of local inflammation, however, soon convinced me that an incision was imperative; the sudden change in the patient's general condition prevented me from carrying out my intention. It had been my privilege, just before doing this operation, to listen at the Academy of Medicine to a most instructive demonstration of the anatomy of the prostate gland, by one of our New York colleagues. I believe to have understood the doctor at the time to say that, in a number of cases of marked prostatic enlargement, the posterior urethra was depressed by a mass of glandular tissue lying in front of the prostatic urethra. The large size of the gland palpated per rectum as well as seen through the cystoscope, made me think that just such a condition was present in this case. I therefore depressed the handle in order to divide the anterior prostatic tissue as thoroughly as possible. Of course, I now very much regret having done so. It was in consequence of this sad experience that I decided discontinuing the anterior incision. Only in those exceptional cases in which the cystoscope plainly will show the cause of an incomplete result after a first Bottini operation to be a mass of prostatic tissue situated above the internal sphincter (Freudenberg reports such a case) shall I, in future, lend my hand to make an anterior incision. That the beak of the incisor slipped off the median lobe at the beginning of the operation, and the galvano-caustic division then deepened the groove between the median and the right lateral lobe, happened by chance. It is questionable whether it would have proven beneficial to the patient. I personally am inclined to think so. It appeared to me from the specimen that the posterior urethra had been well lowered to the bas fond. On the other hand, a large median lobe frequently proves to be the main obstacle to proper drainage. I therefore think that, on the whole, it should be the aim to prevent the instrument from slipping off the median lobe and to try thoroughly to divide the tumor-like projection into the bladder, exactly in the median line. For such cases we will, of course, need the incisor which permits of making the cut 8 cm. long.

The indistinct yellowish spot I had seen through the cystoscope on the right side of the fundus, and which I could not explain at the time, was the stone. Had I introduced the stone searcher immediately afterward, the diagnosis could probably have been easily cleared up. As matters were, the patient was eager to get through with the one examination, and so it was omitted. In future, of course, I shall not again be satisfied with an indistinct abnormal spot in the bladder, but shall ascertain its meaning before doing Bottini's operation.

Case XVIII.—X——, a very active man all his life, has had increasing urinary trouble for the last four to five years. In May, 1897, the catheter was used for the first time; later it had to be resorted to occasionally. Soon the urine became turbid. In the fall of 1897 double epididymitis set in, which kept the patient in bed for three weeks. After this attack had been overcome urination was more free. In April, 1898, Bottini's operation preceded by cystoscopy was carried out by a competent surgeon. Cystoscopy, which was done rather hurriedly, had shown the bladder in a state of chronic catarrh, and demonstrated the pathognomonic groove at the internal urethral fold. Three incisions were made under eucaine, one directly posteriorly, the others at right angles. Very little reaction followed. The patient went back to his home five days later. He there had little chance to take proper care of himself. During the third week, after having jumped from a car, a vesical hemorrhage set in which necessitated catheterization and rest in bed. Six days later it recurred. The bladder then became more irritable and remained so for a long time. No special improvement could be observed as a result of the operation. One year later, in the early part of April, 1899, the patient consulted me. His condition then was as follows: urination every few hours day and night, sometimes accompanied with much pain; the catheter introduced after the act always found residual urine, varying in amount from two to over eight ounces. No blood; no renal elements. Cystoscopy, on April 8th, with the irrigating cystoscope, reveals the presence of four rather small concretions, lodged in a shallow groove to the left of the fundus. They are easily thrown aside by the water which is forcibly injected into the bladder through one of the channels of the cystoscope. When the latter is withdrawn into the vesical neck, two or three of the concretions follow and suddenly are seen to rest near the prism of the instrument. The characteristic groove at the neck of bladder is still present. The prostate can be seen in silhouette and shows distinctly two lateral rather shallow incisions running in a horizontal direction. In view of the presence of the stones, the second Bottini operation had, as a matter of course, to be deferred. Upon special request of the patient, the necessary intravesical manipulations were done under general anæsthesia. Thus, on April 11th, an attempt at washing out the stones with Otis' evacuator was made. To my delight two stones at once were drawn into the large opening at the vesical end of the catheter. They were freed by withdrawing the instrument. The latter was then re-introduced, but in spite of repeated efforts at extracting the other calculi by suction of the rubber bulb, this could not be completely accomplished, a portion remaining behind. Further operative interference was then desisted from, it being hoped that the patient might pass the last stone spontaneously. This, however, did not happen. On the contrary, absolute retention set in which necessitated regular catheterization. On the fifth day after the operation the patient again commenced to void a small amount of urine per vias naturales. On April 18th, cystoscopy was repeated. The remnants of the third and a fourth calculus, which had been broken in two when trying to remove the stones by suction, were plainly visible. It was determined to make another effort at evacuating the stones by flushing the bladder under general anæsthesia, and then immediately adding Bottini's operation. On April 20th this was successfully carried out, just as planned. The stones appeared promptly, and the galvano-caustic division of the gland could be at once added. On introducing and turning the incisor in order to hook the prostate, I was struck by the extreme softness of the organ. The finger when introduced into the rectum in order to palpate the beak of the incisor, could easily detect it about two inches above the sphincter ani muscles. After the necessary hugging of the gland, the tip of the beak was palpable immediately above these muscles. It was evident that the gland was of extreme softness. This recalled to my mind the case (XVI.) of exactly the same character in which I had operated a few months before, and in which I had the misfortune of doing an unintentional internal urethrotomy with the galvano-caustic knife. I therefore resolved to profit by my former experience, and to avoid, by all means, a repetition of the accident. As, however, my patient was ready to go to Europe, in fact had already engaged his berth, it was particularly desirable that the work be done radically in one sitting. In this emergency I made the median cut 2.75 cm.; the two lateral ones, at right angles, 2.5 cm. long each. The patient stood the operation exceedingly well. With the exception of some very severe pains setting in about two hours after the operation, which, however, could be controlled by a hypodermic of morphine, there was no reaction whatever. Absolute retention followed on the eve of the operation. I succeeded in introducing a soft-rubber catheter on a metal guide. Twenty-two ounces of a sanguinolent urine were evacuated. The bladder was washed out and the catheter left in place. On the following day some slight fever set in, which, on the second day after operation, at noon, reached 104° F. with a pulse of 116. Examination made of the perineum showed distinct symptoms of an abscess, which was immediately incised under eucaine. In holding the borders of the wound apart with sharp retractors, it was seen that the posterior incision had entirely cut through the prostatic urethra and a part of the membranous. The end of the two lateral incisions could also be detected from the wound. For convenience' sake a permanent catheter, introduced through the external meatus, was left in place and the wound tamponed. The temperature dropped promptly and was normal on the following day, the third after the operation, never to rise again. From now on careful vesical irrigation was carried out with the additional internal use of urotropin, caffeine, and strychnine. The catheter which had been introduced at the time of the perineal incision was not changed until May 1st, that is, the eleventh day after the operation. On removing it the patient at once passed from eight to twelve ounces of urine spontaneously, of course through the perineal wound, but the same was slightly tinged with blood. On the evening of the same day a rather alarming hemorrhage set in, which, however, was controlled by perineal compression; the catheter was purposely not introduced. Slight vesical hæmaturia followed and continued for four days. On May 12th, or the end of the third week after operation, the patient urinated for the first time per urethram. The perineal wound then rapidly contracted and soon definitely closed. The amount of urine voided every three to four hours was between six and ten ounces.

In the early part of June the patient left for Europe, where he spent a number of months. On his return in the fall he had very much improved in general condition, urinated spontaneously without discomfort, but invariably had to press out the last drops of urine with his hand on the perineal scar. He evidently had been much benefited by Bottini's operation, and there was every reason to hope that the trouble was permanently cured. To my sincere regret I learned that, three months after the patient's return from Europe, a residual urine, varying from a few drachms to a number of ounces, had again appeared, and that the vesical catarrh, which had been present for many years, was not materially improved in spite of continuous local and medical treatment. As far as I could ascertain, a sound of No. 8 American passes into the bladder without trouble, showing that no material contraction followed the unintended multiple galvano-caustic division of the posterior urethra. I am unable to account for the reappearance of the varying residual urine, but should not be surprised if it were found, on cystoscopic examination, that another small calculus is the chief cause of the trouble. It certainly is by no means excluded that further developments will yet show the second Bottini operation to have been a permanent cure. So far we can only claim "material improvement" in this particular case. The patient otherwise has considerably gained in weight, looks well, and is back in active work.

Case XIX.—S. H——, seventy-four years of age. The first urinary symptoms date back seven years: frequency of micturition; after-dribbling. Three years ago retention and overflow set in for the first time. The catheter was employed for a time, when he again was able to urinate spontaneously, about once every hour. For the last nine months ischuria paradoxa; urine discharged involuntarily. Eight weeks ago he consulted a doctor for the first time; 30 to 60 c.c. (1 to 2 oz.) were slowly passed; residual urine 960 c.c. (32 oz.). Vesical catarrh was present. The bladder was irrigated. Internal medication: salol, urotropin. No improvement was noted, but on the contrary, the patient got gradually worse. When he first called upon me, on May 6, 1899, he stated that he was regularly catheterized twice daily, and that generally 1,000 c.c. (33 oz.) were drawn off. In spite of this, the frequent desire to urinate persisted day and night, although he voided but a few drops each time, under great pain. Two days ago he had a chill, followed by fever. I requested the patient to urinate, but he was unable to do so. A Nélaton catheter then introduced without difficulty drew 285 c.c. The irrigating water soon returned clear. Length of urethra, 24 cm. The gland per rectum appears large. Its upper border can just be reached with the finger tip; it is of medium consistency and not expressible on massage.

Report of urinary analysis: Chronic cystitis without fermentation; nephritis, with most probably pyelonephritis.

May 5th: Cystoscopy; funnel of cystoscope needs much pressing down before beak slips into bladder. Hemorrhage from prostate. After change of water, a beautiful trabecular bladder can be viewed. The mouths of both ureters seem to be wide and gaping (hydro-ureter?). Characteristic groove at internal fold nicely marked. On turning the prism toward the fundus, a large projecting growth, evidently a part of the body of the prostate, becomes plainly visible. There is no stone. With the hope of reducing the blood supply of the prostate, resection of both vasa deferentia is done as a preliminary operation on May 22d. On May 24th the patient passes water spontaneously, first 150 c.c. (5 oz.), later 210 c.c. (7 oz.), residual urine 780 c.c. (26 oz.). On the following day he does not void more than 45 c.c. (1½ oz.).

On May 30th, 570 c.c. (19 oz.). are passed spontaneously, the greatest amount voided at one time being 180 c.c. (6 oz.). Residual urine 810 c.c. (27 oz.).

June 1st: 60 c.c. (2 oz.) is the largest amount passed without the catheter.

June 2d: Bottini's operation, under eucaine. On firmly hugging the prostate, the tip of the beak is palpable about one and one-half inches above the anus. Posterior incision 3.25 cm. long; the two lateral ones, both at an angle of 60°, 2 cm. After the operation the patient is unable to pass water. At 11 p.m. a soft-rubber catheter is introduced and 540 c.c. (18 oz.) of a slightly bloody urine are drawn off. The catheter is left in place. The next morning the urine is free from blood. The temperature that day rises to 101°; pulse normal. A slight elevation in the temperature toward evening was noted the following days; it never exceeded 101.3°, however. The patient complains of pain in the left testicle.

June 10th, eight days after the operation, the permanent catheter is removed. Catheterization becomes necessary twice that day.

On the 11th of June he commences to pass water spontaneously, the first amount being 180 c.c. (6 oz.). which is followed by a voluntary discharge about every hour. The catheter is dispensed with.

On June 12th, the greatest quantity of urine voided at one time is 240 c.c. (8 oz.), the total discharge in twenty-four hours being 1,980 c.c. (66 oz.).

June 13th: Total amount passed 2,190 c.c. (73 oz.).

June 14th: Quantity voided in twenty-four hours 1,050 c.c. (35 oz.). The catheter introduced at 5 p.m. finds a residual urine of 690 c.c. (23 oz.).

The next day the catheter has to be used twice, and is again dispensed with on the 17th of June, never to be employed again. Within the last days the patient complained frequently of much pain along the left spermatic cord and in the testicle. Temperature is rising. A palpable infiltration is running through the inguinal canal down to the spot of the ligation of the vas deferens. Funiculitis; epididymis not involved. The infiltration is incised on June 19th, and pus evacuated. After this the quantity of urine voided spontaneously rapidly increases and is, for instance, on June 26th, 240 c.c. (8 oz.). The greatest amount passed at one time on July 3, is 300 c.c. (10 oz.); on the 12th of July again 300 c.c. (10 oz.). This nicely shows the increasing capacity and decreasing irritability of the bladder. During the summer the patient returned under the care of his family physician, who regularly dressed the sinus on the left side of the scrotum, which proved rather obstinate, but permanently closed about six months after the operation.

November 7th: The patient states that he urinates every two to three hours during the day; nights twice. He has never used the catheter since it was laid aside soon after the operation. He has a good stream, but catarrh of the bladder is still present. Continued irrigation is strongly urged.

Final examination, April 16, 1900: Patient empties his bladder every three hours during the day; nights generally a quart, in two to three times; forcible stream; no pain; he has gained considerably in weight; bowels normal. The fistula resulting from the funiculitis closed three months ago. He has no desire to urinate, but on request passed 75 c.c. (2½ oz.); residual 225 c.c. The urine contains a large amount of pus; marked pyelitis; the catheter has not been used again since the operation. The length of urethra is 23½ cm. Patient feels as if he had regained perfect health.

In reviewing the temperature chart of this patient, it is evident that the temperature rose in proportion to the length of time the permanent catheter remained in place. I feel that it was worn an unnecessarily long time. Three days might have been sufficient. Had I removed it then and catheterized the patient at regular intervals, the funiculitis might perhaps have been avoided. As stated before, I am not in favor of putting in a permanent catheter immediately after the operation in every instance, but prefer to wait and see whether the patient is not able to urinate voluntarily. If this is impossible, I consider it better for the patient in the end if he is catheterized at regular intervals, provided the introduction of the instrument is not attended with any particular difficulty. The permanent catheter generally forces the patient to stay in bed.

Case XX.—W. W——, seventy-one years of age. His first trouble in micturition dates back thirty years, the first symptoms being that he had to press long and felt a burning sensation in his urethra. He never had an attack of gonorrhœa or specific disease. At that time sounds were passed, used for a year or two, and brought relief. The diagnosis made by his attending physician was prostatic hypertrophy. The following ten years he felt much improved, but never entirely well. Twenty years ago, during a severe attack of dyspepsia, the prostatic trouble increased. Absolute retention set in, which necessitated catheterization; since that time he never got entirely rid of the catheter. Very often he was absolutely unable to void a drop of urine for an entire day and night, and then again he was better for several weeks. Fourteen years ago the urine often contained blood, principally in winter time. The patient claims to have frequently suffered from chills and lumbar pain, more on the left than on the right side. Five years ago a turn for the worse took place. He had to catheterize himself oftener, sometimes every hour, and suffered very severe tenesmus and hæmaturia. Careful irrigation carried out for three weeks brought improvement. The patient noticed that whenever the urine was tinged with blood, urination was free, but as soon as it cleared trouble set in. He also frequently suffered from epididymitis, sometimes on the right, sometimes on the left side. Four years ago a doctor sounded him for stone. Result, several days of continuous severe hæmaturia; three weeks of intense pain. Since then he avoided all further examinations. Lately he urinated about every hour during the day and used a catheter at night before retiring; this allowed him to rest until midnight, when he would have to draw off the water again, and a third time before morning. When first seen by me, June 15, 1899, the patient, a strong, robust man, was able to urinate 40 c.c., showing a residual urine of 75 c.c. On irrigation the water soon returned clear. Of 200 c.c. injected into the bladder 100 c.c. could be passed. The prostate per rectum was soft and very large in all its lobes. I personally was able to reach its lower portion only; a friend of mine with an extremely long forefinger was also unable to reach its upper border.

Analysis of urine: Acid; albumin, 0.25 per 1,000; urea, 26.4 gm. in twenty-four hours; no sugar; few cells of blood; moderate amount of pus and mucus; some hyaline casts; some blood cells and groups, presumably from renal pelvis; small amount of uric acid. Conclusion, hyperæmia of renal parenchyma with slight vesical catarrh.

On January 19th, cystoscopy with irrigating cystoscope. The instrument has to be introduced to its full length before the cavity of the bladder is reached. The light having been turned on, it is at once seen that the prism is still in the region of the prostate. One sees the characteristic groove not in the median line as is usual, but somewhat to the right side of the patient. That side of the angle near the median line rises perpendicularly upward like a massive wall, and is seen to be covered with multiple polypous excrescences, after the cystoscope is pushed farther in. There certainly is a median lobe of very large size. It is extremely difficult to turn the instrument 180° in order to observe the fundus. It is possible only after additional 250 c.c. of water have been injected into the bladder. There is no stone. In pressing down the handle of the cystoscope, a procedure which is exceedingly painful to the patient, one clearly recognizes a large mass projecting into the bladder (body of the prostate). I did not, of course, hesitate to make it plain to the patient that in his case Bottini's operation might be followed by a great deal of trouble. However, the patient was so thoroughly tired of his condition that he was ready to undergo the procedure at all hazards.

Bottini's operation was done on June 21st. On hugging the prostate the handle of the incisor was forcibly pressed, evidently by the peculiar configuration of the gland, toward the right of the patient. It was, therefore, very difficult to keep the instrument exactly in the median line of the body. It was clear that the large median lobe had been turned back and forcibly resisted, being twisted upon itself. At that moment I felt the necessity of having on hand the instrument with which I could cut as long as I might wish to within the limits of 8 cm. For my friend, who, with his finger in the rectum of the patient trying to localize the distance of the tip of the incisor from the sphincter ani muscles, was just able to feel it, and his finger measures 12 cm. As matters were, I could make only three cuts, one in the median line directly posteriorly, one through the right lateral lobe at 45°, and one through the left at 90°, 4 cm. each. The result was just what we had expected. The injured median lobe rapidly increased in size by reactive swelling and represented an unyielding barrier to the entrance of all instruments, gum-elastic and solid, that we tried to introduce through the normal channel. Absolute retention set in, and all attempts to bring relief in the usual way were futile. Puncture of the bladder above the pubes became necessary and was carried out eight times (twice per day) within the next five days. Strict asepsis being observed, no trouble ensued. Prior to entering the bladder with the trocar, each time a different spot of the skin within the short distance between the symphysis and the lower end of the pre-vesical peritoneal fold was selected. As a preliminary the skin was here incised under local anæsthesia for about one-eighth of an inch, always in the transverse direction.

On June 26th, five days after the operation, I succeeded for the first time in introducing a Nélaton catheter on a metal guide. This was left in place and gave the patient a great deal of relief. Meanwhile the scrotum had become swollen to tremendous size. The pulse was between 90 and 106; the temperature had never risen above 101.6° F., nor had there been a chill at any time. These facts, in conjunction with absence of infiltration in the perineum, showed that urinary infiltration had not set in. I could, however, not explain the œdema of the scrotum in any other way than by assuming that some infecting material had leaked out; perhaps the phenomenon was to be considered a microbic infection by contiguity.

On June 30th, nine days after the operation, multiple incisions through the scrotum, under eucaine, with proper drainage, became necessary. All the tissues down to the tunica vaginalis propria were densely infiltrated, without, however, showing the slightest trace of pus.

On July 3d, the permanent catheter was removed for trial. The patient was unable, however, to pass a drop of water. In order to facilitate treatment a catheter was again introduced and permanent drainage continued until July 12th, that is, the twenty-first day after the operation. Some six hours after the removal of the instrument the patient passed about half an ounce of thin bloody fluid, and once more half an ounce of the same fluid two hours later. Then absolute retention again set in, and regular catheterization every six to eight hours became necessary. It was, however, much easier than before. By July 18th catheterism had become so painful and the spasms of the bladder were so severe, that relief in some way had to be obtained. In my opinion only a second Bottini's operation could be of use. It was done with the incisor allowing of an incision 8 cm. in length, on July 20th, or twenty-nine days after the first operation. The incisor slid into the bladder with great ease; its handle was not forcibly pressed toward the patient's right side, as had been noticed during the first operation. On pulling from without, the instrument suddenly slipped into a deep groove for at least an inch (same as in case XIV.), an occurrence which caused me to abandon my original idea of making the incision 6 to 7 cm. long. Instead, I made a posterior cut of but 4 cm. in length in the median line and one of the same length through each lateral lobe. A Mercier English webbed catheter, No. 17 F., was introduced immediately after the operation was completed. It entered with remarkable ease and was left *in situ* for five days. Reaction was comparatively slight. There was some rise of pulse and temperature, the former reaching 118 at one time; the latter stayed below 101.4° F.

On July 21st, the nurse's report states: "The patient passed a very comfortable night; drainage per catheter was good, 38 ounces in twenty-four hours."

On July 25th, the fifth day after the operation, the permanent catheter was removed. The patient was still unable to urinate voluntarily. Regular catheterization with bladder irrigation had, therefore, to be resumed, and was carefully carried out every four to six or eight hours.

On July 27th the patient, for the first time, remained out of bed for some time, and thenceforth got up for a longer period every day.

On August 6th, the seventeenth day after the second operation, and the forty-sixth day after the first, the patient for the first time, and under considerable pain, voluntarily passed 2 ounces of slightly bloody urine. Four hours later he passed 3 ounces, and one hour later again 3 ounces. On August 8th, he passed 18 ounces within twenty-four hours; residual urine as drawn per catheter, between 9 and 15 ounces. On August 9th he passed 25 ounces in the course of twenty-four hours, and on August 14th 39 ounces. Improvement then steadily continued.

In the early part of September the patient left for the country, where he took baths and massage. When I saw him again, on October 11th, he reported that he had not had to use the catheter at all for six weeks. He urinated about every hour and a half during the day; four to six times during the night, in a good stream and without pain. Now and then there is irritation at the neck of the bladder so that the patient has difficulty in retaining the urine when the call comes. Otherwise he feels perfectly well. Since that time the patient's condition has still more improved, as I learned a few days ago. He so far did not present himself at my office.

CASE XXI.—The history of this case is, it seems to me, not only of unusual interest, but also of great importance. On November 25, 1898, I removed three large, heavy uric-acid stones from the bladder of a patient forty-nine years of age, who, on rectal palpation as well as on cystoscopy, had shown quite a degree of prostatic hypertrophy. The urine at the time of the operation, which was done seven years after the onset of his troubles, was extremely fetid. In spite of ample gauze drainage of the wound and proper siphoning of the bladder with the T-tube, the perivesical connective tissue became necrotic after the operation. It was two to three weeks before all the sloughs had been pushed off. It was eight weeks before the patient could be discharged from the hospital. At that time he still suffered from a severe neuralgia in both sacral plexuses, which was in time overcome by warm baths, rest, and massage. There remained, however, a very rebellious suprapubic fistula through which at least half of his urine was discharged. During the summer months it closed for a short time, but soon opened again after the formation of a perivesical abscess. Cauterization carried out in various ways had no effect. On injecting 200 c.c. of a sterilized boric-acid solution 150 to 175 c.c. were passed simultaneously through the urethra and the suprapubic fistula; the catheter then withdrew 25 to 50 c.c. of residual urine. In the early part of October about half of the urine was discharged through the fistula. Cystoscopy carried out at that time showed the typical groove at the neck of the internal urethral fold. According to the view already expressed in my last article on the subject of Bottini's operation, namely, that it was to be hoped that such an obstinate suprapubic fistula might eventually be brought to a permanent close by means of Bottini's operation, I proposed the latter to the patient.

It was carried out at the German Hospital on October 11th, under eucaine. Three cuts were made, one posteriorly, 4 cm. long; one through the right lateral lobe at 45°, 3.75 cm. long, and a third through the left lateral lobe at an angle of 90°, 3.5 cm. long. There was no reaction. The patient was kept on his back and soon commenced to pass the greatest amount of his urine through the urethra. The suprapubic fistula, which before had been filled with somewhat protruding granulations, soon became shallow and then funnel-shaped. Three weeks later the patient was discharged with his trouble much improved, though not entirely cured. On November 21st, he urinated 70 c.c.; residual urine, 25 c.c. Of 300 c.c. injected, every drop is passed through the urethra in a very forcible stream. There is still some slight leakage through the suprapubic fistula. It is impossible to introduce a probe into the bladder from without. Cauterization of the fistula with the actual cautery could thus not be done. And I was not eager to do it, for it seemed to me that in this case the aim should be not to destroy more tissue, but to cause that which was present to heal by chemical stimulation. I succeeded on that day in injecting 10 c.c. of pure balsam of Peru into the bladder, which had previously been filled with sterile boric-acid water. On passing the latter through the urethra, the balsam of Peru escaped with it. This procedure was repeated three times at intervals. Still, there was some slight leakage, sufficient to saturate gradually the piece of gauze that was worn by the patient in front of the sinus. I therefore decided to increase the strength of the chemical application, and on December 9th I injected 200 c.c. of sterilized water into the bladder, and then with a small glass syringe forced into the bladder through the sinus 15 minims of pure carbolic acid (thus making a one-half-per-cent. carbolic solution in the bladder), a procedure which was immediately followed by an injection of pure alcohol. Five days later the patient reported that there had been absolutely no leakage through the sinus since this cauterization, and from that time on not a drop has ever passed by the suprapubic route.

Final examination, March 29, 1900: The patient urinates five to six times during the day; nights not at all; good stream; no pain; the suprapubic fistula has remained closed; he has gained considerably in weight; bowels normal. While at my office he passes 130 c.c., residual urine 20 c.c. The urine is entirely clear. Of 250 c.c. nitrate-of-silver solution, 1 : 5,000, injected, every drop is passed. Matrimonial intercourse regular and enjoyable. The patient was presented before the Section on Surgery of the New York Academy of Medicine, April 9, 1900.

In view of the success of the operation in this case I have become somewhat doubtful as to the advisability of trying to perform litholapaxy in the majority of prostatics as a preliminary measure to Bottini's operation. We all know how much the prostate often resents prolonged instrumental interference; how, after litholapaxy, an incomplete retention may suddenly become complete. Hence, the possibility of an already present pyelitis assuming a much more serious aspect after the said procedure must be apparent. With my present experience, therefore, I should, in cases of a doubtful prognosis, prefer doing suprapubic lithotomy as the first step, adding, if necessary, Bottini's operation at a later period.

The question as to whether it would not be advisable to do both operations at the same sitting, thus being enabled to put the instrument in place under the direct guidance of the eye, cannot yet be decided. It is true, it is generally three weeks before the eschars are pushed off, at which time the suprapubic wound ought to be nearly closed and the flow of urine through its normal channel could be resumed. If, therefore, both these phenomena occurred at the same time, all would be well. On the other hand, with retarded wound healing, the grooves cut through the prostate might become more or less completely obliterated on account of there being no urine passed through them to prevent it.

With regard to the prognosis of Bottini's operation in this class of cases, it is reasonable to assume that most of the patients will better stand it than those not afflicted with urinary leakage above the pubes, on account of the presence of the suprapubic fistula. If by reactive swelling of the gland the normal passageway should first become temporarily blocked, the fistula will give easy exit to the urine.

I believe that this case is the first of its kind in which so obstinate a suprapubic fistula was brought to a close by Bottini's operation. The case proves that to this class of sufferers also Bottini's operation may prove of immeasurable benefit. I have no doubt that it is destined in most of these cases to take the place of bilateral castration, the only hope of a cure that could so far be held out to these poor patients.

Case XXII.—B——, seventy-two years of age. He has suffered for the last three to four years from increasing urinary symptoms; lately absolute retention; regular catheterization. Two months ago he had a cellulitis of the right hand, which was treated by the family physician with repeated multiple incisions. The patient was sick for over six weeks. He was seen by me in consultation October 11, 1899, on account of the absolute retention. The patient was greatly emaciated. The prostate was large and soft; its upper border could be reached with the tip of the finger. Prostatorrhœa; vesical catarrh. Temperature varied between 100° to 101° F.; pulse not above 100.

October 14th: Cystoscopy. Trabecular bladder; pathognomonic groove at internal fold not very marked, but internal fold irregular, thickened, not transparent; cystitis.

Urinary analysis: Chronic nephritis; no apparent renal lesion of renal pelvis; chronic cystitis.

Bottini's operation was performed on October 18th at 8 A.M., the patient having been carefully prepared by the internal administration of quinine and urotropin. The prostate was found to be extremely soft; after compression the tip of the beak was palpable about one inch above the anus. Posterior incision 1.5 cm. in length; the one through right lateral lobe at an angle of 45°, that through the left lateral lobe at 90°, 1 cm. each. Two hours after the operation the patient voided 120 c.c. (4 oz.) of urine mixed with the fluid which had been injected into his bladder, and continued urinating in somewhat smaller quantities every hour or hour and a half, passing 2,010 c.c. (67 oz.) of slightly bloody urine within the first twenty-four hours. At 5 P.M. of the same day, nine hours after the operation, the patient had a slight chill, followed by rapid rise of temperature and pulse. At 7:30, temperature, 105° F.; pulse, 104. At 10:30 P.M. temperature, 104.8° F.; pulse, 120. Pulse and temperature then gradually declined and reached normal on the morning of the third day after the operation. Seven hours after a second chill, which lasted thirty minutes and occurred on the third day after the operation, phlebitis involving the saphenous vein of the left thigh set in. The patient had had marked varicose veins for many years, but, as he stated, never an inflammation. His general condition was good. The spasms at the neck of the bladder had discontinued; there was no more pain. He voided his urine spontaneously every three to four hours in quantities of 150 to 270 c.c. (5 to 9 oz.). Although the phlebitis had to be looked upon as an annoying complication, I considered the patient out of immediate danger and rejoiced with him in the improvement of his vesical trouble. On October 22d, the fourth day after the operation, he passed about 330 c.c. (11 oz.) at one time in a good stream. The following days the pulse was very satisfactory, never above 100; but the temperature fluctuated between 101° and 104° F. The stomach was rather irritable, but the bladder acted perfectly normally. On the fifth day after the operation the patient passed 1,650 c.c. (55 oz). within twenty-four hours, in six times. However, his general condition did not keep pace with the improvement in the functioning of the bladder. The pulse began to rise again, and on October 28th (ten days after operation) reached 128; temperature, 104° F.; respiration, 40. Urine voided at one time, 480 c.c. (16 oz.). Physical examination demonstrated the presence of a lobular pneumonia, to which the patient succumbed on October 29th, eleven days after Bottini's operation.

To my regret, a post-mortem examination was refused, and I was, therefore, unable to determine whether the lung affection was due to hypostasis or to an embolism. For the reason that the saphenous vein has no direct communication with the internal iliac vein, the one which might become thrombosed after Bottini's operation, I can explain the peculiar occurrence of a phlebitis on the left thigh only by assuming that streptococci were still present in the circulation of the patient from the time of his cellulitis. The slow and weak action of the heart, in conjunction with the equally slow and weak current of blood in the varicose veins, then produced thrombi in the latter, in which the streptococci of course found a most favorable soil. It is certain that the patient did not die in consequence of Bottini's operation, as such. On the contrary, his bladder functions were restored in a most admirable way and in so marvellously short a period as I have not seen occur before or since. What evidently caused his death was the phlebitis with probably following embolism.

Case XXIII.—M. K——, seventy-two and one-half years of age, has been suffering from symptoms of prostatic enlargement for the last six to seven years. Retention has repeatedly had to be relieved by catheterization. Often the region over the kidneys was painful. The patient came under my care during the summer of 1899, when he was suffering from a mild sepsis, suppurating prostatitis, pyelo-nephritis, and cystitis. Micturition was very painful. The prostate was found to be very soft; its upper border could be reached per rectum. Frequent slight chills and rise of temperature were improved under regular catheterization and vesical irrigation. Residual urine was never below 540 to 600 c.c. (18 to 20 oz.). The amount of urine passed voluntarily within twenty-four hours, at very frequent intervals—every half-hour to hour—was between 1,200 and 3,000 c.c. (40 to 100 oz.), the quantity daily withdrawn per catheter being from 1,000 to 1,800 c.c. (33 to 60 oz.). Urinary analysis: Chronic pyelo-nephritis and cystitis. In view of this condition cystoscopy was omitted.

After a few months' treatment the patient strongly urged me to perform Bottini's operation on him. Naturally, I did not feel much inclined to do it. He insisted, however, being anxious to get rid of the catheter, so that finally I acceded to his wish, and, after careful preparation of the patient, performed Bottini's operation on October 9th. One median incision, 3 cm. long, was made very slowly, as usual. The lateral cuts were omitted. No improvement resulted. Micturition was painful and frequent. Ten days later, October 19th, Bottini's operation was repeated. Median incision 4 cm.; through right lateral lobe at an angle of 45°, 3.5 cm.; through left lateral lobe at about 75°, same length. Four hours after the operation, the patient commenced urinating, and from then on passed between 3,000 and 3,500 c.c. (100 to 116 oz.) daily. There was only a very slight reaction. Temperature on the second day was 101.8° F.; pulse never above 100. On the third day both declined to normal. On October 28th, the patient complained of a great deal of fulness in the lower abdominal region, although he had passed 3,810 c.c. (127 oz.) of urine within twenty-four hours. The catheter thereupon introduced withdrew 840 c.c. (28 oz.) of residual urine. Thereafter he was regularly catheterized once in twenty-four hours, and the amount of residual urine began to decrease after the eschars had been pushed off in large numbers during the third week.

On the 4th of December the patient left for his home in the West. He felt better in every respect and had gained in weight. Residual urine had dropped to 210 to 240 c.c. (7 to 8 oz.). As its presence did not cause the patient any inconvenience, further interference was advised against. The urine still contains a good deal of pus.

In a letter to me, dated April 23, 1900, the patient states: He urinates every four to five hours in the daytime, once on retiring at 9 P.M., and twice thereafter; he has not a bit of pain; the stream is good and strong; catheter not used since departure from New York; does not think that there is any residual urine (to my regret, it was not tested); bowels more regular; general condition very good; has gained about eighteen pounds.

This case nicely shows that Bottini's operation may be done with impunity even in patients who suffer from pyelonephritis. This patient certainly belongs at present to the category of "much improved" cases. Had the amount of residual urine been tested at the time of the last report, it might be shown that the case had to be included in the class of "cured" (so far).

CASE XXIV.—L. Z——, sixty-two years of age. Increased frequency of micturition first noticed after a long bicycle ride, about two years ago. It was accompanied with pain and slight hæmaturia. Since that time he could not retain his urine as well as before, and the calls, too, generally came oftener than previously. The most annoying feature, however, was that at the advent of the call a painful erection regularly set in, and a few drops only of urine were passed. After an interval of five to ten minutes, during which the pain did not cease, and under considerable straining, a weak stream of urine appeared. About a year ago he urinated every two to three hours during the day, once or twice during the night. Being obliged to make extensive tours through the States, he often had attacks of very frequent micturition, every ten minutes, an occurrence which, in the light of future developments, will probably have to be looked upon as overflow. Around Christmas, 1899, undisputed retention set in for the first time. By the advice of a friend who was similarly afflicted, he used a rather stiff rubber bougie, of about No. 12 French. With this he evidently injured his urethra in the region of the cut-off muscle, for when his doctor tried to relieve him by catheterization, quite a severe hemorrhage occurred before the catheter had reached the prostatic urethra. When I saw the patient with the doctor, later in the evening of December 28th, the upper border of his bladder was palpable about two fingers' width above the umbilicus. Knowing from experience the difficulties so frequently encountered when catheterizing these patients with absolute retention and a profusely bleeding prostate, I placed the patient's pelvis upon a hard pillow and at once made use of Trendelenburg's prostatic catheter sound (No. 14 French), repeatedly referred to in this paper. I succeeded in entering the bladder and relieving the patient at the first attempt. Prolonged retention followed, which necessitated catheterization and irrigation of the bladder every eight to twelve hours. Digital examination showed the prostate to be of the size of an apple, neither hard nor particularly soft; its upper border could just be reached with the finger. Length of urethra, 22 cm. About two weeks after this he began spontaneously to void urine in small quantities, not exceeding 150 c.c. (5 oz.) at a time, and always under a great deal of pain. Residual urine was never less than 300 c.c. (10 oz.). Cystoscopy was omitted on account of the patient's great sensitiveness.

Urinary analysis, January, 1900: Glycosuria (0.3 per cent.); no lesion of renal parenchyma or pelvis; slight chronic cystitis. An analysis made two weeks later proved the sugar to have disappeared.

After carefully preparing the patient with urotropin, salol, and quinine, Bottini's operation was performed under eucaine, on January 13, 1900, the bladder being filled with 150 c.c. (5 oz.) of a two-per-cent. sterilized boric-acid solution. There was no concretion palpable with the beak of the incisor. The prostate having been hooked, the tip of the instrument could be felt with the finger in the rectum, about 8 cm. above the anus (median lobe!). The lower border of the prostate was estimated at 4 cm. from the anal ring. The median incision was therefore made 4 cm. in length; the two lateral incisions at an angle of 45°, 3.5 cm. The patient stood the operation very nicely, and stated that he had not felt the burning in the least, but had experienced pain throughout the entire length of the urethra, due probably, as I believe, to the firm hugging of the prostate. Two, five, and nine hours, respectively, after the operation, he passed a drachm of urine; twelve hours later a full ounce; 750 c.c. (25 oz.) of slightly bloody urine were then withdrawn per catheter and the latter left in place. There was no febrile reaction whatever. The permanent catheter seemed to become obstructed at times, but a few ounces of the usual irrigating fluid, thrown into it with a hand syringe, restored proper drainage.

January 16th, three days later, the permanent catheter was removed; but 30 to 60 c.c. (1 to 2 oz.) is the largest quantity discharged by the patient. He is, therefore, regularly catheterized and his bladder irrigated every eight hours.

January 18th: same status; the spasms are more frequent; otherwise his general condition is very satisfactory.

January 20th: A second Bottini operation is contemplated. On the morning of the following day, however, the patient voided 90 c.c. (3 oz.) at various intervals, so that the catheter withdrew only 90 c.c. of residual urine.

January 23d: Urination painless; increasing quantities passed at more frequent intervals.

On the 25th of January he passed as much as 150 c.c. at one time. The catheter was then dispensed with.

March 9th: The patient feels splendid; urinates about 2,100 to 2,400 c.c. (70 to 80 oz.) in twenty-four hours, eight times during the day; nights, three times. Occasionally passes 400 c.c. (13 oz.) in one act. There is no pain whatsoever; urine is very slightly turbid. Eschars have been discharged up to two days ago. He continues to take salol and urotropin. Bladder irrigations were advised.

April 10, 1900, ten weeks after operation: Last eschar passed two weeks ago; he urinates without pain every two to three hours during the day; nights once, that is to say, one time within ten hours; bladder holds easily 400 to 420 c.c. The stream is better than ever before in his life; urine cleared up entirely. Painful erection previous to the act of micturition has ceased since the day of the operation. He feels excellent; weighs more than he did any time within the last ten years: bowels normal; matrimonial intercourse regular and much enjoyed.

THE MODERN TREATMENT OF DIABETES MELLITUS.

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CARLSBAD.

Considering how small is our knowledge regarding the etiology of this disease even at the present day, we are obliged to renounce the causal therapy and concentrate our attention on a purely symptomatical one. The principal symptoms of diabetes are glycosuria and the malnutrition caused by constant loss of non-assimilated nutritive material.

Since the disease became known, nearly all physicians tried to reduce the glycosuria by restricting the carbohydrates in the food. During a very short period a very small number of physicians were led by the entirely false conclusion that a greater amount of carbohydrates must be introduced into the diabetic organism to make up for the loss caused by glycosuria; one of them was the celebrated physiologist Schiff, who, himself a diabetic, thereby hastened his own death. The medical therapy by drugs has shown itself in nearly all cases, by careful scientific investigation, to be a failure as far as the patient is considered, the drug-manufacturer only profiting. If there is any good effect, it is certainly due to the diet observed during the use of the drug—without diet there is no diminution of the glycosuria. The opiates are exceptions, but various reasons make us reserve them for the very severe cases only. The different preparations of hydrargyrum may be used in the very rare cases of syphilitic (diabetic) glycosuria, also balneotherapy and hydrotherapy, but both of these have also to be combined with dietetic treatment; I shall say a few words about them later. Therefore the only remaining treatment is the dietetic one (*Ernährungstherapie*). The object of this is, in the first place, not simply to reduce the glycosuria, but to keep the patient in the best form of nutrition, which naturally results from reducing the glycosuria as much as possible and replacing the excluded carbohydrates by other nutritive material of the same calory value.

The best way of finding out the proper diet in individual cases is the following (Kuelz, Naunyn, v. Noorden, etc.): The patient is put for one day on a "standard" diet, as v. Noorden calls it, which contains, besides the indifferent albuminous and fat-producing material, a certain amount of carbohydrates, for instance, 100 gm. wheat bread per day, which contains about 60 gm. of carbohydrates. Then the patient is told to collect twenty-four hours' amount of urine (he must begin with the urine passed immediately after the first breakfast and finish with the urine passed the next morning before breakfast). This method is used in all cases in the clinic for diabetics of Professor v. Noorden at Frankfort on Main. Then the amount of sugar passed during twenty-four hours is ascertained by polarization and titration, or by polarization before and after fermentation, to find out also the amount of substances which turn the plane of polarization to the left.

There are now three possibilities: (1) that there is no sugar at all; (2) that there is less; (3) that there is more than 60 gm. of sugar excreted with the urine. The first we find in all mild cases of diabetes and in all cases of non-diabetic glycosuria. In all of these cases after a period of four to five days the daily portion of carbohydrates is increased by a certain amount, between 30 to 50 gm. of bread or an equivalent of carbohydrates in another form. The urine of the last day of such a period is collected in the formerly described way, and this is continued until a trace of sugar is found in the urine; then we know what amount of carbohydrates the organism is able to assimilate, *i.e.*, "its tolerance for carbohydrates." Then the patient is kept for one or two days on a very strict diet, in order to make the traces of glycosuria disappear entirely, and thereafter the amount of carbohydrates in his diet is increased gradually day by day up to the highest amount which he is found able to assimilate.

In the other cases in which glycosuria is found the amount of carbohydrates in the patient's diet is reduced until a diet is obtained as free from carbohydrates as possible. This reduction must be effected gradually, as a sudden deprivation is very often followed by disagreeable symptoms of collapse. The patient is then kept on that strict diet for three or four days; on the last day the urine is collected in the formerly described manner, and if traces of glycosuria are still found, such periods of strictest diet may be repeated, or we may even, if we fail to free his urine from glycosuria, restrict the amount of albuminous food (Naunyn, v. Noorden, Pavy, etc.), substituting fat for it. The fat is then given with certain vegetables which contain a very small percentage of carbohydrates, which amount can be reduced still further by a certain method of cooking. But during all this time the greatest care is necessary; we must interrupt such a severe diet if we find the patient is rapidly losing in weight, and we must also carefully examine the urine to find whether there is azoturia, whether the amount of acetone is high, and whether diacetic and oxybutyric acids are in the urine. Therefore it is also recommendable to give large quantities of bicarbonate of sodium daily, to avoid hyperacidity of the blood (Naunyn, Stadelmann, Magnus-Levy).

After the glycosuria has disappeared, we begin again to add small doses of carbohydrates to the diet till the highest limit is reached, proceeding as in the mild cases. It is well known that periods of abstinence increase the assimilating force and that the continued use of carbohydrates diminishes the same, therefore the patient should also be told to include from time to time, at regular intervals, three to four days of strict diet, for instance the last three to four days of each month or every second month. These intervals are to be chosen according to the severity of the case. After these four days the carbohydrates are to be increased again up to the allowed amount. The urine is to be examined immediately before the periods of strict diet, in order to ascertain if there is any change in the amount of glycosuria. In other cases, in which it is impossible to suppress the glycosuria, even by strictest diet, we must also allow the patient a certain, though small addition of carbohydrates to his daily diet, for the following reasons: (1) If not allowed, the patient would nevertheless take it by himself. (2) We know that to live for any length of time on a diet consisting exclusively of albuminous material and fat is impossible for the human organism; but in these cases we will include the periods of strictest diet at shorter intervals, and of five to six days, if the general health of the patient permits it. There are further cases of diabetes in which any sort of antidiabetic diet is nothing but a superfluous cruelty to patients whose days are already numbered.

It is also of great value to know in each case the fluctuation of glycosuria within twenty-four hours, an exact knowledge of which will in many cases allow the possibility of a very liberal diet.[1] At any rate it is always advisable to add the given carbohydrates to the more copious meals, dinner, lunch, and supper, and to avoid them more or less at breakfast. But it is not only a question as to how much carbohydrates may be given, but also in what form they are best given. The best way is to give those carbohydrates which the patient is accustomed to have; first of all to allow him a certain quantity of the bread he is in the habit of eating. It is only necessary that the prescribing physician should know approximately the percentage of carbohydrates in those articles of food which he is willing to put on the patient's diet list. During the first few weeks the patient will have to use scales, but later on he will learn to guess the weight of his food articles by their size, etc. Surrogate food is in the most cases easily avoidable. No surrogate will ever reach in taste the real thing; therefore the patient very soon gets tired of it, and, to choose a common example, he will soon prefer a small piece of plain bread to a large piece of a less palatable surrogate. Besides, there are advertised, especially recently, a great many surrogates which are not at all reliable. I have personally had occasion to examine a great number of them, and, using the method of Allihn, which always gives very exact results, I found that some of them contained just as much carbohydrates as the common flour and bread. But there are also some very useful surrogates and preparations.[2]

As said before, in order to make out a good diabetic diet list one must approximately know the percentage of carbohydrates in the various articles of food, and must also know how to substitute the excluded carbohydrates so as to satisfy the want of calories, just as well as the exertions of appetite and taste, and this requires not only scientific chemistry, but also some culinary knowledge and experience, which are easily obtained.

In regard to alcoholics, opinions vary, but used moderately and with careful selection they certainly deserve a place in the diabetic diet list; the quantity, however, must be so chosen as to exclude any toxic effect.

It is easily recognizable that all this is connected with a great many difficulties in an all-around, general practice. A treatment like this not only consumes a great deal of the doctor's and of the patient's time, but it may sometimes even be impossible for a person who is very active either in business or in social life to follow all these directions. In order to avoid all those difficulties it is best to send the patient, as soon as the diagnosis is made and other circumstances allow it, into clinical treatment, either to a hospital or, if the patient has means enough, to one of those private clinics which are entirely devoted to diabetic patients. Then he will not only be under careful examination and control, but—and that is one of the greatest advantages of these clinics—he will learn there how to live after having returned to his home, and then it will be very easy for the family physician to keep the case under control.

The balneo-therapeutic treatment has also maintained its place in the treatment of diabetes, and the many good results attained thereby rather speak in its favor, although strictly clinical experiments have shown no results at all. The effect of balneo-therapy in diabetes is not founded on the special water only, but on the combination of many other circumstances. First of all the patient, leaving his home, leaves behind him all trouble and worriments, gets a rest from his daily life (and we all know what an influence rest and change of surroundings have on a diabetic patient); he is better able and more willing to obey strictly all that is asked of him by his medical attendant. He will find at nearly all the hotels and restaurants, at least in all the famous European spas, a list of dishes which are free from carbohydrates, generally marked out as dishes for diabetics. Another favorable circumstance is that, having all his time for himself, he will do more muscular exercise, which, as we know, decreases glycosuria (either by walking or undergoing a regular course of the now well-known Zander treatment, nearly all the famous spas having elaborate Zander institutes). And last, but not least, it is a well-known fact that the alkaline-sulphatic and alkaline-muriatic waters of some spas have a good influence not only on diabetes but also on gout, which we find so often combined with diabetes, and on oxaluria, another complication not seldom found. In many other cases, especially of the neurasthenic type, it will be better to send the patient simply either to the seaside or to highly situated bracing places—to places where he can find enough accommodation to follow the diet prescribed.

Associated Frontal Sinus and Mastoid Disease.—T. J. Harris reports the case of a South American boy, aged seventeen years, who some months before coming under observation had had a mastoid operation done. Recurrence of symptoms led to the performance by Harris of a Schwartze operation, from which recovery had begun when the patient began to complain of pain over the frontal sinus. Catheterization of the latter relieved the pain, but did not evacuate any pus. There was a continual purulent discharge from the right naris. Suddenly there developed intense pain in the forehead, which was rebellious to all forms of treatment. The frontal sinus was opened by Luc's method without relief. The pains grew even worse, and a typhoid state developed. Finally the boy began to improve on the iodide, but pain then returned in the mastoid. This was reopened, this time by the Stacke method, and much diseased bone removed. This relieved the pain, and convalescence was uninterrupted. No history of syphilis could be elicited.—*The Laryngoscope*, April, 1900.

A Report on the Question of Contagiousness of Pulmonary Consumption.—Johann Flintermann finds that in the city of Detroit, from July 1, 1894, to June 30, 1895, one-fifth of all cases of death were due to tuberculosis. The last report shows an increase in the mortality. In New York City, in 1896, there were 35,000 deaths, and 6,000 of these were due to tuberculosis. Professor von Leyden estimates that in Germany 1,300,000 persons suffer from tuberculosis, and 180,000 die every year from this disease. The author urges education of school children and people in general as to the nature of the disease and the evils of promiscuous expectoration. House disinfection should follow death from tuberculosis. Houses, hospitals, all public institutions should be under close observation, and cases of tuberculosis isolated. Hospitals for tuberculous patients should be provided. The author does not approve of compulsory notification, and agrees with Cornet's doctrine, "The consumptive in himself is almost absolutely harmless, and only becomes harmful through his habits."—*The Physician and Surgeon*, March, 1900.

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[1] F. Kraus: "Notes on the Variation of Glycosuria in Diabetics." Albany Medical Annals, August, 1899.

[2] Any one more interested in this matter will find a list of very useful surrogates, also a number of prescriptions as to how and in what form carbohydrates may be put on the diabetic diet list, in the "Handbuch für Ernahrungstherapie," by Professor v. Leyden, VIII A.; "Ernahrungstherapie bei Diabetes mellitus," by Prof. Dr. C. v. Noorden, Frankfort on Main.

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MALARIA AND MOSQUITOS.

MALARIA in its several forms constitutes perhaps the greatest obstacle to a successful colonization of the tropics. There are of course other diseases common to those regions which occasion great loss of life, but these chiefly affect the natives and can be usually controlled by intelligent prophylactic measures. The malarial fevers are by far the most deadly of the tropical maladies in both white man and native. Large parts of India are devastated and rendered valueless by this scourge, and immense tracts of land in Africa and South America cannot be inhabited by the white race without almost inevitably fatal results. The problem of the causation of malaria, which has been the despair of scientists for generations, would appear to be daily drawing nearer and nearer to its final solution. The large majority of scientific men throughout the world have virtually accepted as decisive the theory that it is mainly if not wholly by the agency of the genus Anopheles, of the mosquito family, that malarial fevers originate and are spread. In fact by many this is no longer looked upon as a theory, but as a doctrine.

A number of investigators have had a share in the discovery that the mosquito plays an important part in causing and disseminating malaria, but to Manson and Ross is generally conceded the honor of bringing the matter to its present advanced stage. Although Americans have not specially distinguished themselves in these investigations, it should not be forgotten, as was pointed out in the London *Lancet*, February 11, 1899, that A. F. A. King, at the meeting of the Philosophical Society of Washington, D. C., held on February 10, 1883, read a paper entitled "The Prevention of Malarial Fevers," in which he suggested the likelihood of marsh fevers being produced by the bites of proboscidian insects, notably in this and some other countries by mosquito bites. This, we believe, was the first occasion upon which the theory was publicly mooted.

Great activity is now being displayed in Europe with the object of deciding the question beyond cavil. For years the Italian investigators have been performing splendid service in the endeavor to probe the malaria mystery, and probably their researches have done more toward its elucidation so far than has the work of any other school. Since the establishment of the two schools of tropical medicine in Great Britain a vivid and practical interest has been taken in that country in the diseases of the tropics in general, and of malaria in particular. The British government in conjunction with the Royal Society first despatched a scientific commission to the west coast of Africa for the purpose of attempting to find the malaria-bearing mosquito, and to locate its breeding-places. Shortly after this the Liverpool School of Tropical Medicine equipped and sent out at its own expense an expedition under the leadership of Major Ross to the east coast with a similar end in view. Major Ross and his coadjutors succeeded in discovering the mosquito Anopheles claviger, and in a few instances in determining the situation of its breeding-places. The London School of Tropical Medicine, authorized by the British Colonial Office, has just sent two of its members, Drs. Sambon and Lowe, to the Roman Campagna, there to conduct certain experiments which, if terminating favorably, should convince the most sceptical that the mosquito is the dominating factor in the causation of malaria. It may be said that experiments of a like nature have already been prosecuted by the Italians Celli and Grassi, with most satisfactory results. If, then, it be taken as proved that malaria is caused by mosquitos—and the evidence in support of this contention is so strong as to appear almost unassailable—and when it is further considered that the malady is conveyed by but one species of mosquito, it follows as a natural sequence that by a wholesale destruction of the sinning insect the ravages of malaria will be greatly curtailed and perhaps in time altogether ended.

The Liverpool School of Tropical Medicine has recently published a book entitled "Instructions for the Prevention of Malarial Fever, for the use of Residents in Malarious Places," which is made the text of an able article in the London *Times* of a late date, and which has been transcribed in *Public Health Reports*, March. The article, after giving a short summary of what is now known of the mosquito theory of malaria, concludes as follows:

"All speculations about air, about soil, about 'malaria belts,' and the like have been rendered obsolete. There is no reason to believe that the parasite of malaria finds access to the human body through any other channel than by means of the Anopheles mosquito, or that 'gnats' or 'mosquitos' which infest regions free from malaria are examples of Anopheles. If this particular insect could be extirpated, there is every justification for the hope that malarious fevers would disappear from the earth; and fortunately the extirpation does not seem likely to present any insurmountable difficulty. The eggs are laid in water, and the larvæ when hatched live in water for about a week before they assume the mosquito form. As larvæ, like those of the common gnat, they rise to the surface to breathe, and a film of oil on the surface is speedily fatal to them by blocking up their air spiracles. The fully-formed mosquito lives for many weeks, but is not presumed to travel far, and probably always obtains its food within easy reach of its native pool of water, to which it periodically returns for the purpose of depositing its eggs. Much may be done therefore by drying up the pools in the vicinity of houses or by treating them once a week with a film of kerosene oil. Much may be done also by killing the mature insect when resting upon a wall after its meal; and it is to be noted that the true Anopheles rests with its body almost at right angles to the surface of the wall, while the absolutely or comparatively harmless gnat rests with its body parallel to the wall or even somewhat inclining to it."

It is devoutly to be hoped that these sanguine expectations may be realized to their fullest extent, and that the time may be in sight when malaria will be swept away.

AN ABSURD CLAIM AND A UNIQUE EXHIBIT.

In the New York *Times* of April 29th, Mr. Goodwin Brown, an Albany lawyer, claims to be the originator of "the system of public baths," which promises to become an enormous sanitary factor in our tenement life.

In our issue of December 6, 1890, we referred to the subject of public baths, and wrote: "Much credit is due to Dr. S. Baruch, of this city, for his earnest agitation of the subject." Since that time we have frequently alluded to the free-bath movement inaugurated by this gentleman. Before medical and philanthropic societies the doctor urged the sanitary importance of the rain bath, and he succeeded in so imbuing Dr. Gertrude Wellington, of Chicago, with his views that she secured the construction of the Carter Harrison Baths in 1894, and of four other baths since that time.

Failing to overcome the opposition of Mayors Grant and Gilroy, the doctor found an earnest and able coadjutor in Mr. Goodwin Brown, who in 1895 brought about the passage of a mandatory act, in obedience to which several free baths have been and are now being constructed in this State (one city being compelled by a supreme court mandamus to build a bath).

While, therefore, Mr. Brown deserves credit for aiding Dr. Baruch in this important enterprise, his sweeping claim is absurd. Mr. Brown relates that "he was attracted in 1891 to the new method of bathing adopted in the soldiers' barracks in Berlin." It is singular that he had to go so far for this important information, when Dr. Baruch had explained the rain bath in 1890 to the Academy of Medicine, and the prominent New York dailies had referred to it as a matter of great public interest, and the New York Juvenile Asylum already had constructed a rain bath. We believe that we voice the sentiment of the medical profession in defending one of its members against encroachment, and insisting that credit be not withheld from the man who has so valiantly and successfully made the fight for this great sanitary boon.

We are gratified to learn that an exhibit in the department of social science and hygiene of the Paris exhibition will demonstrate to the world at large the feasibility, economy, and perfection of the system of public baths so ardently and successfully advocated by Dr. Simon Baruch. It is a matter of pride that this is the only country in the world which possesses public baths furnishing at all seasons warm water, soap, and towels free to any one, and that this great boon to the poor is the result of persistent endeavor of a medical man.

THE AMATEUR NURSE IN SOUTH AFRICA.

There has been within the past few weeks a rush of female members of the British aristocratic and plutocratic circles who have become infected with the disease now known as khaki fever, to Cape Town. So great indeed has been the influx of society women to that already overcrowded city, that Sir Alfred Milner, the governor-general of the South African British possessions, has deemed it necessary to protest against this invasion, and gravely to warn these ladies that not only are they themselves running into needless danger, but that their presence is inadvisable for general sanitary reasons, as well as being an additional embarrassment to the authorities. Lord Roberts concurs in this expression of opinion.

A banquet was given at the Reform Club in London on Saturday, April 28th, the guests of the evening being Sir William MacCormac and Mr. Frederick Treves, both of whom have recently returned to England after fulfilling their duties as consulting surgeons to the British forces at the front. The latter gentleman, who is reputed to be almost as able a speaker as he is operator and writer, delivered an incisive speech, laying bare what he esteems one of the most objectionable features of the present war. Referring to the amateur nurses who have gathered in such numbers in Cape Town and in some other parts of South Africa, he spoke as follows: "So far as the sick are concerned there are only two plagues in South Africa—the plague of flies and the plague of women. The flies we get rid of by horsehair wisps and other appliances, and the flies at least depart at night. But the women are absolutely and really a terror. They come out in the guise of amateur nurses, after having exhausted every other form of excitement. Considering that we are engaged in war the number of well-dressed ladies at Cape Town and elsewhere giving picnics is a blot on the campaign." Doubtless some of these ladies are guided solely by patriotic and humane sentiments, but it is to be feared that in the majority of instances Mr. Treves' pungent criticisms are well warranted, and that a very large proportion are impelled by the failings common to the daughters of Eve and by an insatiable desire not to be outvied by any of their compeers. It is extraordinary, too, to notice, so implicit is the belief of the everyday woman in her powers as a nurse, that it is impossible to convince her that in order to carry out efficiently the onerous duties of an army nurse some training is necessary in addition to the possession of a certain amount of mental and physical fitness. However, the question of women as army nurses has been of late considered at sufficient length in the MEDICAL RECORD, and we can only say that if, over and above the trials incidental to the life of an army doctor in time of war, he is expected also to cope with a multitude of society women posing "in the guise of nurses," he is certainly deserving of heartfelt sympathy.

SMALLPOX IN THE PHILIPPINES.

IT is a somewhat curious fact that when, as now, both plague and smallpox are prevalent in the Philippines, and fifty thousand American soldiers or thereabouts are in those islands, but small heed is paid in either medical or lay journals to the presence of these diseases. It is true, as was pointed out in an article by Maj. C. F. Mason, M.D., U.S.A., published in the MEDICAL RECORD some few months ago, that smallpox is universal throughout the islands among all classes of the natives, and is consequently regarded as a matter of course. It is also true that the efficacy of vaccination as a preventive of smallpox has already received further convincing proof among the United States troops campaigning there. Nevertheless it is a matter for some surprise that the medical profession of this country evinces a certain lack of interest in the diseases of the Philippines.

The London *Journal of Tropical Medicine* for April publishes an editorial entitled "Smallpox in the Philippines," in which, after briefly referring to the article by Major Mason mentioned above, it goes on to give a short history of the progress of vaccination in the Philippines and in the East generally. The writer of the editorial in question points out that vaccination was introduced into the Philippines by the Spanish about the beginning of the nineteenth century, and draws attention to the difficulties experienced until quite recent times in procuring effective lymph, owing to its deterioration in transit. The editorial in the *Journal of Tropical Medicine* concludes as follows: "It is satisfactory to know that the far East is better supplied with vaccine lymph than it was ten years ago, when all lymph came from Britain or America. The lymph from Britain, owing to the voyage through the tropics, was often useless; but now there is a vaccine institution at Hong Kong; and from Japan, Saigon, Calcutta, and even Sumatra and Java, lymph is sent to China and the Philippines. Seeing the unprotected state of the natives in the Philippines no doubt the Americans will soon establish vaccine institutes in Manila and elsewhere in the Philippines, and endeavor to induce the ignorant and prejudiced natives to protect themselves against smallpox, without doubt the greatest scourge known in the far East."

The Rhode Island Hospital.—On May 2d the new southwest pavilion of the Rhode Island Hospital was opened with appropriate ceremonies, and on May 10th the bacteriological laboratories in the same pavilion were opened. On the latter occasion addresses were made by Drs. W. T. Councilman, J. W. C. Ely, and G. Alder Blumer.

News of the Week.

Dr. Jacobi's Birthday. — The seventieth anniversary of the birth of Dr. A. Jacobi, of this city, was celebrated at a banquet held last Saturday night at Delmonico's, which was attended by more than four hundred of his friends and professional associates. His birthday was on Sunday, May 6th, but his friends were too impatient in their desire to congratulate him to wait. The speech-making was begun early, but at the stroke of midnight all rose and drank to the health and long life of the guest of honor. Dr. Joseph D. Bryant presided, and speeches were made by Mr. Carl Schurz on "Dr. Jacobi as a Citizen," Dr. William H. Thomson on "Dr. Jacobi as a Physician," Dr. William Osler on "Dr. Jacobi as a Scientist," and President Seth Low of Columbia University on "Dr. Jacobi in Relation to Medical Education." A poem in honor of Dr. Jacobi's life and works, by Dr. S. Weir Mitchell, was read, and Dr. A. G. Gerster presented the guests with a copy of the "Festschrift," which contains contributions from fifty-three medical men of eleven nations. In his reply Dr. Jacobi said he wished he could proceed from man to man and in silence press their hands, for words did not suffice for the throng of feelings that swelled his heart. He reviewed the events and changes that had taken place in medicine during the nearly half-century that he had lived and practised in this country. Closing, he said that he did agree with some in believing that the moral tone of the profession has been lowered in these latter days when the spirit of trade is paramount. There have been jealousy, strife, and competition at all times, and medical men, like other men, are always human. The "good old times" is an ideal that, while its consummation is too far ahead or beyond the horizon altogether, is searched for backward. Doctors are now, as they have always been, what their time, their people, their surroundings make them. On Sunday the board of directors of Mt. Sinai Hospital presented him with a silver tankard bearing the following inscription: "To Dr. Abraham Jacobi, on the seventieth anniversary of his birthday, from the Mt. Sinai Hospital, in grateful recognition of forty years of devotion and fidelity, May 6, 1900."

Manuel Garcia, the inventor of the laryngoscope, celebrated in London, on March 17th, the ninety-fifth anniversary of his birth. He was born in Madrid, March 17, 1805. When he was a lad of seven, the family went to Naples. He had a fancy for the sea, but, in deference to his parents' wishes, studied for the operatic stage. His earliest appearance was in New York, where he was the *Figaro* of the first performance of "Il Barbiere" in North America. His physique was, however, too delicate for the exacting work of the stage, and returning to Europe he established himself at Paris as a singing-master, later on becoming a professor at the Conservatoire. Since 1850 he has resided in London. His demonstration of the laryngoscope was made before the Royal Society of London, in 1855, in a paper entitled "Physiological Observations on the Human Voice." The full significance of his discovery was not at first appreciated in England, but it was taken up and developed by Turck and Czermak in Austria.

The Hospital Ship "Maine" sailed from Southampton on her return voyage to the Cape on May 3d.

The Plague is reported to have appeared at Suakim in Egypt, and Malta has declared a quarantine of twelve days against all passengers from that country.

Cholera in India.—It is reported from Bombay that cholera is alarmingly virulent among the natives at the famine relief works, where there are fifty deaths daily from the disease.

The Late Drs. Mulheron, Eastman, and McFarland.—At a special meeting of the Broome County Medical Society, held at Binghamton, May 1st, resolutions were adopted regarding the recent deaths of Drs. Edward Mulheron, C. C. Eastman, first assistant physician of the Binghamton State Hospital, and S. F. McFarland.

Medical Missions.—One of the sessions of the Ecumenical Missionary Conference, recently held in this city, was devoted to a discussion of medical missions. Papers were presented by Drs. George E. Post, professor of surgery in the Syrian Protestant College at Beyrout; C. F. Harford-Battersby, of Lokoja, River Niger, West Africa; F. Howard Taylor, of the China Inland Mission; and O. R. Avison, of Seoul, Korea. Dr. Post said that the first aim of medical missions should be the relief of suffering from motives of brotherhood, and they can be planted where no other branch of evangelical work is possible, for they are founded on a need which is universal and felt by all. Every human being is sometimes ill, and, when not ill himself, may be anxious on account of the illness of some relative or friend. The physician therefore has immediate and welcome access to vast numbers who will not have any intercourse with other missionaries. "Missions of every Christian nation," he said, "have by an unerring instinct established and developed medical work, and every year sees a wider extension of its sphere and usefulness. Worldly people, who look askance at other forms of mission work, applaud medical missions and give of their substance to sustain them. Kings and rulers in Mohammedan and heathen lands have built hospitals and given means for their endowment. Far out on the picket line of evangelism heroic men and women gather around them such crowds as collected on the pathways where Christ was wont to walk. Fearless of death, they grapple with cholera, plague, leprosy, smallpox, scarlet fever, diphtheria, and other contagious diseases. In the tainted atmosphere of the dispensary they toil hour after hour to relieve the mass of misery. They go late to sleep, and often rise a great while before day to watch the crises of disease and operation. They remain in sultry, fever-stricken cities of the coast during the long tropical summer, if haply they save some of God's poor. They travel under the burning sun or through blinding storms to reach new centres and open up the way for a further extension of the work. The church which sends them knows the value of that work. The sick whom they cure have given proof of it." Dr. C. F. Harford-Battersby spoke of the possibilities of the missionaries of the future. He declared that the home boards should see to it that they sent only such men and women to the medical posts as were thoroughly fitted, and that no greater damage could be inflicted upon the work abroad than by sending out incompetent medical men. He insisted that the physicians should be earnest Christians, but argued against the idea that missionary doctors should be ordained ministers. He said a man should not be compelled to bear the worry and anxiety of both a medical and a mission station. Dr. F. Howard Taylor, of China, emphasized the need of both spiritual and physical qualifications. In speaking of the need of more medical missionaries, he said that he was the only doctor among twenty millions of natives. He spoke of the physical qualifications of the missionaries and said only men and women of sound body and mind were wanted. "We must have men of sound mind," he said. "We cannot use cranks, and as for men with fads, they had better remain where old fads pass and new fads appear, for in China we have no fads." Dr. Avison said that physicians are sent to the mission fields, first, to give medical care to the missionaries; second, to render that practical help to the sick natives which must always be extended by Christians to those in trouble; third, as a means of advancing evangelistic work by disarming prejudice and bringing the Gospel to the notice of many who, but for the evident benefits to be gained from the former, would decline to put themselves within reach of the latter; fourth, to train native physicians and nurses and prepare them to carry on the beneficent work which the missionaries have inaugurated. Other speakers were Dr. Franklin Pierce Lynch, of Congo; Dr. Frank Van Allen, of India; and Dr. Hepburn, the first American missionary to go to Japan, who went to the East as a medical missionary sixty years ago.

American Dermatological Association.—At the meeting just held in Washington the following officers were elected: *President*, Dr. F. J. Shepherd, of Montreal; *Vice-President*, Dr. D. W. Montgomery, of San Francisco; *Secretary*, Dr. F. H. Montgomery, of Chicago. New members elected were Drs. C. J. White, of Boston, and O. H. Holder, of New York. The next meeting will be held in Chicago in June, 1901.

A Test of the Mosquito Theory of Malaria.—On June 1st Drs. Sambon and Low, of the London School of Tropical Medicine, will begin a summer residence in a place in the Roman Campagna where æstivo-autumnal malarial fever is most prevalent. They will live in a small wooden building with windows and doors protected with wire screens, which will also be placed under the eaves and over the chimney opening. During the daytime, when the Anopheles, or malaria mosquito, does not bite, they will go about at will, but from a little before sundown to some time after sunrise they will keep strictly within doors, although still exposed to the air and soil emanations. Their drinking-water will be the same as that used by other residents of the Campagna, and in fact all their conditions of living will be the same, save only that they will be preserved from the stings of the night mosquitos.

The Society of the Alumni of the Sloane Maternity Hospital.—At the third annual dinner of this society, on Friday, April 27th, the following officers were elected: *President*, Dr. Samuel M. Brickner; *Vice-Presidents*, Drs. J. S. Waterman and L. A. di Zerega; *Recording Secretary*, Dr. L. E. La Fétra; *Corresponding Secretary*, Dr. H. S. Carter; *Treasurer*, Dr. W. V. V. Hayes; *Pathologist*, Dr. James Ewing.

Convention of Trained Nurses.—The third annual convention of the alumnæ of the training-schools for nurses of the United States and Canada was held on Thursday, Friday, and Saturday of last week at the Academy of Medicine in this city. About two hundred delegates were present. The president of the alumnæ was Mrs. Hunter Rodd. The address of welcome was delivered by Mrs. Cadwalader Jones.

Dentists for the Army.—There is now before the House of Representatives a bill to authorize the appointment to the army, under regulations to be prescribed by the surgeon-general, of dental surgeons to be attached to the different branches of the service, in the same manner that medical officers are now provided. The necessity for dentists in the army was manifested during the Spanish war and still more during the Tagal insurrection. The bill was recommended for speedy passage by the House committee on military affairs over two months ago, and although it has been on the calendar ever since it was reported, for some reason it has never been acted upon. The measure has the indorsement of army officers, dentists, and physicians throughout the country.

Tonsorial Antisepsis in Boston.—The board of health of Boston has issued an order enforcing cleanliness in barber shops in that city, its provisions being that "the place of business of all barber shops, together with all the furniture, shall be kept at all times in a cleanly condition. Mugs, shaving-brushes, and razors shall be sterilized by immersion in boiling water after each separate use thereof. A separate clean towel shall be used for each person. Alum or other material used to stop the flow of blood shall be used only in powdered form and applied on a towel. The use of powder puffs is prohibited. Every barber shop shall be provided with running hot and cold water. No person shall be allowed to use any barber shop as a dormitory. Every barber shall thoroughly cleanse his hands after serving each customer."

American Therapeutic Society.—In pursuance with a call for an American Therapeutic Society, issued by the Therapeutic Society of the District of Columbia, a meeting was held in Washington, May 1, 1900. The organization was effected and much enthusiasm displayed. The following were chosen as officers of the new society, which will become affiliated with the Congress of American Physicians and Surgeons, which meets in Washington every three years: *President*, Dr. Horatio C. Wood, of Philadelphia; *First Vice-President*, Dr. Howard H. Barker, of Washington; *Second Vice-President*, Dr. R. W. Wilcox, of New York; *Third Vice-President*, Dr. E. H. Long, of Buffalo; *Secretary*, Dr. Noble P. Barnes, of Washington; *Recorder*, Dr. William M. Sprigg, of Washington; *Treasurer*, Dr. John S. McLain, of Washington. The meetings of the American Therapeutic Society will be held annually; the next meeting being in Washington, D. C., on May 7, 1901.

Quarantine against Yellow-Fever Ports.—On May 1st the usual summer quarantine regulations went into effect at the port of New York. All passengers who cannot show certificates of immunity are to be detained at Hoffman Island under observation until five full days have elapsed since they left Havana or other yellow-fever port.

The International Dermatological Congress.—At the meeting of the American Dermatological Association, held in Washington in connection with the Congress of American Physicians and Surgeons, a committee was appointed consisting of Drs. J. Nevins Hyde of Chicago, Henry W. Stelwagon of Philadelphia, and T. Caspar Gilchrist of Baltimore, to represent the association at the International Dermatological Congress, to be held in Paris in early August, and to extend a warm invitation, in the name of the association, to the members of the congress to hold the next international meeting in this country, in New York. The committee was further instructed, in the event of the congress giving favorable response, to present the name, and urge the election, of Prof. James C. White, of Boston, the first president of the American Dermatological Association and an honorary member of the French and Italian dermatological societies, for the presidency of that congress.

College of Physicians of Philadelphia.—At a special meeting of the section on gynæcology held April 30th, Dr. Henry J. Garrigues, of New York, read a paper entitled "Periods in Gynæcology." At the conclusion of the meeting a reception was tendered Dr. Garrigues at the University Club. At a stated meeting held May 2d, Dr. J. C. Gittings read for Dr. James Ely Talley a paper entitled "Angio-neurotic Œdema of the Salivary Glands."

Navy Department, Bureau of Medicine and Surgery, Washington, D. C., May 5, 1900.—Changes in the medical corps of the United States navy for the week ending May 5, 1900. April 27th (by cable from Asiatic station).—Assistant Surgeon W. E. High detached from the *Manila* and ordered to the hospital. Assistant Surgeon D. G. Beebe detached from the *Yorktown* and ordered to the *Isla de Luzon*. April 30th.—Surgeon T. A. Berryhill detached from the *Monongahela* on reporting of relief, and ordered home and to wait orders. Passed Assistant Surgeon W. M. Wheeler detached from the *Vermont* May 3d, and ordered to the *Kearsarge*. Passed Assistant Surgeon

G. H. Barber detached from the *Kearsarge* and ordered to the *Monongahela*. Assistant Surgeon D. H. Morgan ordered to the *Vermont* May 3d. May 3d.—Medical Inspector J. C. Boyd detached from duty as assistant to bureau of medicine and surgery, Navy Department, and ordered to the *New York* as fleet surgeon of the North Atlantic station. Medical Inspector P. Fitzsimons detached from the *New York* as fleet surgeon of the North Atlantic station, and ordered to proceed home and wait orders. Surgeon J. D. Gatewood detached from the bureau of medicine and surgery, Navy Department, May 8th, and ordered to duty as assistant to bureau of medicine and surgery, same day. Passed Assistant Surgeon C. D. Brownell ordered to the naval training-station, Newport, R. I.

Obituary Notes.—DR. GEORGE FULNER, of Mechanicsburg, Pa., died on May 1st, at the age of seventy-five years. He was a graduate of the Jefferson Medical College in 1853.

DR. JOHN STOCKTON HOUGH, once a practising physician in Philadelpiha, later a resident of Paris and London, and for the last dozen years a gentleman farmer at Ewingville, near Trenton, N. J., died on May 6th, as the result of injuries sustained in being thrown from his carriage by a runaway horse.

DR. EDWARD E. VINCENT, who was surgeon in Peary's expedition to the arctic regions in 1893, was killed in Detroit on May 4th. He was on a bicycle, and in trying to escape from a buggy which was bearing down on him he was thrown under a rapidly moving trolley car.

Obituary.

LANDON CARTER GRAY, M.D.,

NEW YORK.

DR. LANDON CARTER GRAY died at his home in this city on Tuesday, May 8th, after a long illness. He was born in New York City on April 3, 1850. While in Columbia College he had serious trouble with his eyes, on which account he went abroad for a rest, and upon recovering he remained there, studying at the University of Heidelberg. Later he returned to this city and studied medicine, taking his degree from the Bellevue Hospital Medical College in 1873. After practising for a while here he removed to Brooklyn, where he remained until 1886.

Dr. Gray early turned his attention to the study of diseases of the nervous system, and speedily won for himself an enviable reputation in that line of practice. While in Brooklyn he was professor of neurology at the Long Island College Hospital Medical School, and was visiting neurologist to St. Mary's Hospital. He was one of the founders of the New York Polyclinic, and was the first occupant of the chair of nervous and mental diseases in that institution. He was at various times president of the Medical Society of the County of New York, the American Neurological Association, the New York Neurological Society, and the Society of Medical Jurisprudence, and was for many years chairman of the executive committee of the Congress of American Physicians and Surgeons. He was the author of a work on nervous and mental diseases, and was at one time a frequent contributor to periodical literature in this specialty.

Progress of Medical Science.

New York Medical Journal, May 5, 1900.

An Appeal for Systematic Treatment of the Consumptive Poor.—J. F. Russell advances the following propositions: That a large number of poor people suffering with pulmonary tuberculosis in a curable condition cannot go to sanatoria for treatment; that dispensary treatment is practicable, successful, and comparatively inexpensive; that curable pulmonary tuberculosis by dispensary treatment is confined to the early stage; that without organized effort such cases are difficult to attract for treatment, owing largely to ignorance of the disease and a belief that it is incurable; that the treatment covers a long period and patients require daily supervision; that the majority of dispensaries at present make no adequate provision for such treatment: that it is the duty of such dispensaries to organize classes for this purpose. The advantages to be derived from the general adoption of the plan of treatment outlined are as follows: Many are cured; all are benefited; all are educated and made capable of protecting and teaching others; all, laboring and idle alike, can come for treatment. In the end it will break down the deep-rooted belief that pulmonary tuberculosis in all stages or any stage is incurable, and lead to the application for relief early in the disease.

Management of the Hair during and after Fevers.—G. T. Jackson advises the careful combing of the hair during acute febrile conditions. The use of the fingers, if the brush is inadmissible, will prevent much of the snarling so often met with. He advises against cutting the hair and particularly against shaving the scalp. Only diseased hair will come out under the usual manipulations. Once or twice weekly we may use a pomade of a drachm of precipitated sulphur in one ounce of cold cream. This should be carefully worked into the scalp. Once in two or three weeks a shampoo may be given, and for this purpose the tincture of green soap is best. Just as little of the soap should be used as will make a good lather. A hose from the bath-room faucet should be used to wash the soap out. Pomade is then to be rubbed in.

Practical Points in Ether Anæsthesia.—C. F. Burrows advocates giving half an ounce of magnesium sulphate twelve hours before anæsthesia, with a rectal washing one hour before with a quart of warm water. Only milk should be given during this period, and nothing at all during the last four hours. Water may be used freely, but the bladder should be empty just before the ether is begun. He is opposed to the usual morphine and atropine injection. The rest of the article is an enumeration of the customary precautions agreed to by all anæsthetists.

Nitrous Oxide; Ether; Chloroform.—By S. Ormond Goldan.

What is the Basis of Modern Medical Conceptions?—By J. Homer Coulter.

Effeminate Men and Masculine Women.—By William Lee Howard.

Journal of the American Med. Ass'n, May 5, 1900.

Surgery of the Fifth Nerve for Tic Douloureux.—R. Abbe gives his experience with twenty cases, the Hartley operation being done five times, the Salzer four, and the Carnochan eleven. He advocates a thoroughly done Carnochan operation, with clean resection of the second branch to the foramen rotundum, for most bad cases, even when the first and third branches seem to share the neuralgic shocks. If one chooses to do the Salzer, then he advises a section of the zygoma turned down with skin, and a muscle splitting of the temporal rather than coronoid section. If the intracranial method is adopted, he advocates the simple section and limited excision of the second and third branches from the Gasserian ganglia to the foramina, and interposition of a piece of sterile rubber tissue. He sees no reason for believing that the resection of the Gasserian ganglion is necessary to the thorough severance of nerve connection with the brain. In most cases of inveterate tic a chronic neuritis exists, usually of the middle branch. Hence the quick and permanent cures which we are able to record by excisions anterior to the Gasserian ganglion.

The Early Diagnosis of Pulmonary Tuberculosis.—E. F. Wells does not recognize a pretuberculous stage. The disease is often preceded by anæmia, gastric and intestinal disorders, but such states are purely accidental and not premonitory. The beginning of the attack must be coincident with the implantation and parasitic development of the bacillus of tuberculosis. Special attention must be given to the possible occurrence of cough, expectoration, hæmoptysis, thoracic tenderness, fever curve, gastric symptoms, nutrition, blood changes, and pulse characteristics. Tuberculin may be used, but a negative result with this agent is also of value, for it enables us to affirm that not only is the suspected pulmonary affection not tuberculous but that there are no latent pulmonary foci and that tuberculosis does not exist in other parts of the body. In a doubtful case the *x*-ray may tip the balance for or against the probability of tuberculosis being present. This is especially true when thoracic soreness or pain is present, the *x*-ray revealing restricted movement of the diaphragm upon the affected side.

Natural History of Tic Douloureux, with Remarks on Treatment.—C. L. Dana gives a table showing the duration and treatment of forty-two cases. He believes that the early forms, such as he calls a "migrainous tic," occurring usually in women, should not be operated on. There are some exceptions to this, however, in which tic douloureux occurs in early life, due to a distinct local disease, such as an inflammation of the nerve, or of the antrum, or of the jaws. In true tic of the degenerative period of life, prompt medical treatment will usually control the disease and operation is rarely indicated at first. In tic which has lasted three or more years, it may be safely said to the patient that medical treatment may produce a remission, and that this remission may be repeated, and that eventually the disease may be controlled by repeated treatments, but this is not at all sure. It may be said here too that a minor operation may give more relief than medical treatment. The question of prescribing major operations must be decided in each individual case, on its special merits.

Further Observations on the Treatment of the Abdominal Viscera through the Colon.—F. B. Turck describes the method of forcing hot or cold air into the bowel, a double tube allowing of escape. This hot-and-cold-air plan through its stimulant power produces what may be styled "gymnastics of the colon." By other methods he executes massage of the colon, secures colonic electrization, effects direct medication of the colon, and also introduces alimentary substances. The varieties of tubes employed are figured in the original article. Turck considers colonic lavage to be of especial service in typhoid fever. While the length of the disease remains the same, there is a marked diminution in the lassitude, delirium, pyrexia, and other constitutional expressions of the typhoid poison.

Protocols of Microscopical Examinations of Several Gasserian Ganglia.—By L. F. Barker.

Pathological Report of Two Gasserian Ganglia Removed by Dr. Cushing.—By W. G. Spiller.

Operation for Exstrophy of the Bladder by Sonnenberg's Method.—By J. R. Eastman.

Vision and Color Perception for Railway Service.—By W. C. Bane.

The Sight and Hearing of School Children.—By H. V. Würdeman and Frank Alport.

Medical News, May 5, 1900.

The Medical School of the Future.—H. P. Bowditch sums his conclusions as follows: (1) A medical school of the first rank will, in the immediate future, be connected with a university, but will be independent of university control as to methods of instruction and the personnel of the teaching body. (2) It will offer advanced instruction in every department of medicine, and will therefore necessarily adopt the elective system of some sort. (3) The laboratory method of instruction will be greatly extended, although the didactic lecture will still have its place. (4) The work of the students should be so arranged that their attention will be concentrated upon one principal subject at a time. (5) Examinations will be so conducted as to afford a test both of the faithfulness with which a student performs his daily work and of his permanent acquisition of medical knowledge.

The Present Status of Rectal Surgery.—By Joseph M. Mathews.

Perforating Duodenal Ulcers.—By Robert F. Weir.

Truth in Medicine.—By E. G. Janeway.

Philadelphia Medical Journal, May 5, 1900.

Some of the Physiological Methods and Means Employed by the Animal Organism in its Continual Struggle against Bacteria for Maintenance of Life and Health.—S. J. Meltzer maintains that in the struggle against bacteria the defence of the body is not carried on by any single element. Neither the body-fluids, nor the leucocytes, nor the other body-cells alone can claim exclusive merit, but each does its share. Further, in health at least, the actual defence is carried on not by a single tissue, or a single function, but by concerted action of several tissues and functions, by the working of a mechanism. As to the plan of defence the writer says the aim is to reduce greatly the number of bacteria by mechanical methods, and then to destroy the remnant by some biological means. The mechanical methods are: barricading the entrance, throwing out again the landed bacteria, or carrying them to the place of destruction. He then suggests two new factors which he believes to be capable of assisting the work of the destruction of bacteria within the body, viz., the process of plasmolysis, and the vibrating effect of the heart impulse. The conclusions are that the regular, moderate invasion of bacteria into the interior of the body, so far from being an infection—an evil—is a means of immunization; latent infection, therefore, is not a foe to normal life or health, but is rather a confederate in defence of it.

On Recent Advances in our Knowledge Concerning the Etiology of Malarial Fever.—William Sydney Thayer reviews the investigations undertaken in recent years which have resulted in the discovery of the part taken by certain mosquitos in the spread of malaria. In malarious districts around Baltimore and in Virginia and North Carolina he has found several varieties of Anopheles. As to the practical deduction from this discovery he says that there is reason to believe that if in any given region (1) proper measures for treating the spring relapses of malaria were adopted, and (2) efficient measures for destroying the dangerous mosquitos in their larval stage could be carried out, the prevalence of malaria might be materially controlled. The importance to the community of insisting upon the proper treatment of all cases of malaria cannot be too strongly emphasized, for an infected patient in a malarious district is a source of danger to those about him. Before we can attempt, however, to carry out intelligently measures to destroy the mosquitos we must first determine definitely the dangerous species of mosquitos in this country, and must study their distribution, their habits, and their breeding-places.

Nephrectomy for a Large Aneurism of the Right Renal Artery, with a Résumé of the Twelve Formerly Reported Cases of Renal Aneurism. — By W. W. Keen.

President's Address at the Decennial Convention for the Revision of the United States Pharmacopœia.—By H. C. Wood.

Adaptation of Pathogenic Bacteria to Different Species of Animals.—By Theobald Smith.

Bacterio-Therapeutics, with Especial Reference to Tuberculosis.—By Edward R. Baldwin.

The Sociological Status of the Physician.—By Clarence John Blake.

The Relation of Bacteriology to Medicine.—By Richard C. Cabot.

The Medical School of the Future.—By H. P. Bowditch.

Medical Press and Circular, April 18 and 25, 1900.

Case of Persistent Jaundice in which an Exploratory Operation was Performed.—E. F. Eliot operated on a patient who for four and a half years had been jaundiced. A tumor of the gall bladder could be made out through the abdomen. The gall bladder was found distended and a pint and a half of thick black gelatinous bile was drawn off. After incision the mucous lining of the organ was found covered with a gritty substance, which was scraped off and the cavity was packed with iodoform gauze. Death occurred on the sixteenth day from acute enteritis, supposed to have been caused by the gritty matter and altered bile entering the gut after so long a period of freedom from bile.

The Pathology and Treatment of Pneumonia.—Nathan Raw considers pneumonia a self-limited disease, which can neither be aborted nor cut short by any known means. It may terminate favorably without medicines; still an immense amount of good can be done by the physician. It is essential to control the fever by sponging with iced water. Cardiac failure is the great stumbling-block. Here alcohol should be given up to twelve ounces of good brandy in twenty-four hours. In the majority of cases alcohol is not required in pneumonia. Strychnine up to $\frac{1}{12}$ grain hypodermatically will often have a miraculous effect upon the heart. The author's experience with oxygen in sixty-five cases has not been favorable. Saline injections are still in the trial stage.

Myotonia Congenita. — Leonard Guthrie reports the case of a boy aged ten and one-half years, who for a year had presented symptoms. The thumbs were turned in and a tonic spasm of the hands resembled that of tetany. The grasp of objects was slow and awkward and he could not let go quickly. The spasm was more marked after rest. The gait was jerky, and he did not bring his heels fully to the ground. Running was easier than walking. Tonic contraction persisted during sleep.

The Pathology of Acute Myelitis.—Mayer relates the history of seven cases in which the microscope showed degeneration of the white and gray substance of the cord. The differences in appearance between the "perforated" and "infiltration" forms are given.

The Treatment of Talipes Equino-Varus.—Abstract of a paper by R. A. Hibbs, of New York, on lengthening the tendo Achillis.

Three Lectures on the Surgery of the Stomach. —By Mayo Robson.

Protargol versus Nitrate of Silver.—By John Moir.

British Medical Journal, April 28, 1900.

Inoculation with Typhoid Vaccine as a Preventive of Typhoid Fever.—R. W. Marsden reports an experiment with the typhoid vaccine in the Monsall Hospital, Manchester. Of the twenty-two nurses in the hospital, fourteen were vaccinated, four had had typhoid fever, and four refused to submit to the experiment. During previous seasons the number of nurses who were attacked with the disease was: 1895–96, three; 1896–97, two; 1897–98, eight; 1898–99, six; during the season of 1899–1900 following the vaccinations none of the nurses suffered an attack. One of the nurses had an ephemeral fever in January, lasting only a few days. Assuming that this ephemeral fever was a genuine attack of typhoid, the author thinks its very mildness and evanescent nature would speak strongly for the contention that there is "an increased power of resisting infection by living typhoid bacilli," and certainly the occurrence of such attacks would never be a cause of anxiety.

A Family with Addison's Disease.—Robert A. Fleming and James Miller report five cases of an affection presenting all the clinical features of Addison's disease, occurring in a woman and her four children, aged from two and a half to seven years. The mother, a woman twenty-eight years old, showed all the typical clinical features, including pigmentation of the mucous membrane of the mouth and lips, while the children, in order of age, demonstrated the same phenomena in decreasing severity and distinctness. The moles, placed so prominently in the list of important clinical features by Addison, Greenhowe, and others, were specially characteristic of this family group.

Antityphoid Vaccine.—T. Wilson says that his experience of the use of the antityphoid serum of Professor Wright, of Netley, among troops in South Africa, is that if it does not render the typhoid bacilli innocuous, it at least will modify favorably an attack of typhoid fever. Before making inoculations he had the men abstain from alcohol for three days and take an aperient on the morning of the fourth day, and on the morning of the fifth day be inoculated.

On the Value of the Agglutination Test as a Means of Diagnosis of the B. Typhosus from Coliform Organisms.—By W. H. Horrocks.

Abstract of a Report on the Acoustic Principles Affecting the Conduction of Sound by the Bones of the Head.—By Albert A. Gray.

Men and Horses Partially Incapacitated by the Bites of the Simulium (Sand Fly), in a Hampshire Wood.—By James Cantlie.

Preliminary Note on a New Quantitative Method of Serum Diagnosis.—By Richard T. Hewlett and Sydney Rowland.

Epidemic Laryngitis and Tracheitis among Troops on the Voyage to South Africa.—By Charles Gibbs.

"Growing Pains" as a Symptom of Rheumatism.—By E. M. Brockbank.

Failure of Respiration during Ether Administration.—By G. P. Shuter.

A Case of Intestinal Obstruction Caused by a Band and an Enlarged Uterus.—By C. Hamilton Whiteford.

On Some Practical Points in Conducting the Administration of Anæsthetics.—By H. Bellamy Gardner.

A Clinical Lecture on Bulbar Paralysis and its Counterfeits.—By G. A. Gibson.

Report of a Case of Tetanus Treated Successfully by Serum.—By G. Lloyd Roberts.

The Lancet, April 28, 1900.

A Case of Pernicious Anæmia Treated by Anti-Streptococcic Serum.—The treatment of a case is thus described by W. Elder: the patient, a man aged thirty-five years, was admitted to hospital February 3d, and commencing one week later his mouth was thoroughly washed and brushed with an antiseptic mouth-wash and he was given gr. v. of salol and gr. xv. of salicylate of bismuth internally every six hours. Gr. x. of anti-streptococcic serum was at first injected into the subcutaneous tissue over the dorsum ilii every second day. At the first two injections, on account of a fault in the syringe, he received only about 8 c.c., but afterward 10 c.c. was given on each occasion except on February 9th, when he got only 5 c.c. From February 3d till March 19th he received in all eighteen injections of the serum, and the antiseptic treatment was continued all through. With the exception of a hypnotic occasionally when his nervous symptoms required it, and a dose of castor oil or cascara sagrada for his constipation, this was the only medicinal treatment. He got none of the usual remedies for anæmia—neither iron nor arsenic nor bone marrow. On March 20th (fifty-two days after his admission and forty-five days after the commencement of treatment) his blood had practically reached normal.

Strychnine as a Factor in Causing Cerebral Hemorrhage.—L. Grant sounds a note of warning against the very prevalent practice of the public, which consists in taking, whenever a feeling of depression is felt, patent nostrums or even officinal preparations which contain strychnine. This drug is a cardiac, vasomotor, and gastric stimulant, and may so brace the system as to lead one to overwork. Moreover, it may show a cumulative action. All of these effects combine to bring an unusually severe strain on the vessels, and in patients who are the least atheromatous may be the cause of some vascular break-down. A case of apoplexy narrated by Grant tends to support this view. This particular patient was in the habit of taking syrup of the phosphates of iron, quinine, and strychnine, together with bicarbonate of soda for a morning "fizzing" drink.

On Cysts of the Breast; their Relative Frequency, Diagnosis, and Treatment.—From a careful analysis of two hundred and forty-two cases of breast disease, T. Bryant has come to the following conclusions: Cysts of the breasts are far more common than they are generally believed to be. They are chiefly found in women during the same period of life as that in which cancer is met with; they are mostly quite amenable to local treatment without the sacrifice of the breast gland in which they are situated. There is no reason to believe that women who have these cysts are more prone to cancer than those who have them not. The article is an elaboration along the lines indicated by the foregoing propositions.

An Experimental Inquiry into Scurvy.—F. G. Jackson and V. Harley believe that the view requires modification which attributes scurvy to the effect of want of fresh vegetables or lime juice. They base their opinions upon a study of the sanitary records of various arctic expeditions and upon the results of dietetic experiments upon monkeys. They conclude that the presence of the vegetables or lime-juice is not alone sufficient for the prevention or cure of scurvy, and that we must regard the condition of the food in general, and especially the state of preservation of the meat, as the essential factor in the etiology of the disease.

On the Value of Abdominal Distention as an Indication for Exploratory Laparotomy in Intestinal Obstruction.—J. J. Waddelow reports the case of a man, aged fifty-four years, with complete intestinal obstruction lasting seven days, and fecal vomiting lasting two days. The onset of the disease took the form of an acute biliary colic, but the exact cause of the obstruction was unknown. Abdominal distention was present, but, as it did not progress, operation was deferred and reliance was placed on laxative enemata. Recovery ensued.

Clinical Lecture on a Case of Internal Derangement of the Knee Joint.—By E. Owen.

Inversion of the Myomatous Uterus.—By W. Roger Williams.

Endoscopy of the Œsophagus and Stomach.—By G. Kelling.

Berliner klinische Wochenschrift, April 9 and 16, 1900.

Some Exceptional Points on the Diagnosis and Therapy of Pulmonary Tuberculosis.—H. Senator enumerates in this article some of the measures which may be utilized for the relief of various symptoms. For hæmoptysis he suggests the feasibility of giving large doses of gelatin internally. This remedy has been shown to have the power of increasing the coagulability of the blood. He also commends the ligature of the limbs and inhalation of astringent agents. For the fever, he has obtained the best results with phenacetin, lactophenin, citrophen, and pyramidon. For night sweats, pencilling of the skin with formol has frequently afforded relief.

Contribution to the Apparatus Therapy in Affections of the Central Nervous System.—P. Jacob states that there are three classes of apparatus capable of employment in maladies of the central nervous system. The first class is designed to replace the function of muscles which are completely powerless; the second supports the action of muscles which are only partially disabled, while the third is designed to reinforce the action of muscles which are in themselves normal but upon which additional work is thrown owing to the incapacity of muscular congeners. Illustrative cases are given under these respective headings.

Disturbances in the Filtration Power of Diffusely Inflamed Kidneys.—G. Köresi and W. Róth-Schulz give the following conclusions, based upon their own observations: (1) In parenchymatous nephritis the filtration power of the kidneys is lessened in proportion to the severity of the case. (2) In the contracted kidney this power remains more or less normal, sometimes completely so. (3) The same holds true of the kidney of heart disease so long as compensation does not fail. (4) The congested kidney occupies in this respect a transition stage between chronic parenchymatous nephritis and the contracted kidney.

An Unusual Case of Acute Anterior Poliomyelitis of Infectious Origin Occurring in an Adult.—K. Gumpertz reports the case, which occurred in a young man aged twenty-three years, who after a slight illness of a few days, during which he complained of general malaise, dulness, anorexia, and fever, presented the typical paralytic symptoms of anterior poliomyelitis, which gradually improved in the course of the following three months. As he had been exposed to typhoid infection, it was concluded, after a careful study of all the factors in the case, that this was the nature of the infectious agent.

Experiences from Preliminary Examinations for Admission to the Institutions for Pulmonary Therapy in Grabowsee.—By K. Brandenburg.

A New Method of Examination of the Fundus of the Eye for Erect and Inverted Images with a New Electric Eye Mirror.—By H. Wolff.

The Plague in the Light of Recent Research.—By P. Frosch.

Cell Division.—By W. Flemming.

Münch. med. Wochenschrift, April 17 and 24, 1900.

On the Diagnosis of Changes in the Lungs due to the Inhalation of Dust in Industrial Occupations.—Professor Bäumler calls attention to the relative frequency in some localities of an affection of the respiratory organs simulating phthisis, but which runs a rapidly favorable course. There is usually a history of many years of respiration of dust in the patient's occupation. Cases in which there is no accompanying tuberculosis must be distinguished from those in which an occasional dust effect is added to an already existing tuberculous process.

Glycosuria in Vagrants.—Hoppe-Seyler has remarked the frequency with which glycosuria occurs in those who have led an irregular, wandering life, being poorly nourished and having undergone hardship. Five instances are recorded. They are not true cases of alimentary glycosuria, but passing disturbances in the carbohydrate metabolism, together with disturbances of circulation, interstitial and parenchymatous diseases of the liver and pancreas, play a rôle.

Late Diphtheria in the Nasal Pharynx.—Eschweiler relates a case, and believes the condition more frequent than literature indicates. Many instances of supposed primary rhinitis fibrinosa diphtheritica do not begin in the nose but in the nasal pharynx. In chronic cases the naso-pharynx must be carefully cleansed by the physician, and after a cure is effected any adenoid growths present must be removed to prevent recurrence.

Upon the Causes of Hypertrophy of the Heart in Kidney Diseases.—August Bier believes that hypertrophy of the heart and the changes in the blood-vessels which accompany it are purely compensatory effects without which prolonged existence would not be possible. This position he goes on to justify and explain by physiological and physical conditions and facts, and to show that the changes are useful and necessary to the economy.

Mucous Colic and Membranous Catarrh of the Large Intestines.—R. Schütz states that authors do not agree upon questions of etiology in colica mucosa and enteritis membranacea, and he presents four instances, all in women, by which he hopes to throw some light on the distinctions to be made between them.

Case Reports of Tendon Rupture.—Oscar Vulpius gives notes of a number of cases observed in which the extension apparatus of the forearm or other muscles were involved, and quotes the literature of rupture of the quadriceps tendon.

Muscle and Tendon Laceration of the Biceps Brachialis.—Ernst Pagenstecher reports upon two new cases, and refers to his previous article in the *Berliner klinische Wochenschrift*, No. 16, 1895.

The Aggregate Occurrence of Sebaceous Follicles upon the Mucous Membrane of the Mouth in Man.—By Dr. Suchannek.

The Study of Internal Medicine in France, England, and Germany.—By L. R. Müller.

Clinical Observations upon Ichthalbin in Diseases of the Intestines.—By Dr. Rolly.

Surgical Suture and Ligature, and Ligature Material.—By H. Braun (conclusion).

New Contributions to the Pathology of the Œsophagus.—By W. Fleiner.

Laryngeal Affections in the Course of Diabetes.—By Otto Leichtenstern.

On the Detection of Tubercle Bacilli in the Fæces.—By J. Strasburger.

On the Psychology of Voice Fatigue.—By Max Breitung.

Deutsche med. Wochenschrift, April 12 and 19, 1900.

Epidermolysis Bullosa Hereditaria.—Otto Michaelsen reports the case of a young woman seventeen years old, who presented herself for the treatment of blisters appearing on the hands and feet, accompanied with great pain and profuse sweating. She was of healthy appearance, and the internal organs were found on examination to be normal. The palms of the hands were wet with perspiration and were covered with numerous blisters, the size of a pinhead to that of a walnut. Some had collapsed, their integumentary covering lying in fine creases on the base. There was no scar formation on the skin, and the nails were normal. On the soles of the feet, and especially between the toes, there were many excoriations due to the maceration of the integument, and there were also numbers of blisters of various sizes, like those on the hands, which were very tender on pressure. The patient had suffered from this trouble since her earliest childhood, the bullous formation appearing first on the feet and later (about the twelfth or thirteenth year) on the hands. The affection was always worse in warm weather and was intensified by hard work, especially harvesting. There were no lesions either preceding or accompanying the blisters which suggested in any way an urticaria. An inquiry concerning the girl's antecedents revealed the fact that she had inherited the disease from her father and he from his mother. In all twelve persons, four males and eight females, in this family suffered from epidermolysis. There were four generations of sufferers, the patient under observation being in the third, the children of her sister constituting the fourth.

Ovarian Cyst Impeding Labor Removed by Posterior Colpotomy.—A. Hesselbach reports the case of a woman thirty-one years old, who had had five normal pregnancies. During the latter half of the sixth she suffered severely from sacral pains. Labor began but progressed slowly, and examination revealed a cystic tumor between the rectum and vagina, projecting into the latter in horseshoe shape partially encircling the child's head. As the tumor offered an absolute obstruction to delivery, and craniotomy was out of the question, removal of the cyst was the only alternative. The vagina was incised and the tumor dissected out with the finger, and finally the entire hand was introduced. It was impossible to replace the cyst, so it was evacuated through a slight puncture and the sac was drawn as far as possible into the vagina. Delivery was then effected by means of the forceps, the vagina was rapidly cleansed as well as it could be, and the sac was pulled down so as to bring the pedicle within reach. This was ligatured and incised. The child was slightly asphyxiated, but was easily resuscitated. The woman made a good recovery.

Mobility of the Heart in Change of Position of the Body.—Determann finds that in general the heart moves 2½ cm. to the left and 1 cm. upward when a healthy person lies on the left side, and moves about 1½ cm. to the right and ½ cm. upward when he lies on the right side. In some cases, however, the organ may be displaced 6½ cm. to the left or 4 cm. to the right without causing any distressing symptoms. The greatest change of position of the heart in varying positions of the body occurs in the emaciated, those who lead a sedentary life and whose muscles are flabby. In many persons who cannot lie on one or the other side because of palpitation, pain, and other distressing symptoms, this increased mobility of the heart exists. Occasionally the symptoms are even more severe—a rapid and irregular pulse, marked oppression, etc. The treatment of this condition consists, first, in improving the general health by means of a generous diet, arsenic, iron, hydrotherapy, etc. The abnormal sensitiveness of the heart, of which many of these patients complain, may be relieved somewhat by the bromides.

The Indication for a Mastoid Operation.—Richard Müller says that every case of acute middle-ear suppuration which, in spite of proper treatment, continues for two weeks in undiminished intensity without showing any tendency to improvement, must be treated by opening of the mastoid antrum, even when there are no threatening symptoms present. This, he says, is not to be taken too literally and absolutely, for while it is a rule which one may always follow with safety, yet in certain cases one might be justified in delaying operation a little beyond the limit mentioned.

Unusual Displacement in Fracture of the Leg.—Reichenbach reports a case of fracture of the leg in which the upper fragment of the tibia was displaced to the inner side of the lower and in the same frontal plane, the upper portion of the fibula being in front of the lower and in the same sagittal plane.

Syphilis of the Lingual Tonsil and its Relation to Atrophy of the Follicular Glands.—By W. Lublinski.

A Case of Multiple Melanosarcoma with Peculiar Complications in Both Eyes. — By A. Wagenmann.

Bacilli Resembling Tubercle Bacilli in Gangrene of the Lungs.—By Lydia Rabinowitsch.

A Case of Isolated Paralysis of the Suprascapular Nerve.—By A. Hofmann.

Oxyphile Bacilli in the Stools of Nurslings.—By H. Finkelstein.

The Toxicological Position of Raphides.—By L. Lewin.

The Treatment of Obesity.—By Wilhelm Ebstein.

The Growth of Bacteria.—By Feinberg.

Archives of Pediatrics, May, 1900.

Tuberculosis of the Female Genital Tract in Children.—Martha Wollstein reports the case of a little girl aged two years, who died on Randall's Island. At the autopsy there was found marked purulent bronchitis of both lungs, and discrete miliary tubercles were scattered throughout the substance of all the lobes. The peritoneal surface of the rectum was covered with exudate and studded with tubercles. The left ovary was normal, but the right ovary was covered with a layer of cheesy material extending into the cortical layer, where there were many miliary tubercles which had undergone cheesy degeneration and did not involve the medulla. The mucous membrane of both Fallopian tubes was converted into a cheesy mass. There were two abscesses, one in the right broad ligament and one in the cul-de-sac of Douglas. No clinical history of the case could be obtained.

The Ambulatory and Hospital Management of the Gastro-Intestinal Derangements of Infancy in the Summer Months among the Poor of Large Cities.—Henry Koplik emphasizes the fact that the gastro-intestinal diseases, both mild and severe, are in the vast number of cases infectious, and urges scientific examination of infants' diarrhœal movements before treatment is inaugurated. Treatment is not so laborious in the simple diarrhœa of the coli variety as in the severer forms of streptococcal infection. The ambulatory method of treatment (dispensaries and out-door services) of summer diarrhœa is far more satisfactory than the hospital or sanitarium method. The author gives a long list of reasons why this is the case. A camp or colony of huts in the country, with arrangements for plenty of air and light, would be an ideal hospital for the treatment of sick infants.

The Care of Premature Babies in Incubators.—James D. Voorhees gives the results of the use of the incubator in the Sloane Maternity in two years' time, one hundred and six babies having been treated. Twenty-nine died within four days, all but three of these being more or less asphyxiated at birth. Seventy-seven survived the first four days. Of these thirteen died in the hospital. The condition of three was poor at the time of discharge, fair in twenty-four, and very good in thirty-seven; thirty-two were above their birth weights and fifty-seven were gaining in weight. Three months later, thirteen were reported as having died, twenty-eight were unheard from, and twenty-one were found to be alive and doing well. The author gives full description of incubators and methods of treatment.

The Application of a Rational Surgical Technique to the Removal of the Foreskin.—By Leonard Woolsey Bacon, Jr.

Occasional Periscope of Teratology.—By J. W. Ballantyne.

Archiv für Derm. und Syph., vol. i., Nos. 2 and 3, 1900.

The Favorable Effects of X-Rays in Lupus.—Himmel makes a study of the results of Roentgen-ray medication in lupus and the side effects upon intact skin and appendages. He finds that the relatively harmless inflammatory reaction produced upon the skin by the action of the rays, as soon as the latter have penetrated to the subcutaneous cellular tissue, acts favorably upon the lupus infiltration and destroys the bacilli and brings about healing of the skin. The *x*-rays are, therefore, of benefit, but naturally do not prevent new bacilli from lodging here and producing new nodules.

Endothelioma of the Skin.—Eduard Spiegler presents with several portraits and microscopic drawings a review of the literature of endotheliomas of the skin or rare forms of skin tumor. The case represented by a colored lithograph is a striking one from the great number of tumors present and their peculiarity of formation. Histologically, they resemble sarcoma at times and become malignant in course, though usually they appear to be clinically innocent.

A Method of Rapid Staining of the Gonococcus.—Uhma gives a way of rapidly coloring Neisser's diplococci in fresh unfixed preparations. The object-glass is moistened with a one-half to one-per-cent. neutral red solution (Grübler) and dried. A small drop of pus is placed on a cover-glass and laid upon the previously prepared object-glass, pressed down, and examined. The gonococci are the first morphotic elements to appear colored.

The Treatment of Some Instances of Blennorrhœa of the Eyes with Largin.—Almkvist gives a brief account of this newer method of treatment, in which he employs a two-per-cent. solution of largin.

Much seems to depend upon early diagnosis and prompt beginning of treatment, just as is the case with silver solutions. When the cornea is not yet implicated, the results are favorable.

Epidermolysis Bullosa.—Rona describes two new instances, presenting as after-effects atrophy of the skin, cysts of the epidermis, and trophic lesions of the nails. As to the identity of this form with the hereditary form described by Goldscheider, the writer is not at present willing to commit himself.

Bulletin de l'Académie de Médecine, April 17, 1900.

Post-Mortem Diagnosis of Canine Hydrophobia.—M. Nocard instituted a series of investigations in order to ascertain whether the lesions of the plexiform ganglia of the pneumogastric were always present in rabies, as stated by Van Gehuchten and Nelis. The first dog had rabies after seventeen days of incubation, and was killed seventeen hours after the first appearance of the symptoms. The cells of the ganglia were absolutely unaltered. The same results were found in the case of a second dog, killed in the first attack after twenty-three days of incubation. The third dog, seized with madness after thirty-two days of incubation, had marked lesions of the ganglia. Half the cells were destroyed, and the whole of each ganglion was infiltrated with leucocytes. A fourth dog had very slight lesions. On the whole, the author thinks that when the results are negative the dog cannot be considered to have been free from suspicion of rabies, and the persons bitten should be taken to the Pasteur Institute.

Goat Vaccine among the Kabyles.—M. Hervieux reports the results of Fargin's experiments with this vaccine in a country where bovine vaccine is most difficult to obtain. The result was in every respect equal to that obtained by cowpox, and the author recommends its use in that country, where cows are so rare that in seven months' time Fargin never saw one, and never had beef to eat.

Correspondence.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

The Progress of the War.—Since I last wrote Lord Roberts has carried out some careful movements for clearing the Boers from the southeastern part of the Orange Free State. When this district is quiet, he will be able to make a forward movement with much less risk to his communications. But everything proves that Roberts is not going to be in a hurry. He is quite aware that a quick end to the war has been expected of him, but he is equally aware that if he gets into "an entanglement" (as the British euphemism goes), there is no one to relieve him. Therefore, he intends to be perfectly sure that his force is properly equipped, adequately mounted, suitably clothed, attended by all necessary medical men, and provided with an unfailing supply of good food before he starts. Humanity and prudence alike dictate his proceedings, and I confess that I am a little astonished to find otherwise clear-headed critics of the campaign holding him to be dilatory. A little medical knowledge would have saved them from rash judgments. Besides Roberts' manœuvres between Bloemfontein and the Basuto frontier, though primarily undertaken to preserve his railway communication with Cape Town, may at any moment become actively offensive and even decisively successful against the Boers; for while the British cavalry drive them from Dewetsdorp and Wepener northward, it may be possible for another force to cut off their retreat at Ladybrand. In the course of the next few days it will be decided whether the Boer forces still left south of Bloemfontein are surrounded and made to surrender, or prove able to escape and re-form between the English and Pretoria. There are many loopholes in Roberts' projected circle, and with their great mobility and perfect knowledge of this country I shall not be surprised if the Boers burst through it; but I do not believe that either event will have any rapid impression on the progress of the war. For, whatever happens, the road to Pretoria will be strongly held, and Roberts will be resisted all along the line. The medical officers of the British army, under whose care many Boer sick and wounded prisoners have now passed, all state that the spirit of the Boers is quite unbroken, and that obstinate fighting must be expected of them to the end; and what the patient while he is really ill tells the medical attendant is apt to be true.

Sir William MacCormac and Mr. Treves have, I learn, both arrived back in England. During their four months' service with the army they rendered excellent help to the Royal Army Medical Corps, their moral support being as valuable as their scientific aid.

The Imperial Yeomanry Hospital.—The staff of this hospital, which arrived in Cape Town early in March, have been ordered to Deelfontein, which Lord Roberts has selected as the first site of the hospital. This place, which is not marked on many maps, is about four hundred miles from Cape Town and thirty miles south of De Aar Junction. There is no town, the only buildings being the railway station, the general store, and a pumping-house with machinery capable of raising a practically unlimited amount of pure water from a deep well. As De Aar Junction is the place where the railway lines to Bloemfontein and Kimberley diverge, it would seem that from every point of view the spot chosen for the Imperial Yeomanry Hospital is a good one. However extended Lord Roberts' front may be, the hospital will be directly behind it; it also will be a convenient stopping-place for any sick and wounded following either upon Lord Methuen's operations on the Vaal River or upon the long-expected relief of Mafeking; being two days' train inland, the sufferers will be saved much of the weary railway journey which has been so trying to the patients brought down to the base hospitals at Wynberg; and lastly, Deelfontein is a pleasant and healthy place with the splendid water supply to which I have referred. It should be added that the place now possesses a newspaper, for Mr. Newland-Pedley, the dental surgeon to the Imperial Yeomanry, has started a journal which is called *The Devil's Fountain.*

The Effect of Typhoid Fever and Privation in Ladysmith.—In Ladysmith, as was said in these columns early in the investment of the town, none of the factors were absent that should make for the development and spread of enteric fever. The report of the army medical department of Great Britain for 1898, which has only just been given to the public, but which presumably fell under official eyes at least a year ago, mentions the place as one where enteric fever is constantly prevalent—a fact which makes its selection as a base for military operations appear rather unfortunate in medical eyes. Add to this endemicity the circumstances of a protracted siege, and you get a position in which it was safe to prophesy that the worst scourge of armies would be severely felt. And now we know the figures. The siege commenced on November 2, 1899, when the effective strength of the garrison was 572 officers and 12,924 men. The effective strength at the end of the siege, that is, on March 1, 1900, was 403 officers and 9,761 men, the majority of whom were, however, only "effective" in name. When the town was relieved, 154 officers and 2,624 men were in hospital. The total admissions to hospital during the siege numbered over 10,000, and during the last six weeks the deaths numbered 8 per diem, chiefly from enteric fever. About 560 persons (officers, men, and followers all told) died of disease during the siege, the number of wounded being almost the same. But of the wounded only 8 officers and 51 men died; while 18 officers and 193 men were killed outright in action. From these figures it will be seen that enteric fever was the worst foe encountered by the Ladysmith garrison.

The American Hospital Ship, the *Maine*, arrived in England on April 23d, taking with her one hundred and fifty-one men and twenty-one officers. Nearly all the patients were convalescent by the time the ship reached Southampton, and Lady Randolph Churchill was able to announce an excellent voyage with favorable weather all the way.

Severe enteric fever has broken out in Kimberley.

Dr. Scholtz, a well-known physician in Cape Town, has been appointed physician to the Langman Hospital. This, the second largest of the hospitals supported in South Africa by private enterprise, is stationed at Bloemfontein.

Assistant-Surgeon Jackson, a prisoner in Pretoria, has died there from dysentery. There are, by the way, some ominous stories current in Lord Roberts' army concerning the medical and sanitary care that is received by the numerous British prisoners in Pretoria. These can be but stories, for no one has come through from Pretoria for many weeks now. A few released prisoners, and Mr. Winston Churchill, and one or two officers who escaped have narrated their experience and describe the treatment received by the prisoners, as it came under their personal knowledge, to be on the whole good. Feeding is rough, and the price to be paid for even the smallest luxury is very high, but there is not, unless there has been some sudden deterioration in the Boers' humanity, the entire absence of civilized treatment that has been described in lurid terms by one or two correspondents for the British press. The Boer prisoners in British hands have suffered severely from enteric fever. Doubtless it is rumored in Pretoria that the British are treating their prisoners shamefully, while, as a matter of fact, these prisoners have received the most careful attention.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE MIDWIVES CONTROVERSY—SURGERY OF THE STOMACH—QUESTIONS CONCERNING CANCER—LATE RICKETS—THE QUEEN IN IRELAND—THE ROYAL ARMY MEDICAL CORPS—SIR BATTY TUKE CANDIDATE FOR PARLIAMENT—LIVERPOOL TROPICAL SCHOOL—DEATHS OF WALTER CLEGG AND R. G. PATTESON.

London, April 20, 1900.

THE midwives bill is rousing a good deal of opposition. It would have been more effectual if it had been manifested earlier, but the profession seemed apathetic and the corporations were hoodwinked. In the report stage the supporters threw off the mask and showed that they were determined to license midwives and to decline all restrictions. Some, indeed, affected to keep up the delusion that the midwives when registered would not be independent practitioners, and were willing for them to be required to send for a doctor in dangerous cases. But they refused to penalize not doing so. This has opened the eyes of some, and the opponents are being encouraged.

A committee has been formed to oppose the bill, and more meetings have been held or arranged for. An attempt is being made to show members of Parliament the dangers threatened to the public. Dr. Rentoul is again to the fore with a plan to form an association of ten thousand members. He formulates eight objections, and I am afraid that his effort will not be sufficiently concentrated to defeat the bill.

Dr. Glover is being called over the coals by one party for his action in this matter. As I told you, he was challenged to resign from the General Medical Council and offer himself for re-election. He has replied to this that he is not a mere delegate. It is natural that he will not accept the mandate of any committee opposed to the views he expressed openly when a candidate. It is obvious, however, that he is losing touch with many electors on this subject, the more so as events show the objects of the promoters in their nakedness. I am sorry, because he is an excellent representative and has done good work. It is said that he is a general practitioner, but then it is only as a very high-class general practitioner that he can be spoken of—quite on a level with the higher grades. He lives in the most aristocratic part of Islington, has been honorary surgeon to the dispensary, and enjoys the confidence of a large, high-class clientèle. It may well be, therefore, that he looks upon midwifery with a very different eye from that of the struggling general practitioner in a poor neighborhood.

If the present bill passes, a doctor may be expected to be at the call of an ignorant midwife; but if he keeps an unqualified assistant who has been recognized for years as capable, he is liable to be removed from the register. If these ignorant midwives are to be registered, we may look for a great increase in quackery of all kinds and of abortion-mongering. Years ago a member of Parliament urged upon me this last danger. We have seen enough of it without registration.

A curious circumstance has occurred in connection with this bill. The Dublin College of Physicians issued a circular letter, asking the Irish members of Parliament to endeavor to get the measure extended to Ireland. Now the Irish Medical Association has issued an urgent appeal to the members of Parliament to oppose such extension, and goes on to say that the existing provision in Ireland is as nearly perfect as possible. It appears that the college acted under the misapprehension that the bill would prevent the midwives of the Rotunda and Coombe Hospital from practising in England. This is not the case. But the bill would register a host of untrained women, who could flood Ireland and compete with her trained midwives.

Any one who had not followed the progress of surgery on the stomach might well have been startled when it was announced that Schlatter had performed a resection of the complete organ, and that the patient lived in comparative comfort for fourteen months. Seven other complete gastrectomies have since been performed, of which three of the patients lived for thirty-six hours, six weeks, and several weeks respectively. Thus of the eight cases the mortality is four, or fifty per cent. Of almost complete gastrectomies, in which at least three-quarters of the organ was removed, fourteen cases have been reported, according to Mr. Mayo Robson, who stated in his Hunterian lectures at the Royal College of Surgeons that ten of the patients had recovered, giving a mortality of 28.5 per cent. Of course the survival may be of very varying periods in different cases, but in these lectures Mr. Robson could not give full details, as he had to go over the whole field of the surgery of the stomach, which he did with great effect. He looks hopefully on the future of gastric surgery, and appeals to physicians with the usual surgeon's cry for earlier diagnosis, so that operations if necessary may be performed before the patient's recuperative powers are exhausted. In perforating ulcer this necessity has been pretty well brought home to physicians, but there are many other cases in which a consultation with a surgeon might well be urged, and of course the earlier the better. The cases in which surgery has made advances were thoroughly discussed by the Hunterian lecturer, who was able to say that his last thirty-two operations on the stomach in private practice had all resulted in recovery.

Sir W. M. Banks has given new life to several questions connected with cancer by the views he expressed in his recent Lettsomian lectures. One of these is the relation of diet to cancer, and though this in some form is a very old question, we have really hardly any definite knowledge on the subject. The impression of Sir W. M. Banks is that overfeeding predisposes to the disease, especially excess of flesh food. Here we touch another undecided question—the alleged increase of cancer. Sir W. M. Banks believes that there is a real increase; therefore, accepting this as a fact, he appeals to it as supporting the view that excess of meat food conduces to the development of the disease. No one doubts that there has been a progressive increase in the consumption of meat for some twenty or thirty years, and that increase has been most marked among the laboring class. This, however, is a long way off from proof of the hypothesis. Admitting the concurrent increase of two circumstances by no means proves a relation between them; and considering the connection of gout with flesh diet, the suggestion that cancer occupies a similar position is being warmly disputed and in some quarters pooh-poohed.

Amony other explanations of the increase of cancer —when such increase is admitted—may be named more careful diagnosis, more accurate statistics and nomenclature, and increased longevity. Cancer, being a disease of the later period of life, might be expected to increase with the prolongation of that period. But whether the two have increased *pari passu* is naturally more difficult to show than that there has been an absolute increase in one.

The question of parasitism was treated by Sir W. M. Banks with a certain degree of reservation, but he freely admitted that the bodies described as parasites by various observers are special organisms. Whence they come, what they do, is another point. He is convinced they exist, and gave some experiments by Mr. Montsarrat, of the Liverpool Infirmary, confirmatory of those of other bacteriologists. It is to these specialists we must look to settle the question. The question of treatment derives much importance from the successes that have been achieved of late by extensive operations. Sir W. M. Banks was a pioneer of this practice, but has never gone to the extremes of some. His practice has been much the same as that of Samuel Gross. Indeed, it is to these two surgeons that the modern operative treatment ought to be dated, for they carried it out faithfully when not a few actively opposed them. Now it is rather sad to see surgeons attributing the origin of the practice they once opposed, but now adopt, to the labors of later Germans, rather than to the British and American operators, Banks and Gross, who initiated the method.

Among the cases exhibited at the Medical Society was one of late rickets, shown by Mr. Muirhead Little. His patient was a girl aged seventeen years, who was in good health up to the age of five, at which time knock-knee was noticed. At seven years she took to crutches. She was said to have broken both thigh bones, one six, the other five years ago. When seen by Mr. Little (October, 1899), her length in the recumbent position was forty-four inches. The head and ribs showed signs of rickets; the lower end of the radii and the ulnæ were much enlarged; the shafts of the femora curved forward and outward, making progression cross-legged; the tibiæ were normal. Macewen's operation was performed on one knee, when the bone, instead of being hard, was so soft that a mallet was scarcely necessary. The bones were unusually pervious to x-rays. Only half the normal amount of calcium was present in the urine. The marked enlargement of the epiphyses distinguished this and similar cases mentioned from rachitis adolescentium.

Mr. Kellock thought it might be a case of late rickets, but there were points named which suggested to him mollities ossium or fragilitas ossium, or perhaps a combination of them.

The president (Dr. F. T. Roberts) said the case strongly resembled rickets, and the bone ends were certainly enlarged. The changes in the chest were not those of early rickets, but this was not usually the case in late rickets.

Mr. Little replied that the idea of rickets only affecting the epiphyses was novel; the whole bone was involved; fracture was frequent, but was of the greenstick kind in rickets. This patient had never suffered any pain. He used the term "late rickets," as it resembled cases so described more than any others.

The Irish royal colleges were naturally among the institutions to present loyal addresses to the Queen on the occasion of her majesty's happy visit. The City of Dublin Hospital is henceforth to be distinguished by the prefix Royal.

The Royal Army Medical Corps continues to gather fresh laurels at the war. This is the more significant just now when reputations are being lost in other directions. Mr. Treves has returned home, and Sir W. MacCormac is on his way. They have had a pleasant trip at the country's expense, and the army surgeons received them as brethren.

Sir Batty Tuke is a candidate for the representation of the universities of St. Andrews and Edinburgh, vacant through the death of Sir William Priestley.

An anonymous benefactor has endowed a colonial fellowship of £100 a year for five years in the Liverpool School of Tropical Medicine.

Mr. Walter Clegg, M.R.C.S., died on Monday, aged seventy-nine years. For nearly forty years he was the coroner for the Boston division of Lincolnshire. He was the son of a Wesleyan minister, and founded *The Boston Guardian* in 1854. He served in the Crimea as surgeon to the Second Battalion Rifle Brigade. While there he acted as war correspondent for *The Illustrated London News*. He was one of the oldest war correspondents, having begun that work nearly as soon as Sir W. H. Russell, and he lived to be one of the oldest coroners. He was mayor of Boston in 1868 and 1869. Subsequently he was medical officer of health up to about three years ago.

The death is announced of Dr. R. G. Patteson, surgeon to the Meath Hospital, Dublin. Though hardly forty years old, he had achieved a high position. He graduated in arts and medicine at Trinity College in 1885, and took the travelling prize of Dublin University in 1886. After studying in London, Vienna, and Berlin, he returned to Dublin, took the fellowship of the College of Surgeons, became one of the examiners, and carried on his work until ill health, which had troubled him for long, compelled him to withdraw from his arduous labors. He made many contributions to surgical and biological literature.

Tetanus.—Inject fifteen minims of a two-per-cent. carbolic-acid solution every two hours.—*Il Policlinico.*

DISINFECTION OF THE UMBILICUS IN ABDOMINAL OPERATIONS.

To the Editor of the Medical Record.

Sir: Perhaps the following will be of some interest to the readers of the Medical Record: In the preparation for abdominal operations, especially that of disinfecting the abdominal walls, there is a detail which in this country is not perhaps very widely known, but does deserve a wider acquaintance; it is the complete cleansing and disinfection of the umbilicus, made possible by traction upon it with a clamp forceps. This smoothes out the numerous depressions naturally situated there, and offers an uninterrupted and smooth surface for thorough cleansing and disinfecting.

The above is from observation in the Paris hospitals, in which it is part of the preparatory technique.

James Taylor Hanan, M.D.

Brooklyn, N. Y.

"HOW TO SEND ANATOMICAL SPECIMENS BY MAIL."

To the Editor of the Medical Record.

Sir: An article appeared in the issue of April 21st, p. 696, by Steward Gordon, on "How to Send Anatomical Specimens by Mail." I wish to mention one class of specimens to which I have found practically similar methods not applicable; namely, soft specimens like the intestinal mucosa. The pressure of the lint fibre in specimens I have seen caused a net-like indentation which rendered them almost valueless for museum purposes; and the distortion, histologically, unless understood, causes confusion, and in some cases might lead to seriously incorrect statements. Specimens of this kind are preferably sent in fluids; and screw cases are made especially for sending them by mail.

D. S. Lamb, M.D.

Army Medical Museum, Washington, D. C.

WHAT IS THE BEST POSTURE FOR THE PATIENT IN BED AFTER ABDOMINAL SECTION, PARTICULARLY IN PUS CASES?

To the Editor of the Medical Record.

Sir: I was much interested in the article by Dr. George R. Fowler, entitled "Diffuse Septic Peritonitis, with Special Reference to a New Method of Treatment, namely, the Elevated Head and Trunk Posture, to Facilitate Drainage into the Pelvis, with a Report of Nine Consecutive Cases of Recovery," and published in the Medical Record of April 14, 1900.

During the past ten years, in the after-treatment of nearly all my abdominal sections—particularly pus cases—and much for the same reasons given by Dr. Fowler, I have employed the method advocated by him, and have not been persuaded to change it. The head and shoulders of my patient are elevated upon several pillows, the castors in the lower posts of the bedstead are removed, and a round hair pillow is placed under the knees of the patient, for the double purpose of preventing slipping down in bed and securing additional relaxation of the abdominal muscles; this relaxation affording comfort to the patient and favoring peristalsis and the descent of fluids toward the pelvic cavity.

In the after-management of these cases it is both curious and instructive to note the different theories upon which we act—a sort of theoretical mental gymnastics of kaleidoscopic change of tint and figure. Only recently, it has been enjoined upon us that better results will follow the employment of a posture exactly the reverse of that advocated by Dr. Fowler; that is, to elevate the hips of the patient in order to favor the diffusion of fluids over an extensive area of peritoneal surface, which somehow digested the contained poisons, or even absorbed them with greater facility. To cite a common phrase: "A larger area of peritoneal surface can take care of a phenomenal amount of toxins."

Mirabile dictu! Dr. Fowler prefers, without previous irrigation, to wipe the abdominal cavity dry with gauze, leaving in no decinormal salt solution to attenuate the toxins; rehabilitates glass drainage—sometimes employing several tubes, reinforced by numerous wicks or strips of gauze, and then delights in observing a copious exit of fluids into the superimposed dressings. Adding preliminary irrigation, Lawson Tait also, throughout his brilliant and successful career, laid the greatest stress upon an endeavor to keep the peritoneal cavity free of all accumulating fluids; hence his constant reliance upon the drainage tube in all pus cases or when bleeding was feared from ruptured adhesions. He would keep the peritoneal membrane as dry as possible; so would Dr. Fowler. Each may have had a different theory upon which to base the practice, but the latter virtually is identical with both operators. In the practice of our art, truly "the heresy of to-day is the creed of the next."

Dr. Fowler is to be congratulated upon his enviable record in an ordinarily hopeless class of cases, and his results speak volumes for the treatment employed, although it cannot justly be claimed that this treatment is a distinctly new method.

Henry K. Leake, M.D.

Dallas, Tex.

Reviews and Notices.

Transactions of the British Orthopædic Society. Volume III. Published by the Society. Bristol: J. W. Arrowsmith. 1899.

Eighty-nine bound pages, giving reports of various sessions for 1897–98, of especial interest to the orthopædic surgeon.

Diseases of Women. A Text-Book. By Charles B. Penrose, M.D., Ph.D., Professor of Gynæcology in the University of Pennsylvania, etc. Illustrated. Third edition. Philadelphia: W. B. Saunders. 1900.

A few additions have been made in this new issue, but the author has carefully revised the text. A feature of the work is that in most instances but one method of treatment is given for each disease, thus rendering the student's chances of confusion less. Many problems are made much clearer by the illustrations given. The work seems to be justly popular.

Refraction and How to Refract: Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eyeglasses, etc. By James Thorington, A.M., M.D., Adjunct Professor of Ophthalmology in the Philadelphia Polyclinic and College for Graduates in Medicine; Assistant Surgeon at Wills' Eye Hospital, etc. Illustrated. Philadelphia: P. Blakiston's Son & Co. 1900.

Those who have read the author's little manual of retinoscopy with the plane mirror will not be surprised to find here a complete but succinct guide to the determination and correction of ametropia, beginning with a consideration of rays of light and of elementary optical principles. Successive chapters deal in a thoroughly practical manner with the standard eye, the various errors of refraction, the balance of the external eye muscles, cycloplegics, and, finally, with the application of various methods to the prescription and fitting of correcting glasses. The book can be recommended not only to beginners in the study of ophthalmology, but to those practitioners and students as well, whose limited knowledge of mathematics precludes the study of Helmholtz or Donders. A purist might take exception to the author's use of the word "refract," in the sense of testing refraction—a barbarism which is not excused by its prevalence. Usage, so called, is as unreliable a guide in the choice as it is in the accentuation and pronunciation of words, to judge by the coining of such terms as "refractionist" and "refracting opticist." As the author himself says, refraction has come to mean the optic condition of an eye in a state of repose or under the physiological effect of a cycloplegic. Let us use it in this sense, then, and when we wish to speak of determining ametropia, let us use two simple words instead of a single one which, in its misapplication, has a meaning "by courtesy of complicity" only.

Essentials of Medical Chemistry, Organic and Inorganic, containing Questions on Medical Physics, Chemical Philosophy, Analytical Processes, Toxicology, etc. Prepared especially for students of medicine. By Lawrence Wolff, M.D., Demonstrator of Chemistry, Jefferson Medical College; Physician to the German Hospital of Philadelphia; Member of the German Chemical Society, of the Philadelphia College of Pharmacy, etc. Fifth edition, thoroughly revised by Smith Ely Jelliffe, M.D., Ph.D., Professor of Pharmacognosy, College of Pharmacy of the City of New York; Clinical Assistant, Department of Neurology, Columbia University, New York. Philadelphia: W. B. Saunders. 1899.

The chapters dealing with organic chemistry have been considerably modified and enlarged, more particularly in the discussion of physiological chemistry. An attempt has been made to present a brief outline of the present status of our knowledge of the chemical constituents of the human body. The revision by Dr. Jelliffe brings the subject-matter well up to date.

A Treatise on Surgery, by American Authors. Edited by Roswell Park, A.M., M.D. Condensed edition. 8vo, 1,262 pages. New York and Philadelphia: Lea Brothers & Co. 1899.

This condensed edition of the larger work is the result of a wise conclusion to meet the growing requirements of the busy practitioner, whose time and opportunities for the consultation and study of elaborate treatises are necessarily limited. From the standpoint of condensation, which is the main one to consider under present circumstances, the work is a conspicuous success, giving all that is required under the respective sections and conscientiously preserving all that is of practical value. The general arrangement of the elaborate work is well preserved, and in many respects fully answers all its essential purposes. On behalf of the editor and his able collaborators, it is but just to say that the work is fully up to the times, not only from a pathological but an operative point of view. In respect to the bacteriology of surgery proper, substantial progress has been made in adapting the resources of the laboratory to the requirements of advanced study of the blood constituents, tumor elements, classification of growths, and possible microbic origin of malignant processes. It represents a very large amount of valuable research in a very small compass.

La Pratique des Accouchements Obstétrique Journalière. Par Henri Variner, Professeur Agrégé à la Faculté de Paris, Accoucheur des Hôpitaux, Secrétaire Général de la Société d'Obstétrique, de Gynécologie et de Pædiatrie. Avec 387 figures. 437 pages. Paris: G. Steinheil, Éditeur. 1900.

This valuable work, founded upon the author's lectures, aims at the instruction of the student by means of illustrations reproduced from actual photographs. While prominence is given to these, the text is none the less full and clear. Chapter I., on the diagnosis and hygiene of pregnancy, is especially useful to the student; in fact we do not recall any more lucid description of the details of obstetric palpation. The section on diagnosis is most practical. Chapter II., which deals with normal labor, including a hundred and thirty pages, is profusely illustrated. Chapter III. deals with delivery, and discusses at length the placenta and its mode of expulsion. Numerous photographs, taken at the bedside, are introduced as in the previous chapter. American readers will disapprove strongly of the advice to make traction on the cord. Chapter IV., on the normal puerperium, treats thoroughly of the subject of involution, especial attention being paid to the changes in the uterine tissues. Numerous original drawings are introduced. The last hundred pages are devoted to a review of the subject of puerperal sepsis, particularly the prophylaxis. Several sections are given to bacteriology. In general it may be stated that this monograph is most praiseworthy. The author's style is original and pleasing; the illustrations are numerous and, though not always satisfactory from an artistic standpoint, they are well calculated to catch the eye of the student and to impress upon him the points made in the text. The paper, type, and general make-up of the book are above the average.

Mentally-Deficient Children: their Treatment and Training. By G. E. Shuttleworth, Baltimore, Md. Second edition. Illustrated. Philadelphia: P. Blakiston's Sons & Co.

In this new edition there is contained additional matter bearing upon education, and special measures recommended and adopted by school authorities, notably by the school board for London. The author's experience seems to qualify him well for a task which has been acceptably filled.

A Manual of the Diagnosis and Treatment of the Diseases of the Eye. By Edward Jackson, A.M., M.D., Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic; formerly Chairman of Section on Ophthalmology of the American Medical Association; Member of the American Ophthalmological Society; Fellow and ex-President of the American Academy of Medicine. With 178 illustrations and two colored plates. Philadelphia: W. B. Saunders. 1900.

This volume contains six hundred and four pages. It is of convenient size, well printed on good paper, and so arranged that its contents are easily accessible. The author states in his preface that the "book is intended to meet the needs of the general practitioner of medicine and the beginner in opthalmology." It is truly an admirable work for this purpose, and contains much that will interest the advanced worker in ophthalmology. Written in a clear, concise manner, free from superfluous statements, it bears evidence of the author's comprehensive grasp of the subject. The text is divided into twenty chapters. One chapter is devoted to directions regarding "The Examination of the Patient, Case Records, etc.," one to "Remedies and their Applications," one to "Ocular Symptoms and Lesions connected with General Disease." The work is especially strong in the chapters which are devoted to the examination of the eye, the consideration of refraction and all that pertains to it, the disorders of muscles, and the ophthalmoscope. A valuable feature of the work is the short bibliography that follows each chapter, affording a means for the more comprehensive investigation of each subject. The term "multum in parvo" is an appropriate one to apply to this work. It will prove of value to all who are interested in this branch of medicine.

Clinical Department.

A CASE OF RAYNAUD'S DISEASE.

By F. J. BOWEN, M.D.,

MT. MORRIS, N. Y.

Mrs. G——, twenty-eight years of age, had for several winters suffered from symptoms corresponding to the description of the stage of local asphyxia of this affection. The fingers of both hands were affected, circulation apparently disappearing from about the distal and middle phalanges. Nutrition suffered in a corresponding degree. The parts affected appeared shrunken or withered and cold, the nails were dried and lustreless, and at one time she said that the tips of the fingers felt sore, as if almost to the point of ulceration. The patient would hardly be called anæmic, but was slender and might be spoken of as "thin-blooded." She was of nervous temperament. Her husband was a laundryman whom she sometimes assisted. When she came under my care in early winter, I advised her first, in regard to this work, not to go out of doors to hang up clothes; to wash with the hands in warm water for a moderate length of time was advised, but for a longer time was forbidden. In the way of medicine she was given tonics—compound syrup of hypophosphites I believe—and a preparation containing digitalis, nitroglycerin, and belladonna.

For the first time in several successive winters the symptoms were avoided.

A PIECE OF CHEWING-GUM IN THE URETHRA.

By W. H. PETERS, M.D.,

PROVIDENCE, R. I.

F. McG——, aged thirty-five years, consulted me for retention of urine, due to a foreign body in his urethra, which he said was chewing gum; that he inserted it in the meatus in March, 1899. He states that he has suffered the past ten months considerable pain in urinating, but not enough to cause him to seek medical advice. Lately his water has not been so free, and at the present time he has been unable to pass any water for eight hours. He gives a history of having had gonorrhœa ten or twelve times, but not since March, 1899. The bladder was very much distended, and the pain radiating to the glans penis was severe. There was a slight amount of blood about the meatus caused by his trying to dislodge the mass. At the bulb could be plainly felt a mass about an inch long, nodular, about half an inch or more at its greatest thickness, and hard to the touch. It was immovable. A very small-sized silver catheter was pushed by it with considerable difficulty; the water was drawn, and the patient was relieved. With a sharp uterine curette the body was broken up and found to be composed of chewing-gum, coated with phosphate of lime. The patient was given morphine gr. $\frac{1}{2}$, and sent to the hospital, where a few small pieces of a calcareous substance were removed by the visiting surgeon. The patient recovered without a chill. Dorr, in the *British Medical Journal* of May 14, 1892, reports a case in which a man had passed up his urethra a piece of chewing-gum, which in three months became largely coated with phosphates. It was removed by the supra-pubic method. As the gum was still soft and sticky it would have been impossible to disengage the jaws of the lithotrite or to crush the gum.

A CASE OF RAPID UNION IN FRACTURE OF THE THIGH.

By CLARENCE A. WELLS, M.D.,

QUINCY, ILL.

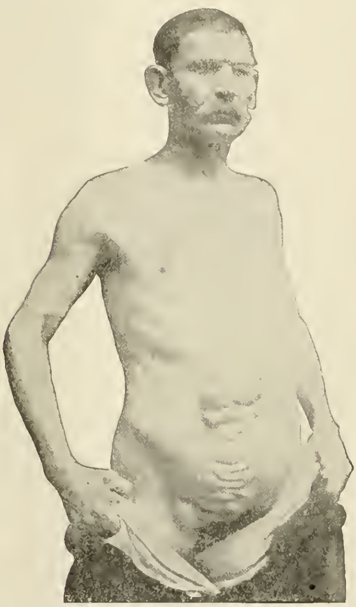
EGBERT H——, aged fifty-eight years, a male nurse in the hospital of the Illinois Soldiers and Sailors' Home, while going from the ward to the hospital kitchen, one hundred feet or more away, slipped and fell on the icy walk and sustained a simple, oblique fracture of the femur just below the trochanter. He suffered greatly from shock, so that the fracture was not dressed until the second day. All the signs and symptoms of that injury were present. Buck's extension was employed, and sand-bags weighing twenty pounds were applied tentatively. Counter-extension was secured by elevation of the foot of the bed. As the patient was restless, and as no fracture bed was used, the Hamilton long-side splint was omitted, and instead long sand-bags were used externally from the toes to the chest, and internally the entire length of the leg. Aside from some disturbance of the kidneys for a few days, the patient did well. The calls of nature were attended to in bed by means of the bed-pan. On January 20th, thirty-five days after the accident, the extension was taken off, because he complained so much of the discomfort. The fracture at that time was quite firmly united and the callus very marked. On January 24th the patient got up and used the wheel chair, and the next day began to walk with crutches. From that day to the present he has continued to walk around, and three weeks later even discarded the use of a cane. The injured leg is one inch shorter than its fellow.

AN ABDOMINAL VARIX.

By C. M. GALLOWAY, M.D.,

XENIA, OHIO.

T. G——, Co. A, Twentieth Regiment Ohio Volunteers, infantry, enlisted at Mansfield, Ohio, on October 22, 1862. He was discharged at Louisville, Ky., on July 15, 1865. The curious affection shown in the illustration began to make its appearance very shortly after his discharge from the service. It began at about the centre of the epigastric region as a small, tender swelling, and has gradually increased until it has assumed the proportions seen in the illustration. It cannot be reduced and is very tender on pressure. The mass over the stomach is somewhat larger in proportion to the other portion than the photograph indicates. It is almost as large as his clenched hand. On account of the movement of the abdomen in breathing it does not show very plainly. It is diagnosed at a varicose condition of the internal iliac vein. It seems to have no valves. No varicose veins are found elsewhere. It is supposed to have originated from pressure of his cartridge belt. It has not increased in size during the past few years.



Appendicitis.—Ice bag; opium by suppository; no food save a solution of peptone and sugared water. The bowels should be kept at rest for a week and then be gently washed out with a decinormal salt solution per rectum.—LAUBE.

Society Reports.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

FIFTH TRIENNIAL SESSION.

Held at Washington, D. C., May 1, 2, and 3, 1900.

(Continued from page 770.)

Second Day—Wednesday, May 2d.

THE second and final session of the Congress of American Physicians and Surgeons was held in the Lafayette Square Opera House in the afternoon. The meeting was called to order by the president, Dr. Bowditch, at 2:55 P.M.

The proposition made at yesterday afternoon's meeting for the appointment of a committee of three with full power to draw up and execute a memorial and petition to Congress of the United States, asking that charitable, religious, and educational institutions be relieved from such provisions of the war tax as are levied upon them and likewise upon legacies left to such institutions, was next taken up. The resolution was passed by unanimous vote, and the president appointed the committee as follows: Drs. F. C. Shattuck, A. Jacobi, and William H. Welch.

DR. KEEN, of Philadelphia, then offered the following resolutions of medical interest, which were unanimously carried:

"*Whereas*, The medical profession employs various kinds of exact measuring apparatus, particularly clinical thermometers, ureometers, lactometers, and volumetric apparatus; and

"*Whereas*, The physician should be able to obtain a written official guarantee of the accuracy of such apparatus; and

"*Whereas*, No bureau has been established by our government for this purpose, necessitating the importation of certain apparatus from countries possessing standardizing bureaus; therefore, be it

"*Resolved*, That the Congress of American Physicians and Surgeons heartily indorse the movement now on foot establishing such a standardizing bureau, where such work and other equally important may be undertaken.

"*Resolved, further*, That a copy of these resolutions be forwarded to the Secretary of the Treasury, to the president of the Senate, to the speaker of the House of Representatives, and to the chairman of the House committee on coinage, weights, and measures."

Sociological Status of the Physician.—Owing to the unavoidable absence of Professor Osler, whose announced subject was "Modern Therapeutics," DR. CLARENCE J. BLAKE, of Boston, spoke on the above subject. He said that the term "sociology," first used by August Comté less than sixty years ago, might be briefly and broadly defined as "the science of the laws of human relationship," and, as often happened in the presence of cognate intellectual processes working toward the same end, the suggestion of a concise definitive appellation furnished a rallying-point to which the various workers converged, and from which they went out strengthened by a sense of companionship and encouraged to more extended effort by a better comparative knowledge. Of all special educations that of the science and practice of medicine, when it was of the best quality, was the most exacting and made the largest demand upon the staying-power of the student; it was longer in duration, more confining, and required more intense application than the corresponding courses which led to a degree either in law or in divinity, and afforded a larger suggestive opportunity for collateral scientific reading. He believed that the hospital of to-day was something very much more than a repair shop; it was a school full of object lessons in the application of those qualities which are the "uprights," the "girders," and the "binding-rods" of the modern social structure; it was the most absolutely clean of all human habitations, and the present splendid successes of surgery in the amelioration of suffering and the preservation of life were due not only to the application of trained skill and intelligence, but to its operations under conditions of absolute sterilization which were microscopic in their minutiæ. He said that the entrance of women into hospital life and work was one of the sociological advances for which the medical profession was mainly responsible, a responsibility having a serious ethical, as well as an important economic side. The teacher had a regular stipend, allotted hours of work, and a definite holiday; the nurse, in private practice, had no regular stipend, no protracted leisure, and led an economically irregular life, with occasionally extraordinary demands upon her strength and powers of endurance. The medical profession, which had created the trained nurse to its own great advantage and with considerable extension of its helpfulness, was owed a debt which should be acknowledged not only individually but generally. The doctor spoke of the utility of medical inspection and of its necessity in many cases. He covered at some length the establishment and maintenance of charitable institutions, especially those suited for the mental development of the feebleminded and mutes. In closing, he said that another relationship which might be broadened beyond its individual phase was that between the doctor and the clergyman, and recent experiments based upon a proposition that the divinity student should have opportunities to see the practical side of hospital and other instituion work under medical guidance were so promising as to lead to the serious consideration of making this a definite part of the regular divinity-school instruction.

PRESIDENT BOWDITCH, at the conclusion of Dr. Blake's paper, stepped forward and said: "Now, gentlemen, it is my pleasant duty to ask your attention to our honored ex-president, who has cultivated the fields of medicine and literature with equal success, and who has kindly consented to express himself in his own charming verse on the evolution of the physician."

DR. S. WEIR MITCHELL then spoke, in part, as follows: "Mr. President and Fellow-members of the Congress: I will say a word in explanation of the unusual fact of my appearance here. It is perfectly well known, I venture, that never before in the history of medicine has a congress been addressed in verse. For this novelty you may thank the committee of the congress and my friend, its president."

Dr. Mitchell, upon rising to address the audience and upon the conclusion of the reading of the poem, was greeted with prolonged applause and was the recipient of many congratulations. He spoke with emphasis, feeling, and gesture. He described the doctor's honorable, dignified, and humanitarian station in life. The priests disagreed, but the doctor extended the universal hand of fellowship and good-will. The sentimental and pathetic introductions were delivered very impressively. One pretty verse reads:

"What sense of pleasure won that helping hand,
You best can tell, you best can understand;
Who, looking back across your busy years,
Know what your hands have spared of pain and tears."

His lines, "One bugle-note or one battle-call, one watch-word—*Duty*—that is all," was drowned in prolonged applause.

The congress was then adjourned until the evening, when the president addressed the assemblage upon "The Medical School of the Future." He said that among the intellectual movements that have characterized the century now drawing to a close, there was perhaps no one more deserving of careful study than that which was concerned with providing education for the people in the school, the academy, and the university. The importance of popular education became apparent in proportion as political freedom was secured for the people. Thus Viscount Sherbrooke, better known as the Hon. Robert Lowe, in the Reform debates of 1866 and 1867, after the passage of a bill for the extension of the suffrage, uttered the well-known words, "We must now, at least, educate our masters." The same sentiment had also more recently been embodied in the inscription on the Boston Public Library, "The commonwealth requires the education of the people as the safeguard of order and liberty"; and in the presidential address of Dr. J. M. Bodine, at the meeting of the Association of American Colleges in 1897, we find the same idea thus expressed: "In America the citizen is king. The king must be educated to wield aright his ballot sceptre." For many years educators looked upon their work with no little complacency. The educational systems of the various civilized countries were supposed to be well adapted to the ends in view, and educational exhibits had generally been regarded as important features of international expositions; but within the memory of most of those now before him times of serious discontent had not been wanting. Education had not always been found to furnish the required safeguard for order and liberty. Highly educated men had often been found singularly lacking in mental balance. Schools for the inculcation of "common sense" have never yet been established. Even the great developments of psychology as an experimental sign had occurred chiefly within the last twenty-five years; though it had served to establish many a law of mental action, it had thus far failed to justify the hope that pedagogy might find in psychology a foundation for the erection of rational systems of education. Indeed, we had recently been told by one of the ablest expounders of the science that "it was a great mistake for teachers to think that psychology, being the science of the mind's laws, was something from which they could deduce definite programmes and schemes and methods for immediate school-room use. Psychology was a science and teaching was an art; a science only laid down lines within which the rules of the art must fall, laws which the follower of the art must not transgress, but what particular thing he should positively do within those lines was left exclusively to his own genius." Even this general guidance had been very imperfectly afforded, for the limits set by the science of psychology to the art of teaching had never been precisely defined. In fact, the most fundamental question of all, namely, the relation of mental to physical development, had not yet been settled, though much material for its study had been collected. It was not, therefore, surprising that in many countries teachers had made too great demand upon the time and strength of growing children. This had been clearly the case in some parts of Germany, where school-boys from eight to fifteen years of age had found their vital energy so far exhausted by the school work required of them, that they had lost all inclination for the vigorous athletic amusements so naturally indulged in by Anglo-Saxon boys. The deterioration of the race as a result of too close application to intellectual pursuits to the neglect of the physique had been fortunately obviated, in the case of Germans, by the army system, which took entire possession of the youth and forced him to devote three years to the education of his body, turning him out at the end of that period a young man with mind and body trained to a high degree of efficiency, well fitted for civil as well as military pursuits, and comparing favorably in all respects with men of his age in other nations. Looked at from this point of view, the German army must be regarded as an important part of the educational system of the country, though as a piece of educational machinery its workings could not be considered economical. In fact, the absurdity of depending upon the army to remedy the defects of the school system had long since been forced upon the attention of German educators, and the difficulties above alluded to were now in a fair way to be removed. The relations between the governing body of a university and its medical faculty in matters of administration were often defined by custom and tradition rather than by statutory provisions, and differed very considerably in different institutions. In general, two methods of government might be distinguished. Either the initiatory was left with the teaching faculty, the governing body exercising a veto power, or the governing body acted directly without necessarily asking advice from the faculty or its members. The former method of government was most likely to be found in those cases in which a well-established medical school had allied itself to a university for the sake of the mutual benefits that might ensue from the union, and the latter method in those cases in which a university had completed its organization by the establishment of a medical department. In speaking of the proper distribution of the work of a medical student, Dr. Bowditch said that thirty years ago no such question seemed to have presented itself to the minds of the instructors in medicine. The medical faculties of that time contented themselves with providing each year courses of lectures covering the departments of medicine, as they were then understood, and every student was expected to attend as many of the lectures as he saw fit. Between 1870 and 1880 the fact that there was a natural sequence in medical studies became generally recognized, and graded courses of instruction were established in the principal medical schools of the country. The grading was not, however, carried sufficiently far. Thus instruction in both anatomy and physiology was generally given simultaneously through the whole of the first year, though the knowledge of structure should logically precede a knowledge of function. The time seemed now to have come for taking another step in grading medical instruction, and during the academic year now drawing to a close instruction in the Harvard Medical School had been given in accordance with a plan of which the guiding principles were concentration of work and sequence of subjects.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

Seventeenth Annual Meeting, Held at the Arlington Hotel, Washington, D. C., May 1, 2, and 3, 1900.

First Day—Tuesday, May 1st.

ABRAHAM JACOBI, M.D., PRESIDENT IN THE CHAIR.

President's Address.—DR. JACOBI, in his opening address, discussed the subject of cardiac murmurs in infancy and childhood. He referred to the rarity of functional murmurs in infants, and reported such a case occurring in a colored child aged thirteen months. In this case the murmur, which was a loud systolic mitral one, could not be accounted for at autopsy. Dr. Jacobi said that extra-cardial murmurs, mostly systolic in children, were very infrequent in infants below two years, because at that early time the heart was larger in proportion, and less covered by the lungs.

Ulcerous endocarditis might not exhibit any murmur, and the diagnosis of this condition was thereby rendered difficult. Proliferating endocarditis might give rise to a systolic mitral murmur in the newly born, which might either last a lifetime, or disappear in time with the growth of the organ, or by absorption, or by progressing compensation. Most murmurs meant organic lesions either in the valves or in the myocardium; in that respect all ages were alike. Among other causes of cardiac murmurs in infancy, aside from the infectious diseases and rheumatism, Dr. Jacobi mentioned contraction or partial obliteration of the mitral orifice, or adhesion of the valve; also persistence of the ductus arteriosus Botalli, and congenital stenosis of the pulmonary artery, or other congenital defects.

A Report of Certain Cases of Tuberculosis which were Apparently due to the Nature of the Soil.—Dr. Richard Cole Newton, of Montclair, N. J., read a paper on this subject, in which he emphasized the fact that while sunlight and life in the open air, and pure milk and a wholesome occupation were necessary and essential to the alteration of the predisposition, so that the bacillus of Koch could not gain a foothold in the human organism, a dry, properly constructed cellar to one's dwelling, which should be built over a pure, well-drained, sandy subsoil, was just as essential. The speaker reported a number of cases in which a high mortality rate from consumption in certain families was apparently due to the unsanitary condition of the residence they occupied.

Dr. Leonard Weber, of New York, said he fully agreed with Dr. Newton regarding the important rôle which sanitary conditions played in the development and spread of pulmonary tuberculosis. Examples of this had frequently come under his observation in New York, where, in certain tenement-house localities, the disease was very prevalent.

Dr. N. S. Davis, of Chicago, said there was no question that the acquirement of tuberculosis was best favored by continuous life in poorly ventilated rooms, which induced imperfect lung exercise. Of course, the hereditary inclination to the disease was also a factor, but in its prevention too much importance could not be placed upon the hygienic surroundings of the individual.

Dr. Charles L. Minor, of Asheville, N. C., said that while the epidemic of "tuberculophobia" raging throughout the country would no doubt react beneficially, there had been no corresponding enthusiasm in the direction of prophylaxis. The public had become frightened, but not in the right way. The tubercle bacillus was practically ubiquitous, and if acquirement of tuberculosis depended solely upon that germ, the human race would long ago have been exterminated.

Dr. Edward R. Baldwin, of Saranac Lake, said that the observations made by Dr. Newton had some bearing upon the bacteriology of tuberculosis. Dr. Ransom, of England, had made some investigations which went to show that moisture was an important factor in the development and longevity of the tubercle bacillus, and he claimed to have demonstrated that this germ actually grew upon wall-paper in a house in which the surroundings were very damp. It was well known, Dr. Baldwin said, that dampness would preserve the vitality of the bacilli for a long time in the expectoration.

Dr. Judson Daland, of Philadelphia, said that in Iceland, where all the factors existed which were regarded as favorable to the rapid spread of pulmonary tuberculosis, *i.e.*, long periods of dampness, wind, and absence of light, the disease was practically unknown there until about six years ago, when a few cases of tuberculosis were introduced into the island. Since then the disease had made rapid strides there, and two years ago one hundred and thirty-four cases were reported.

Dr. E. O. Otis, of Boston, called attention to the excellent work in the direction of sanitary improvement which was being done by tenement-house reform committees in New York and Boston.

The Educational and Legislative Control of Tuberculosis.—Dr. Charles Denison, of Denver, read a paper with this title, in which he confined his remarks principally to the degenerative results of deficient ventilation, and secondarily to the degenerative results of defective heredity. In the defective ventilation of living-rooms, the author said, we had a unified, predisposing cause, anterior to the tubercle bacillus, which would explain alike the origination of tuberculosis in animals, fowls, and man; this factor induced deficient pulmonary air and blood circulation, and led to auto-infection. We might reason, as with few exceptions everybody did, that the bacillus of tubercle, being the constant accompaniment of the decaying process in tuberculosis, was consequently the cause and source of all this evil; but the very lateness of its appearance showed it to be rather a result than a cause. Its absence in so many forms of scrofula, adenoid growths, wasting, and catarrhal conditions which eventually proved tuberculous, showed that the pretuberculous and perhaps the first stage of tuberculosis was already established, presumably in advance of the germ. These conditions were proved by the tuberculin test to be a part of the real disease before the microscopic or any other ocular demonstration of the bacillus was possible. Tuberculosis would not "down" in response to any edict against street expectoration, the disinfection of rooms occupied by consumptives, or even the slaughtering of tuberculous cattle, however important these measures of prevention most assuredly were. To show a unified cause, we must come back to the living-room of a human being, the meagre size of which, and its deficient sunlight and air circulation, afforded a sufficiently marked degree of deficient ventilation to constitute a glaring fault of our civilization. This seemed to be the initial cause or starting-point of tuberculosis, which probably killed more people than did war and any other one form of disease together. The speaker said that if law could protect life, as it aimed to do, by fire-escapes, the necessity of stand-pipes, the abatement of the smoke nuisance, the ventilation of sewers, and the non-pollution of drinking water, why should not this subtler and ever-present cause of degeneration and death, defective ventilation, even in its slighter degrees, come under its fostering care? He suggested that an effort should be made to establish and maintain the equivalent of the following, to wit: for a living apartment a minimum space of fifteen hundred cubic feet per individual, and a minimum ventilation or change of air of two thousand feet per hour per person. Furthermore, a course for the study of ventilation should be made a prominent feature of all advanced schools and colleges.

Dr. Beverley Robinson, of New York, said that while the building of sanatoria for consumptives would, no doubt, result in much good, such institutions could do very little toward checking the spread of the disease so long as the more important factors of defective ventilation and hygiene were neglected. A patient was perhaps cured at such a sanatorium, and then must go back to live under the very conditions which induced the disease.

Dr. Carroll E. Edson, of Denver, reported an instance in which the family physician, a man of standing and reputation, insisted upon the discharge of a governess when he learned that ten years before she had spent some time in Colorado on account of some apical trouble from which she had entirely recovered.

Dr. W. F. R. Phillips, of Washington, D. C., said that the subject of "live" air, and devitalized air, to which Dr. Denison had referred, had been extensively studied by Richardson, Mitchell, Billings, and others, and was still unsettled. Richardson came to the conclusion that the devitalization was probably due to some molecular change which occurred in the oxygen. The others attributed its injurious effects to increased temperature and humidity, and to some extent to the carbon dioxide it contained.

Some Phases of the Tuberculosis Problem in Colorado.—Dr. Sherman G. Bonney, of Denver, read a paper on this subject. He stated that there existed in Colorado at the present time not only an appreciation of the communicability of tuberculosis and the necessity for rational preventive measures, but also, unfortunately, a somewhat unreasoning fear as to the dangers of direct infection. There had developed an increasing popular prejudice against ordinary association with the consumptive, and a beginning sentiment against the further importation of individuals afflicted with the disease. The agitation originally conceived through scientific knowledge applied to public health was giving birth to a somewhat ill-proportioned and ignorant crusade. While the percentage of deaths from tuberculosis contracted in the State of Colorado had been progressively increasing during the past four years, the actual number of cases originating in the State was but slightly larger, and the total was considerably less. Thus, in 1893, the total number of deaths from tuberculosis was reported as four hundred and thirty-five, of which forty-nine were specified as contracted in Colorado, establishing the proportion of eleven and one-quarter per cent. The next year the total was three hundred and seventy-seven, a diminution of fifty-eight, while the number contracted in Colorado was fifty-one, an increase of but two cases for the entire year, yet the proportion was published as being 13.7 per cent., a gain of 2.5 per cent. in the deaths originating in Colorado for the year. Despite an increase of fifty thousand in the population of Denver since 1893, the number of cases specified as having developed in 1898 was but four more than in 1893. Dr. Bonney said that a factor of no inconsiderable importance in connection with the question was the strong inherited susceptibility of a portion of the younger population in Colorado, and such infant cases should not be recorded as instances of deaths from indigenous tuberculosis. Another factor was that some residents might develop an active condition from an infection previously latent. On the other hand, he said, it must be remembered that the influx of consumptives in all stages of the disease, and in every condition of financial distress, constituted an economic problem not to be ignored. Many came to the State as a place of last resort.

Dr. Otis said that last year—which was the first year in which the Massachusetts State sanatorium was in operation—sixty-four per cent. of incipient cases of tuberculosis and thirty per cent. of all cases were discharged as arrested. If other States did as well, the fears of the people of Colorado would soon be allayed.

Dr. R. H. Babcock, of Chicago, said the statistics given by Dr. Bonney showed conclusively that the fears of the people in the State of Colorado were not well grounded. The increase in the number of deaths from tuberculosis originating in the State had been insignificant, and could, no doubt, easily be explained on the grounds of environment, occupation, and heredity. The population of Denver had largely increased in recent years, and this was a factor which had favored an increase in the number of cases of tuberculosis.

Dr. James C. Wilson, of Philadelphia, referred to the frequency with which apparently hopeless cases of pulmonary tuberculosis were sent on long journeys in a fruitless search for health. There was now a growing knowledge among the profession that very frequently efficient climatic treatment could be secured at home.

Dr. R. G. Curtin, of Philadelphia, said that Denver would possibly soon cease to be regarded as a desirable locality for tuberculous patients. It largely owed its popularity to the dry climate, which was being altered by the extensive irrigation of lawns and trees, the frequent street sprinkling, the increase in the population, and the number of factories.

Dr. Denison spoke of the prevalence of cases of tuberculous meningitis in Denver. He attributed the slight increase in the number of cases of tuberculosis originating in the State to the fact that many of the residents had a tuberculous family history.

Dr. James A. Hart, of Colorado Springs, said that five yeas ago he announced that he had observed but one case of tuberculosis in his private practice originating in Colorado Springs. Up to the present time he had none others to report.

ASSOCIATION OF AMERICAN PHYSICIANS.

Fifteenth Annual Meeting, Held in Washington, D. C., May 1, 2 and 3, 1900.

Edward G. Janeway, M.D., of New York, President.

Second Day—Wednesday, May 2d.

The Organism and Lesion of Actinomycosis.—Dr. J. H. Wright, of Boston, read this paper, which was illustrated by stereopticon views of microphotographs of the diseased organs. The disease, he said, frequently went unrecognized and was much more common than generally supposed. He considered it as a subacute or chronic process. He asked what were the "clubs" or rays, and then answered the question by saying that they were degenerated filaments. In the case from which the specimen was obtained, the lungs, kidneys, liver, and even the abdominal wall and vertebra had been involved. One picture showed abscess involving the ventricular wall of the heart.

Diagnosis.—Dr. Wright said that the diagnosis could be made under the microscope by crushing one of the rays. It was not necessary to stain the specimen. The rays were branched, with dark and light spots. Staining was necessary to bring out these spots. He also spoke of the difficulty of obtaining cultures of the ray fungus, which was due to secondary infection. The ray fungus was anaerobic.

Dr. J. M. Da Costa said he thought the use of potassium iodide had an admirable effect upon the disease and even would cause a cure.

A New Pathogenic Fungus (Sporothrix).—Dr. L. Hektoen, of Chicago, read this paper, which was also illustrated by microphotographs. He mentioned the case of a boy, in whom, after receiving a punctured wound of the finger from an iron nail, several nodules appeared at the site of infection and later along the forearm and arm. Cultures were made from time to time, and with the constant result that sporothrix was present. Dr. Hektoen described the sporothrix as occurring in colonies, with central masses from which radiated spore-bearing threads. It was fatal to white rats when injected into the peritoneal cavity, and caused coagulation necrosis. He said that he knew of only three cases occurring in man.

Dr. Simon Flexner, of Baltimore, said that when the sporothrix was inoculated into mice there was an enlargement of the lymphatic glands, followed by general septicæmia.

Dr. Hektoen contradicted this last statement.

Some Conclusions Arrived at after a Study of One Hundred and Ten Cases of Pernicious Anæmia.—Dr. Richard C. Cabot, of Boston, read this very interesting paper. In his cases there had been fifty-seven males and fifty-three females, and only four cases had followed parturition. Late middle life predisposed toward it, as shown by the fact that in eighty-two of his cases the patients had been over forty years of age. He thought that pernicious anæmia was much more frequent than the text-books would lead one to suppose. Some cases had come to him which had previously been diagnosed as tuberculosis. He thought that there was very little if any relation between the menopause and pernicious anæmia. It had nothing to do with syphilis. Hemorrhage was quite common, especially of the nose and gums. He spoke of the striking constancy of the symptoms in almost all of his cases, even in some of his so-called mild ones, viz., muscular weakness, dyspnœa, gastro-intestinal disturbance (paroxysmal diarrhœa). The appetite had been poor in all but three cases, and in these it had been ravenous. In two-thirds of his cases there had been a temperature of 99° to 100° F., and even higher. The urine in fifty-three cases had been normal, while others had had a trace of albumin with granular casts. Nervous symptoms had not been constant. Some cases had had myelitis. As to the blood, the white corpuscles were subnormal; the number of red corpuscles was 2,500,000. The diameter of the white corpuscles was greater than normal. The proportion of lymphocytes was relatively high. Dr. Cabot said that there was no relationship between the symptoms and the blood condition. The average duration of this disease was from one to two years. The longest-lived case he had had was five years. All treatment, he thought, was hopeless, unless the use of laxatives would be of service, working along the line of Hunter's idea, that of gastro-intestinal toxæmia. Dr. Cabot thought that arsenic did little if any good in these cases.

Report of Cases of Pernicious Anæmia with a Special Reference to the Blood Findings.—Dr. Frank Billings, of Chicago, read this paper. He had had nineteen cases, eleven males and eight females. The average age had been forty-six years; the extremes were twenty-four and sixty-two years. He could find no exciting cause. His cases were similar in result to Dr. Cabot's cases.

Clinical Notes on Cases of Pernicious Anæmia.—Dr. Fred. P. Henry, of Philadelphia, reported five cases, and spoke of his theory that the blood of patients with pernicious anæmia reverted to that of the cold-blooded animals.

Dr. H. A. Hare, of Philadelphia, thought that pernicious anæmia was more common than the books would lead one to think. In his experience, men from the country districts had been more susceptible, and those in mining districts, especially in the anthracite district of Pennsylvania, were prone to the disease. He said that he was opposed to the idea of atrophy of gastric tubules in this disease as an etiological factor, and further, he believed in the use of arsenic for such cases. We knew a great deal about the blood in disease, but did not know so much about it in health. He suggested that work along that line would show variation in form, etc.

Dr. William H. Thomson, of New York, spoke of Hunter's theory of this disease being caused by suppuration at the roots of the teeth and in the mouth, and that swallowing the organisms caused the disease. Dr. Thomson said he had a case in which the stomach washings contained streptococci.

Dr. McPhendron, of Toronto, said he had cured two cases. He spoke of blood-serum injections and thought that some improvement had followed their use.

Dr. S. Weir Mitchell said that all the blood counts that had been given were merely relative and not absolute. Massage increased the number of red cells, or rather brought them out of their hiding-places. He cited his own case as an example.

Dr. Charles G. Stockton, of Buffalo, said that he had had twelve cases of this disease, and laid stress upon the difference between the gastric secretions with hydrochloric acid in pernicious anæmia and in secondary anæmia.

Dr. W. S. Thayer, of Baltimore, thought that one could not make a diagnosis on the blood count alone.

Dr. J. M. Da Costa spoke of the length of remissions in this disease, which were often very great. He recalled a case of a man who apparently was well for eleven months under no treatment whatever. He also mentioned the case of a sailor treated in hospital who, when he had begun to improve, had been discharged and had gone on shipboard and worked for seven months. He had then returned to hospital to die. Dr. Da Costa spoke of high fever in pernicious anæmia, and recalled cases that resembled typhoid fever in their temperature range.

Dr. Herrick, of Chicago, said that the improvement of symptoms was due merely to a relative increase in the red corpuscles and in the percentage of hæmoglobin.

Dr. Cabot, in closing, answered Dr. Hare by saying that counts of normal blood had been made at the Massachusetts General Hospital for the last eight years with negative results.

Proliferation and Phagocytosis.—Dr. F. V. Mallory, of Boston, read this paper. The effects of injurious substances were manifested, he said, in the following way: (1) Degeneration of the cells; (2) exudation from blood-vessels; (3) proliferation of the cells; and (4) phagocytosis. He said that the last two were of importance. He thought that toxins caused proliferation, *i.e.*, strong toxins caused necrosis and death, while weak toxins caused proliferation and phagocytosis. He spoke of the micrococcus lanceolatus causing proliferation (fibrous exudation) in the lungs and kidney. The toxins of typhoid and tuberculosis were mild, and would cause a proliferation of endothelial cells in the blood-vessels of the intestines, or in the liver and spleen. Dr. Mallory said that certain toxins would cause such a great increase of the lymphatic and plasma cells circulating in blood that they would pass out into the organ, as, for example, the kidney, and interfere with its function.

Dr. William H. Welch, of Baltimore, said that he objected to the theory that external agents such as toxins would cause cells to multiply. He thought that the toxins excited necrosis directly, and the finding of bacteria in the larger cells went to show that the smaller cells had attacked the larger ones, and not vice versa.

Cases of Diarrhœa Associated with the Presence of Strongylus Intestinalis in the Stools.—Dr. W. S. Thayer, of Baltimore, read this paper. After spending a short time in giving the history, together with a short outline of its morphology, he reported two cases. The first was of special interest from the fact that the patient had an abscess of the liver due to an amœba coli infection. It had also been infected by infusoria and strongylus intestinalis. Dr. Thayer said that the diarrhœa was never accompanied by pain.

(*To be concluded.*)

Do Not unjustly blame the local anæsthetic for signs of collapse or fainting when the patient is watching an operation upon himself. It is better to cover the patient's eyes even in trivial procedures, and never to operate upon a standing patient.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 19, 1900.

William H. Thomson, M.D., President.

The Physiology of Internal Secretions.—Prof. W. H. Howell, of the Johns Hopkins University, read a paper on this subject. A large number of experimenters, he said, had endeavored to prove the antitoxin theory of the action of such glands as the thyroid, but the accumulated experience of the past few years had apparently made this theory improbable. The very gratifying therapeutic results with the extracts of the thyroid gland had not been paralleled in experiments with the other gland extracts.

Ovarian Extract.—The value of ovarian extract in the treatment of amenorrhœa and dysmenorrhœa seemed to have a rational basis. The hypothesis that the ovaries produced an internal secretion had received some support by recent investigation. For example, experiments had been made upon dogs to determine the effect upon metabolism. After the performance of a double ovariotomy no change in metabolism had been noted for ten weeks, but after that time a decided decrease had been observed in the daily consumption of oxygen. On the other hand, data were available to show that the administration of ovarian extract had increased the daily consumption of oxygen. By the method of grafting more hopeful results were to be looked for. As to the nature of the specific substance of the internal secretion, nothing was as yet known.

Testicular Extract.—With regard to the testicles the evidence that they produce an internal secretion was less convincing. It had been stated by some investigators that castration diminished the consumption of oxygen, but, unlike the ovarian extract, it had not been shown that the testicular extract had the power of increasing the oxygen consumption.

Thyroid Gland.—The parathyroids were minute bodies adjacent to, or embedded in, the thyroid gland. Histologically they showed no resemblance to thyroid tissue. Experimental research indicated that these bodies had a function of their own resembling, in some respects, that of the thyroids proper, but differing in important particulars. Experiments on animals seemed to show that if both thyroids were removed and the parathyroids left, the animal would not die, but death would ensue if both the thyroids and the parathyroids were extirpated. From physiological experiments there was little reason to believe that the functions of the two bodies had anything much in common.

Suprarenal Gland.—Schaeffer had suggested that these glands gave off slowly to the blood an internal secretion which tended to keep the muscular system in proper tone, and particularly the musculature of the circulatory system. It had been shown that the quantity of secretion given off to the blood could be influenced by stimulation of the splanchnic nerve. It had also been demonstrated conclusively that the adrenal vein contained more of this secretion than the other veins of the body. It was exceedingly probable that the active principle of this internal secretion had been isolated in the substance known as epinephrin. This active principle was so easily destroyed in the body that it was hardly probable that therapeutic results of much importance would follow its hypodermic use or its ingestion by the mouth.

Pancreatic Gland.—When the duct of the pancreas is filled with paraffin, an animal showed marked disturbance of nutrition, but beyond a temporary glycosuria there was nothing observed. If after the complete removal of the pancreas a small portion was implanted under the skin of the abdomen, the glycosuria failed to appear, or was slight and transitory. It must be supposed, therefore, that under normal conditions the pancreas gave off an internal secretion to the blood, which was in some way a necessity to secure the normal consumption of sugar. In severe pancreatic diabetes the glycogen disappeared from the liver at the time when there was the most sugar in the urine. Even in the severest form of pancreatic diabetes it was easy to increase still further the quantity of sugar in the urine by puncture of the medulla. Physiological experiments indicated that pancreatic diabetes could not be treated successfully by the ingestion of pancreatic tissue; on the contrary, it had been proved that the transplantation under proper conditions of pancreatic tissue was successful in ameliorating the condition. It was possible that other glands, like the pituitary body, for example, also manufactured internal secretions. This made the subject of metabolism and nutrition much more complex than it had hitherto been believed to be.

The Physiological Effects of Extracts of Ductless Glands.—Dr. Richard E. Cunningham read this paper. He objected to the use of the ordinary desiccated extracts of the ductless glands, on the ground that there was good reason for believing that they were mixtures of various substances, and that the determination of the results from their use must necessarily be very unreliable. Much had been anticipated from the administration of the extract of the pituitary body in cases of acromegaly, yet the clinical results had been disappointing. He had personally been unable to observe the remarkable effects on the circulatory system from the ingestion of suprarenal extract, described by several observers. One would expect the best therapeutic results from the administration of suprarenal extract in Addison's disease, yet the cases so far published had not confirmed this belief. Of twenty-four reported cases that he had collected in which the suprarenal extract had been administered, not a single patient could be said to have been cured, though fourteen had been temporarily improved. Ten had been practically unaffected by the treatment. When the aqueous extract of the suprarenal gland was introduced into the blood-vessels, it caused a marked fall in the blood pressure, but if the colloid preparation of the extract of this gland was injected this lowering of the blood pressure was not noted.

Thymus Gland.—The thymus gland had been first introduced to the medical profession as a remedial agent in connection with the treatment of a case of pseudo-hypertrophic paralysis. In ten cases of exophthalmic goitre treated by him with dried thymus, only three could be said to have been even temporarily improved. The best results from the use of these extracts had been secured with thyroid extract. If large doses of the desiccated extract were given, the results would often be the development of symptoms apparently indicative of poisoning with the proteid bodies constituting the impurities of the extract. On the other hand, it would often be found that the same individual could take rather large doses of iodothyrin without experiencing any such toxæmia. The iodothyrin did not seem to be nearly so active as the colloid, from which it could be easily obtained.

Dr. W. H. Bates said that he understood that the secretion of the suprarenal gland was stored up in the muscles, giving them, as it were, latent energy. In cases of heart disease, a very decided effect on the heart could be observed when the suprarenal extract was absorbed through the mucous membrane of the mouth, or was given hypodermically. This action was less likely to be observed if the extract was swallowed and was thus exposed to the gastric juice.

Dr. Cunningham spoke of the parathyroids, and said that in the dog there were usually two such bodies. The inner one of these was removed with considerable difficulty. In three dogs he had performed the experiment of taking the thyroids and parathyroids and sewing them in an artificial pocket of membrane. All three animals had become myxœdematous. One had been killed at the end of a month, and two had died in the course of another month. He was sure he had removed the parathyroids as well as the thyroids, and yet the animals had survived.

Dr. Howell, in closing, said that Dr. Bates' theory about the storing up of the adrenal secretion in the muscles was not in accordance with the facts brought out by experimentation. Undoubtedly the extract had an effect upon the heart and circulation; nevertheless this was very temporary. The effect of injections was certainly not promising so far as direct physiological experiment was concerned.

SECTION ON MEDICINE.

Stated Meeting, April 17, 1900.

E. Franklin Smith, M.D., Chairman pro tem.

The Iodide Treatment of Aneurism.—Dr. Louis Faugères Bishop read this paper. He said that the immediate effect of this treatment was that the patients were made more comfortable, the pulsation of the aneurism became less, and the sac apparently diminished in size. This remedy seemed to have an effect on the sac itself, whereby the development was less rapid and the tendency to coagulation was increased. The iodide treatment was directed against the tissue changes which were the original cause of the disease. Iodide certainly had a greater influence over tissue metabolism than any other drug. All the other methods of treatment by inducing coagulation had the defect that they sought to cure a disease the causes of which remained active. He had been accustomed to begin the treatment by the administration of ten drops of the saturated solution of iodide of potassium, three times a day, and increasing the dose one drop each day. The speaker said that he had seen so many cases of aneurism benefited by the iodide treatment that he had now great confidence in it. These remarks were intended chiefly for cases of thoracic aneurism.

Report of Three Cases of Thoracic Aneurism in which Subcutaneous Injections of Gelatin were Used.—Dr. Lewis A. Conner made this report, giving his own experience with the method during the past year. Briefly the method consisted in injecting 200 c.c. of a 2.5 per cent. solution of gelatin into the subcutaneous tissues of the thigh, and after the injection keeping the patient absolutely quiet. These injections should be repeated weekly until fifteen or twenty had been given. In his own cases the initial injection had consisted of a two-per-cent. solution and the subsequent ones of a one-per-cent. solution. The injections had all been followed by slight local discomfort and rise of temperature. The first case was one in which rupture took place in the course of the treatment, and the autopsy had revealed no evidence of recent clot formation. The second case had been one of aneurism of the transverse and descending portions of the arch of the aorta. Between May 24th and July 27th seven injections had been given, and each injection had been followed by severe pain lasting often for eight or ten hours. This had been associated with reddening of the skin, but in no instance had suppuration occurred. The pain had been equally severe whether the injection had been given in the thigh or in the abdominal wall. After the second injection the slight pulsation that had been felt posteriorly disappeared. The patient's cough and the irritation of the throat disappeared while under treatment, but the latter had been discontinued because of the great suffering produced. The third case was one of aneurism of the transverse portion of the arch. Three injections had been given, and had caused local distress without producing any improvement. During the treatment there had been a gradual increase in the size of the aneurism. The greatest care had been taken in the preparation of the gelatin solution.

Dr. C. H. Lewis said that he had tried the method in one case, a patient in Columbus Hospital. There had been a very large pulsating aneurism of the arch of the aorta, and extensive erosion of the ribs. The first gelatin injection had caused a good deal of pain and some rise of temperature. At the expiration of a week a second injection had been given, but it had also been followed by severe pain and by a temperature of 103° F. A few days later the aneurism had ruptured. Unfortunately an autopsy could not be obtained.

Rabies in New York City.—Dr. Robert J. Wilson read a paper with this title. He deplored the tendency of certain physicians to deny the very existence of rabies, because this led students and young physicians to be careless in the treatment of animal bites. In 1898 there had been eight cases of death from rabies in the Greater City of New York; in 1899 two cases, and so far in 1900 one case. The disease might be said to be endemic in the borough of Richmond. Since January 1, 1897, the bodies of forty dogs had been received at the laboratory of the health department, four coming from one locality. Mild and superficial cauterization, or the application of antiseptics, was worse than useless. The best application was the actual cautery. Fuming nitric acid was about as good, but the wound left by it was slower and more troublesome in healing. Unless the wound was very insignificant it was better to administer an anæsthetic in order that the cauterization might be thoroughly done. Such a procedure conferred protection in about ninety per cent. of cases. In all suspected cases the best treatment should be instituted whenever possible, and if this was done it would yield ninety-nine per cent. of successes. The shortest period for the Pasteur treatment was fourteen days, but it was often necessary to extend the treatment over a period of eighteen to twenty-five days. The injections were preferably given over the abdomen. The first few injections were quite painful, but it was possible for an individual who was not of a nervous temperament to take the treatment and still continue at work. There was absolutely no danger in the treatment itself, but it was not advisable to send the virus out from a central laboratory.

Dr. H. T. Cronk sent a report of a case of rabies that he had observed at the Gouverneur Hospital.

Dr. C. H. Lewis presented the report of the case of rabies which had occurred recently at St. Vincent's Hospital. On March 8th a man, sixty years of age, had presented himself for treatment for a bite on the right side of the neck and cheek which he had received from a strange St. Bernard dog. This dog had been found by the man's children, and had appeared perfectly docile, so that the family had been on the point of keeping the dog. The man had attempted to remove a string from the neck of the animal, and in doing so had pressed upon a partially healed sore; immediately the animal had sprung upon him and inflicted a wound from four to six inches long. The animal had exhibited thereafter no other signs of distemper or other disease. The dog had been immediately shot by the police, and his carcass taken away by the street-cleaning department. The wound had been irrigated at the hospital with bichloride solution, cauterized with pure carbolic acid, partially sutured, and dressed antiseptically. The man had suffered much pain that night, and on his return to the hospital, on the advice of the surgeons there, he had entered the hospital. Thirteen days after the bite, the patient had been discharged with the wound healed. Twenty-one days later the man had been readmitted, this time to the medical service of the hospital. For eighteen days he had worked, and had felt perfectly well. On April 10th, on attempting to drink some water he had experienced the first difficulty in swallowing. During the night he became nervous and sleepless, and the wound began to pain him. The next morning he had gone to the Pasteur Institute, where he had been told the preventive treatment would be of no avail. On readmission to St. Vincent's Hospital, on the same day, his pulse had been 80, respiration 24, and temperature 98° F. There was a peculiar apprehensive expression, and he begged to have water taken away, although the mere sight of it had no effect upon him; it was only when he was asked to drink it that he experienced any distress. On the following day the temperature had kept at about 102°; the face had been flushed, and there had been some dyspnœa and a feeling of tightness about the throat and chest. That night he had become delirious. In the morning his temperature had been 103°, his pulse 84, and respiration 24, and he had been quite excitable. For the first time medicinal enemata caused spasm. He passed into coma and died at 5 P.M. A partial autopsy had been secured, making it possible to examine the medulla, pons, and part of the cord. Nothing distinctive had been discovered from the gross appearance, but portions of the brain and cord had been taken for purposes of inoculation.

Dr. L. F. Bishop emphasized the importance of teaching that there were two forms of hydrophobia, the rabid and the paralytic. Comparatively few people seemed to know or realize that a dog might have hydrophobia and yet not be rabid, or exhibit the classical symptoms of rabies.

Dr. Wilson said that while he believed no case had been reported in which hydrophobia had been communicated to another by a dog through the saliva alone, nevertheless it was a well-recognized rule in all Pasteur institutes that the utmost care should be taken to use antiseptics, to cleanse all parts from saliva, and to take every precaution against possible contamination of this kind. It was exceedingly important in every case of dog-bite to inquire where the dog had come from, and whether the animal was a stray one. If the latter was the case one should immediately take steps to find out what had become of the animal. He did not think human beings were usually infected from animals suffering from the paralytic form of rabies; indeed, the paralytic form seemed to be wholly restricted to laboratories.

Dr. Lewis remarked that there was a rule requiring the police department to see that every animal that had bitten a person and had been shot should be taken to the health department for investigation. Had this been done in the case just reported it might have been the means of saving the man's life.

Dr. L. A. Conner said that some years ago the assistant pathologist of the New York Hospital had died shortly after having made a post-mortem examination on a case of hydrophobia. He had presented in his last illness a peculiar form of paralysis which had been considered at the time to be paralytic rabies.

The Good and Bad Effects of Digitalis Used as a Therapeutic Agent.—Dr. William Henry Porter read a paper with this title. He said that it was quite apparent from a perusal of current literature that the action of digitalis upon the human system was not yet fully understood; hence he desired to present in this paper a review of its physiological function and therapeutic possibilities. To comprehend thoroughly the action of any drug its chemical composition must be fully understood. So far, five glucosides had been isolated from digitalis, viz., (1) digitalein; (2) digitoxin; (3) digitonin; (4) digitalin, and (5) digitin. They were all oxidizable substances, and yielded as the result of their oxidation-reduction heat, carbonic acid, and water. Only four of these glucosides actively influenced the animal economy, and while three of these had actions in common, the fourth was absolutely antagonistic to the other three.

Powdered Digitalis.—When powdered digitalis was administered the contained active principles profoundly influenced the action of the heart and the circulation. The three active principles which had a similar action caused a short and more intense systole and a prolonged diastole, and at the same time, by contracting the arterioles, produced a decided rise in the blood pressure. These circulatory changes were immediately followed by a marked slowing of the heart's action—an effect which was best explained by the increased resistance in the arteries and the depressing effect of the digitonin upon the cardiac muscle. If the digitalis was continued, the cardiac pulsation became more frequent and feeble as a result of the toxic effect of all the active principles of digitalis on all the involuntary muscles. While these changes were taking place the continued high arterial tension deprived the heart of its proper nutrition, so that if the drug was not withheld, the final result would be death with the heart in diastole. As a rule, the blood pressure in the splenic arcade remained normal.

Infusion of Digitalis.—The effect of the infusion of digitalis is different from that of the powder because two of the active principles, digitoxin and digitalin, were almost wholly insoluble in water. The infusion, therefore, really contained only two active principles, digitalein and digitonin, whose actions were antagonistic.

Tincture of Digitalis.—Still another action was observed from the use of the tincture of digitalis, because while digitoxin and digitalin were freely soluble in alcohol, digitalein was only sparingly soluble, and digitonin not at all.

Fluid Extract of Digitalis.—The fluid extract more closely resembled the powder in its action, but it was a more uncertain preparation because there was no practical method of determining just what proportions of the different ingredients were dissolved out by the mixture of alcohol and water used in preparing the extract.

Cumulative Action.—Dr. Porter said that careful study failed to discover good evidence that digitalis was stored up in the system for a time and was then suddenly liberated and eliminated, thus giving rise to the well-known phenomena attributed to the so-called cumulative action of this drug. This action appeared to be more directly exerted upon the heart, the kidneys often acting freely even in spite of the depressed heart action. The explanations hitherto advanced seemed to the speaker wholly inadequate. His own explanation of the occurrence of these symptoms of digitalis poisoning was, that three factors were at work, viz., (1) the diminished nutritive supply to the cardiac muscle, resulting from high arterial tension; (2) the increased work imposed upon the heart, and (3) the direct action of digitalis as a powerful muscle poison. He said that there could be but one result of the continued administration of digitalis, *i.e.*, the degeneration of the muscular fibres of the auricular and ventricular walls, particularly of the former. The heart action was at first slowed to meet the increased demands made upon it; then, like any other degenerated heart, its action became rapid and feeble, and finally irregular, or it might stop altogether in diastole as a result of some slight exertion, such as sitting up in bed or rising to pass urine. When a reliable preparation of digitalis was administered continuously up to the full physiological limit, the heart was invariably damaged, thus explaining the oft-repeated remark that digitalis proved unsatisfactory in permanently alleviating cardiac affections.

Digitalis in Mitral Lesions.—When there was insufficiency or stenosis of the left auriculo-ventricular orifice, digitalis temporarily improved the condition. In the case of aortic insufficiency, digitalis caused a more rapid and effectual closure of the incompetent orifice, and, by the intensified systole, a more thorough emptying of the ventricle. In cases of mitral stenosis the prolonged diastole and intensified contraction of the auricle enabled the latter more thoroughly to fill the ventricle, and the more powerful systolic contraction drove a larger volume of blood into the aorta. It was evident, therefore, that in both lesions of the mitral orifice the administration of digitalis overcame the pulmonary congestion and the dyspnœa dependent upon it. But once the normal tension had been reached and passed, the action of digitalis was detrimental to all the physiological functions of the body.

Digitalis in Aortic Lesions.—Dr. Porter said that there seemed to be no good reason for the employment of digitalis in cases of aortic insufficiency or aortic stenosis. In aortic regurgitation the increased systole certainly could not compensate for the prolonged diastole, and the longer time during which regurgitation could take place, to say nothing of the injury resulting from increasing the peripheral resistance and diminishing the nutritive supply of the cardiac muscle. In aortic stenosis the augmented cardiac systole might, for a time, force a larger volume of blood into the aorta, but the increased work thrown upon the heart, the toxic effect of digitalis on the muscle, and the progressively diminishing nutrition soon led to degeneration of the heart, and to an aggravation of all the symptoms. In fatty degeneration, or in any enfeebled state of the circulation in the heart muscle, digitalis was contraindicated. In hypertrophy of the heart digitalis might possibly be of use for a few days at a time in cutting down the nutritive supply, but it was too dangerous a remedy to employ for such a purpose. Digitalis should be given to influence the heart and circulation only when the arteries were very much relaxed, and the pulmonary or systemic veins overfilled. As soon as the engorgement had been relieved, digitalis should be stopped, and more reliable remedies substituted. It was true that some of the bad effects of digitalis could be antidoted by combining it with nitroglycerin, but such a combination did not prevent the toxic action of digitalis on the involuntary muscles, and it was at best poor therapeutics.

Action of Digitalis upon the Kidney.—The speaker then proceeded to discuss at length the physiological laws governing renal secretion, and in this connection made the statement that the quantity of water discharged from the kidneys was dependent upon the relation of hydraulic pressure within the glomeruli on the one hand, and in the arterial system throughout the body on the other hand. The function of the epithelial cells lining the uriniferous tubules was a much more complex problem. Serum albumin did not exist in the blood as a single substance; what had been called serum albumin was now known to be composed of three or more isomeric forms of the proteid molecule. The speaker said that it had been asserted that digitalis was not eliminated from the system by the kidneys in the form of glucosides, and hence the diuretic effect of digitalis could not be explained by any irritative action upon the renal glands. It was not difficult to show that the chief action of digitalis on the kidneys could be explained by its power to change the mechanical workings of the heart and of the circulation. When digitalis was administered continuously in rapidly increasing doses, owing to the high arterial tension and the diminished calibre of the renal arteries, the blood was driven through the kidneys so rapidly that the effete material was not removed. The result was first an anæmia, and subsequently a toxic condition usually described as uræmic. In cases of renal disease in which there was no marked swelling of the epithelial cells and the exit from the larger veins remained unimpaired, digitalis simply drove the blood through the kidneys more rapidly without augmenting the hydraulic pressure in the glomeruli, and consequently in this class of cases digitalis had no diuretic action, but impaired the nutrition of the kidney and practically aggravated the kidney lesion. On the other hand, if there was a general venous engorgement, a passive congestion of the kidney, or an active determination of blood to the kidneys until the circulation in them had become impeded, the result was very different. The same was true of all forms of parenchymatous metamorphosis or degeneration of the epithelial cells, for here the latter became swollen and by pressure on the veins outside the Malpighian tufts, prevented the normal and free escape of blood from the efferent vessels of the glomeruli. When digitalis was administered under these conditions, the watery constituents of the blood flowed off through the capillaries of the Malpighian tufts into the uriniferous tubules—in other words, its action here was that of a true diuretic. Moreover, the improvement of the general circulation in this class of cases led to better nutrition in the kidney itself, and in this way helped to cure the parenchymatous lesion and all other lesions found in this group of cases.

Conclusions..—The author's conclusions were as follows: (1) The chemical composition of digitalis is complex, some of its active principles antagonizing others; (2) the various preparations of digitalis differ widely in their composition and action; (3) the so-called cumulative action of digitalis is due to its contracting the arterioles and shutting off nutrition; (4) it is both a useful and a dangerous remedy, and has a very limited range of usefulness; (5) it is of use only in lesions of the mitral valve, and then only for a short time, and should be discontinued as soon as these have been overcome; (7) it is of value as a diuretic only when there are low arterial tension and engorgement of the kidney; (8) digitalis decreases the excretory action of the normal kidney and impairs its nutritive activity.

Dr. Leonard Weber took exception to the statement in the paper that the infusion of digitalis was of but little value. His personal experience with it had been much more satisfactory, provided he used the fresh English leaves, made into an infusion of the strength of half a drachm to six ounces of water. He had been seldom disappointed with it, and had attained as good results as with the powder. He had used Squibb's fluid extract for years, and had found it also an exceedingly useful remedy, being not only reliable and effective, but convenient because of the smallness of the dose. The indications for the use of digitalis had been laid down very clearly in the paper, as had also the action of digitalis on the kidneys. He had been particularly pleased with the statement that digitalis was seldom, if ever, indicated in disease of the left side of the heart. He looked upon digitalis as one of the most valuable remedies at at our command.

Dr. L. A. Conner said, concerning the use of digitalis in aortic insufficiency, that while the indications for this drug were much less frequent here than in some other cardiac lesions, he could not but feel that it sometimes proved exceedingly beneficial. The theoretical objection that it unduly prolonged the period of regurgitation did not seem to him of much weight, for, if this argument was carried to its logical conclusion, it meant that we should make use of remedies which would increase the rapidity of the heart's action. It was a question rather of the condition of the ventricle and of the state of the heart muscle than a theoretical consideration of the purely mechanical problems involved.

Dr. Porter, in closing, said that his statements had not been made from a purely theoretical standpoint, but had been based on a very large clinical experience. This had been that, outside of that condition in which there were decided venous engorgement and emptiness, so to speak, of the arterial side of the system in cases of aortic regurgitation, digitalis was more harmful than useful. The great danger from digitalis was from the heightening of the arterial tension in the coronary arteries, with the consequent impairment of the nutrition of the heart. He still believed that the tincture of digitalis, made from the fresh leaves, was the most valuable and the most certain of the preparations of digitalis. It contained the largest percentage of those constituents which were most useful in the treatment of cardiac disease.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 23, 1900.

J. Clifton Edgar, M.D., Chairman pro tem.

Tetanus: its Nature and Therapy.—Dr. Alexis V. Moschcowitz read a paper with this title. Tetanus was one of the diseases known from time immemorial. It was an acute infectious disease, invariably caused by the entrance into the body of the organism of Nicolaier. Different names had been given to this disease, but they were really varieties of tetanus, giving rise to differences in symptomatology. Tetanus might follow the slightest injuries, such as the introduction of a hypodermic needle, or from a leech-bite. The diagnosis was readily made by finding the bacillus of Nicolaier.

Etiology.—It was caused by the lodgment of the bacillus of Nicolaier, except in the few cases in which the tetanotoxin or other poison resulting from the action of the bacilli had been introduced into the system in laboratory work. The germ was harmless when swallowed, inhaled, or introduced into the rectum.

Symptoms.—The symptoms were always so well marked that the reader of the paper did not enter largely into the description of them. Cephalic tetanus began with paralysis of the muscles supplied by the facial nerve. Puerpural tetanus might follow abortions as well as child-birth. It always began with trismus. Tetanus neonatorum was a disease of the poorer classes, and the first symptom was inability to nurse.

Pathological Anatomy.—It was difficult to give the concise pathological anatomy of tetanus; it was not fully known. The present knowledge of its pathogenesis pointed to the cells of the anterior horns as the seat of changes. Local tetanus occurred regularly in all cases of experimental tetanus and in muscles nearest the seat of infection. The seat of origin of the spasms was in the spinal cord, the toxins being carried along the nearest nerves. The peripheral nerves which were connected with the wound were frequently in a condition of acute, septic, ascending neuritis.

Prognosis.—The prognosis depended upon two factors: (1) The period of incubation; (2) the rapidity of the symptoms showing the progress of the disease. The prognosis of acute tetanus with a short period of incubation may be as high as 96 per cent., down to 60 per cent., or a trifle less. During the past ten years the following cases, taken from the literature, gave these results: From the use of the subcutaneous method, 290 cases, of which 173 resulted in recovery; from the use of the intracerebral method, 48 cases, in which 23 patients recovered; or a total of 338 cases, of which number 196 patients recovered and 142 died. He separated the cases into the following divisions: (1) Very grave cases, in which, in one or two hours, the whole body would be involved; (2) grave cases, in which the tetanic symptoms were continuous, tonic and clonic convulsions taking place; (3) medium grave cases which developed in the course of a few hours to six weeks, and in which the symptoms gradually disappeared; (4) mild cases, which were distinguished by the symptoms coming on gradually; (5) very mild cases, in which there were mild trismus and mild rigidity of the muscles of the neck; here the symptoms might last many weeks.

Treatment.—Up to the last decade the treatment was symptomatic. By the efforts of Cattani, Tizzoni, and others the treatment had been modified. The rational treatment embraced the following points: (1) The bacteria should be destroyed at the seat of infection; (2) the toxins already absorbed should be eliminated; (3) an endeavor must be made to render innoxious the products absorbed; (4) the symptoms induced by the action of the toxins should be overcome. The offending body should be removed and the wound disinfected. Saprophytic germs were easily destroyed. A solution of bichloride, 1 : 1,000, to which was added five per cent. of tartaric acid, might be used. Tincture of iodine was useful. The entire wound should be cauterized with the actual cautery or nitrate of silver. Amputation of the injured member might have to be considered. In endeavoring to eliminate the toxins already absorbed, it had not yet been definitely decided through what channels the toxins were eliminated. He advised the use of diuresis, catharsis, and diaphoresis; these were certainly worthy of trial on theoretical grounds. Again, a certain quantity of blood might be withdrawn and decinormal saline solution introduced. The fundamental principle of treatment was by means of introducing into the system the serum of animals rendered immune; the mode of action had not been acceptably explained. He referred to the failure to diagnosticate tetanus sufficiently early. A patient with tetanic symptoms was not beginning to have tetanus, but was beginning to die of tetanus. The toxins should be neutralized; their effects on the body should be prevented. The intracerebral injections he thought to be devoid of danger if used with proper antiseptic and aseptic precautions, and done slowly enough. Urticaria had been observed, but it disappeared within a few days. As to immunizing the patient after infection had taken place, this involved the introduction of the antitoxin as a prophylactic measure in all wounds; such opportunities were seldom offered. To overcome the symptoms induced by the action of the toxin, the reflex irritability of the higher reflex nerve centres, the aim should be to take such measures as will prevent spasm, as by the use of certain remedies. Of some value were opium and morphine, chloral, bromides in full doses, hyoscyamus, physostigma, etc. The injection of certain emulsions into the brain substance was referred to; also the destruction of the toxins circulating in the system by injections of carbolic-acid solutions. In closing the speaker stated that by the antitoxin treatment the mortality had been reduced from ninety per cent. to about forty per cent. He recommended that, although the serum was of great value, the other therapeutic measures should not be neglected.

Dr. William H. Park said that the first surgical point to keep in mind was how extremely local was the poison of tetanus; the bacilli, and the toxins that originated from them, were to be found in the small local wound; so, if the case was seen early enough, much of the symptoms could be eliminated. He emphasized the importance of cleansing the wound in order to get rid of both bacteria and the toxins.

Dr. Lambert did not get with the serum treatment as favorable results as were given in Dr. Moschcowitz's paper; he was not much encouraged from the use of the serum. Regarding the method of treatment he did not see that better results were obtained when the serum was introduced into the ventricles or spinal cord than when an intravenous injection was given. Cases had been reported in which patients had died from abscess of the brain and not from the tetanus. The intravenous and subcutaneous methods should be tried, and he cautioned against injections into the brain or spinal cord.

Dr. Robert Abbe stated that, from his personal experience with the antitoxin, he rather favored its use and would certainly use it again under similar circumstances. Up to summer before last he had seen only six cases, and these, with one exception, had been fatal. Two years ago he had seen two, and last summer he had seen seven cases. Two cases he had treated by the subcutaneous method; he had had a small allowance of the serum, and bad results followed. Last summer he had seven cases which presented unusual and interesting features; they furnished a valuable opportunity to see differences in action in wounds in which the tetanus poison had gained an entrance; the wounds acted as differently as two surgical wounds could. Some of the wounds were not ordinary suppurative ones but ugly punctures, following pistol shots, and around the wound, in an area as large as the hand, there was a lardaceous infiltration; when it was incised it cut like pork. All wounds should be thoroughly cleansed, and he preferred the tincture of iodine for this purpose, wetting a cloth with it. The intracerebral injections were used only in bad cases; in five such cases three patients survived. The method used was that of Kocher; a simple open wound was made by drilling through the bone with a common hand-drill, and the antitoxin was injected with an ordinary hypodermic syringe. An opening as large as a lead pencil could be made under cocaine anæsthesia; the proper position was half-way between the outer angle of the orbit and a point in the middle of the median line of the skull directly over the auditory meatus. There was no pain or mental change; the pupils, pulse, respirations, and heart were absolutely unchanged. There was no evidence of later trouble so far as could be determined. In two cases the injections were made twice through the same wound. A practical question that presented itself was whether we could see any effect from the direct administration in this way, either immediately or in the future, that could be ascribed to the remedy. In some cases one could not see any striking effects. In some cases there was some decided benefit, even in those that were fatal. In one case of puerperal tetanus that was referred to him, the woman was in an exceedingly bad condition; intracerebral injection by Kocher's method was performed, and the patient went thirty-six hours without spasms; she ultimately died.

Dr. M. W. Ware had often seen the lardaceous appearance of the wounds described by Dr. Abbe, occurring about the injuries from guns or toy pistols. Knowing that the germ of tetanus was anaerobic, he incised three inches away from the wound in patients who had died from this disease, and he got pure cultures. This taught him that, in these cases of tetanus, it was better to lay open widely the wounds when first seen. He deprecated the use of caustics on account of the eschars that were formed.

Dr. Alexis V. Moschcowitz closed the discussion. Regarding the remarks of Dr. Park, who had stated that most of the patients had died after intracerebral injection from abscess of the brain, as a matter of fact he had collected all of the cases in which the intracerebral injection had been used, and only one patient had died, and in this instance the streptococcus albus was found, showing that it had resulted from improper cleansing of the skin; that patient probably had general sepsis. Injury to the brain might be done, but not if care was taken to use a fine needle and to take enough time.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 5, 1900:

	Cases.	Deaths.
Tuberculosis	214	164
Typhoid fever	13	2
Scarlet fever	152	13
Measles	637	32
Diphtheria	233	30
Laryngeal diphtheria (croup)	8	6
Cerebro-spinal meningitis	0	4
Chicken-pox	26	0
Smallpox	2	0

Yellow Vision after Snake-Bite.—Richard Hilbert mentions the various conditions attended with the phenomenon of colored vision. So far as he is aware, his is the first report of seeing yellow after snake-bite. A young girl, walking barefoot in the fields, fell with a piercing cry that she was bitten on the toe by a snake. The snake was seen by others. An hour later, when brought to the office, blood could be squeezed from the wound near the nail. The limb was 5 cm. greater in the middle thigh than its fellow, and the calf 4 cm. The next day there were stiffness and pain, besides the symptom that all light-colored objects appeared bright yellow. A bluish discoloration of the skin, extending over the abdomen, required fourteen days to disappear. It was seven and a half weeks before the child was well again. It would be interesting to learn whether in tropical countries, where snake-bite is more frequent, yellow vision is a common symptom.—*Memorabilien*, April 3, 1900.

Notes on a Case Simulating a Perforating Gastric Ulcer.—W. J. Thompson and F. C. Dwyer met with the case of a young woman, aged twenty-three years, who some six weeks previously had begun to suffer from vomiting on taking food, with much discomfort and flatulency. After a meal of bread and milk she was seized with nausea and epigastric pain, followed by the vomiting of a reddish fluid. Symptoms grew worse in the course of a few hours, with abdominal distention, rapid and weak pulse, fever, etc., and a diagnosis of perforation was made. Section of the abdomen revealed, not a gastric ulcer, as was expected, but a coil of jejunum intensely inflamed, covered with flakes of lymph and having on its surface two patches almost gangrenous, though not yet perforating. Nine inches of bowel were resected, the Murphy button being used. Recovery ensued. The lesion was believed to have resulted from infarction from a mesenteric thrombus.—*Dublin Journal of Medical Sciences*, April, 1900.

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Original Articles.

WHEN SHALL WE OPERATE FOR APPENDICITIS?[1]

By JOSEPH WIENER, Jr., M.D.,
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My object in writing this paper is not to add to the already overwhelming mass of literature that has of late years accumulated on this subject, but rather to attempt in a feeble way to let a little light on the most important part of the whole subject-matter, namely, when shall a given case of appendicitis be submitted to operation? In spite of the extensive literature on this subject, perhaps to some extent on account of it, much uncertainty and diversity of opinion exist among medical men as to when they should advise an operation in these cases. I have been led more particularly to be interested in this subject because I am almost daily coming in contact with cases of appendicitis that are sent to the hospital by physicians. Only too many of these patients have already perforations of the appendix, and not a few have a general peritonitis.

I am no firm believer in the value of statistics, but the following figures taken from the annual reports of the Mount Sinai Hospital for the past five years must give food for reflection:

	1894	1895.	1896.	1897.	1898.
Total number of cases of appendicitis.	41	87	91	130	149
Number of cases with general peritonitis	7	10	14	23	22

In one hospital alone we find in five years seventy-six cases of general peritonitis due to disease of the appendix, almost every one of which, of course, terminated fatally. It need scarcely be mentioned that had these seventy-six patients been sent to the hospital early, the large majority of them would have recovered. The term "early operation" is a relative one, and much harm has been done by attempting to lay down rules as to on which day or at which hour after the onset of the attack an operation should be performed. I have known of several cases that were sent to the hospital on the third or fourth day of disease, sometimes even on the second day, with general peritonitis. On remonstrating with the physician of these patients for having delayed so long before sending the patients in for operation, the reply has generally been: "Why, it is only the second or third day of the disease." This was very true, but it generally cost the patient his life. Every case must be decided on its merits—no rule of thumb can be laid down. To wait for symptoms of perforation or of peritonitis is fatal. Patients may die, and especially children do die, from sepsis without any perforation. It is advisable in children to urge operation even earlier than in adults, for the child's heart cannot withstand sepsis as well as an adult's. But there is another important point about this term early operation. When did the disease in the appendix, the appendicitis, actually begin? With the onset of the first attack of pain, vomiting, fever, etc.? Or was there an inflammation going on insidiously long before? The first attack of appendicitis very often does not mean the beginning of the disease. There may have been a catarrhal inflammation, or even an ulceration of the mucous membrane of the appendix for a long time before the onset of what is generally taken for the first attack. The acute attack may mean that the ulcerative process is suddenly increasing, or that a foreign body (coprolith) is superimposed on a previously long-present ulcer; or it may mean that the peritoneum about the appendix is becoming inflamed (a local peritonitis). If we fail to keep these anatomical facts in mind, we will frequently be disagreeably surprised on opening the abdomen early in an attack (as we suppose) to find a perforation of the appendix and a general peritonitis. If, on the other hand, we keep the pathology before us, we will carefully examine the history of every case of acute appendicitis for any gastric or intestinal symptoms which, even though slight, may have previously been present. We will sometimes even get a history of slight pain at times in the right iliac region, for months preceding the first acute attack. In the presence of such a history, we will be more anxious to operate very soon after the beginning of the acute attack. For these are just the cases in which, on opening the peritoneal cavity on the second or third day, we find a diffuse peritonitis. Naturally, this is true to even a greater degree in recurrent attacks. For here we know that a pathological process has been for weeks, or months, or even years, going on inside the appendix. And we do not know, we cannot know, how near that process in the appendix is to perforating. Six hours, twelve hours, twenty-four hours of an acute attack may bring on a fatal perforation, and we may then perform an early operation, so-called, and find to our sorrow that it is a very late one. Hence it will be wise in a second or third attack to operate earlier than we would in a primary attack with the same intensity of symptoms. There is a class of cases in which the patients have one attack of moderate severity that keeps them in bed for a few days only. They then get up and attend to their work, but they often have pain and discomfort in the right iliac region with perhaps some gastric disturbance. These cases, though the patients are able to be up and attend to their affairs, are always dangerous, and cannot be watched too carefully. They go along for weeks or even months, and then there suddenly develops a second attack, which is always a severe one and often fatal. The disease with them is progressing continuously though slowly, and finally leads to a sudden climax. The following case, in which I operated a short time ago, serves as a striking example of this class:

Charles L——, aged seventeen years, had his first attack of appendicitis six months ago. He was in bed for two weeks with moderate pain and tenderness, which were relieved by ice-bag and opium. For the following few months he had pain and discomfort off and on in the right iliac fossa. For the past six weeks he was free from pain until two days before his admission to the hospital, when he was seized with severe general abdominal pain, which soon became localized to the right side. At the beginning of the attack he had a chill lasting ten minutes. He was treated outside for forty-eight hours, and entered the hospital with a pulse of 150 and temperature of 104° F. I decided to operate as soon as I saw the patient, which was about an hour after his admittance. At the operation an enormously thickened appendix was found, gangrenous at its base, where it had sloughed away completely from the cæcum, and surrounded by foul-smelling pus. In the pus a small coprolith was found, and at the tip of the appendix was a second one. The general peritoneal cavity was not invaded at the operation; the appendix was removed and the whole wound packed with gauze. Four hours after the operation the patient had a second chill lasting ten minutes. The day following the operation the pulse rate was 120–142, and the temperature 100°–102° F. There was slight conjunctival icterus and some delirium—in short, the usual picture of sepsis. Septic paresis of the intestines developed, and the patient died in forty-eight hours after the removal of the appendix.

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[1] Read before the Harlem Medical Association, January 8, 1900.

I operated in a somewhat similar case last summer. A boy, aged seventeen years, had three attacks of appendicitis during the preceding year and a half. The attacks were mild in character, and had kept him in bed only a few days. Between his attacks he had occasionally had slight pain on the right side. He entered the hospital two days after the beginning of the attack, which had been ushered in by vomiting and pain in the right iliac region. There was general abdominal pain, and the whole abdomen was very rigid. The diagnosis of appendicitis with general peritonitis was made. At the operation, offensive purulent fluid was found in the peritoneal cavity; the appendix was perforated at its base, not adherent, but the small intestines were all matted together, presenting the usual picture of a general peritonitis, of which the boy died within twenty-four hours of the operation. Such cases, of which we see only too many at the hospital, have prompted me to write this paper.

The diagnosis of appendicitis is made from: (1) The history; (2) the symptoms; (3) the results of examination—by abdomen, by rectum, by vagina.

As regards the history, we must ascertain first of all whether there have been previous similar attacks, whether the patient has had gastric or intestinal symptoms which may have been passed by as "indigestion," and yet may have been due to trouble in the appendix. The history of the onset of an acute attack of appendicitis is generally one of two kinds. Either there has been general abdominal pain with or without vomiting for some hours, with a gradual localization of the pain to the right iliac fossa—this is the history we most frequently obtain. Or, on the other hand, the attack begins with severe pain on the right side, generally accompanied by vomiting, but with little or no pain in other parts of the abdomen. This history is not so common, and generally speaks for a severe inflammation.

The symptoms of appendicitis are sufficiently well known not to need much dwelling on. I would merely draw attention to the fact that the symptoms are unfortunately very often no criterion of the intensity or character of the disease. We see very severe cases with very mild symptoms; we see mild cases with severe symptoms. The symptoms of an attack may be entirely masked by the treatment that is being instituted; particularly is this true of the use of opium or morphine. Too often is operation delayed because the pain has subsided under the use of opium, and the patient feels very comfortable, while the pathological process in the appendix is quietly progressing. Too much stress cannot be laid on the danger of using opiates in this treacherous disease. Almost all the patients that enter the hospital with a general peritonitis have been treated with opium or morphine. For myself, I firmly believe that if the pain in an attack of appendicitis, in spite of the use of an ice bag, is so severe as to necessitate the giving of morphine, then an operation is almost invariably indicated. Pain and local tenderness are two of our most valuable symptoms in this disease, and we dare not give drugs that will mask them.

It is a mistake to think that the point of greatest tenderness is always near the anterior superior spine of the ilium. True it is that this is generally the case, because that is the usual location of the appendix. But where the appendix is, there will we find the greatest tenderness. If the appendix is located high up near the gall bladder, the greatest tenderness will be in the hypochondriac region. If it is located low down in the pelvis, we will elicit great pain by rectal or vaginal examination. Moreover, it is often true that the greater the pain, the more severe the disease. If a case on one day presents but moderate pain and on the next shows a decided increase, we may safely deduct therefrom that the inflammation has become just so much more severe. Late in the disease, however, sepsis may so blunt the sensibilities that pain is no longer complained of. Perforation of the appendix often causes severe local pain, which after a few hours is decidedly less but more diffuse, showing the beginning of the involvement of the general peritoneum.

The examination in cases of appendicitis is of prime importance. The local symptoms are decidedly more important than the constitutional ones. In the face of marked local signs we should operate even if the constitutional symptoms are slight. Conversely, however, if we have marked constitutional symptoms with but mild local ones, we should not be too quick to operate, but should first be certain that we have a case of appendicitis to deal with. Nevertheless in some of the worst cases we can feel surprisingly little. This is due in great part to the rigidity of the rectus abdominis and oblique muscles of the right side. This rigidity of the muscles is a very important sign, as it usually speaks for a severe intra-abdominal inflammation underlying. How often do we cut through such a rigid abdominal wall and find a perforated appendix! The following case illustrates what an important indication for operation right-sided rigidity of the abdominal muscles is:

Harry K——, thirteen years old, admitted June 15, 1899. He had never had a similar attack. Six days ago he was struck in the abdomen with a fist. That evening he had slight general abdominal pain. The following day he vomited several times. The pain and tenderness became localized to the umbilical and right iliac regions. Cathartics were given before he entered the hospital, and the bowels moved freely. Pain and tenderness had persisted up to date. The bowels moved well on the day of admission, when he also vomited greenish fluid as he had done the day before. The tongue was moist and coated; there was slight conjunctival icterus. The abdomen was soft on the left side, but on the right side there was marked muscular rigidity. Owing to this rigidity, nothing could be felt of the appendix or its surroundings. Rectal examination was negative. On the day of admission the pulse was 118; the temperature, 102° F. On the following day, in spite of the fact that pulse and temperature both dropped to 100, I determined to open the abdomen. I was led to this conclusion solely by the persistent rigidity of the abdominal muscles on the right side. I found the appendix. with a perforation at the tip, behind the cæcum, and surrounded by an abscess cavity. The boy made a prompt recovery.

With the exception of the rigidity of the abdominal muscles, the abdominal and rectal examinations in the case were negative. But in the onset of an attack, by examining the right iliac fossa carefully, we can usually feel what we are accustomed to call a "mass." This "mass" only exceptionally means an abscess. It usually means that the appendix is inflamed, that its walls are thickened, and that there are adhesions around it. We must not be deceived by feeling the edge of the rectus muscle, or by fecal masses in the cæcum. Having made our abdominal examination as thoroughly and as gently as possible (to avoid rupturing an abscess that may be present), the next step is to examine by rectum or by vagina, and if possible by both. Too much stress cannot be laid on the value of vaginal and rectal examination in appendicitis. In women the vaginal examination is of prime importance, but even in men and children the rectal examination is often invaluable. We can often make a diagnosis from the rectal examination when the abdominal examination yields no positive result whatever. But it must be borne in mind that we are not by any means through with our examination of a case of acute appendicitis when we have examined the abdomen and the pelvis. All the organs in the body should be carefully examined. The lungs may show a beginning consolidation, and we know that in the initial stage of a pneumonia the abdominal symptoms frequently predominate. Marked enlargement of the spleen would lead us to suspect typhoid fever or malaria, both of which diseases sometimes resemble an acute attack of appendicitis. Naturally the examination of the blood and urine would be immediately made in a doubtful case. Even after we have examined all the organs in the body there are still two data that we must ascertain, one of which is of great value; I refer to the pulse and temperature. In every case of acute appendicitis there is some increase in the rapidity of the pulse, and generally also some rise in the temperature. But pulse and temperature often do not show a corresponding increase. And what is of the greatest importance, we may have but slight elevation of pulse and temperature with grave pathological changes in the appendix.

Granting that we have made the positive diagnosis of appendicitis, we are at once confronted by the momentous question: What are we going to do about it? There is a quite general unanimity of opinion among surgeons and even among medical men that almost every case should be operated upon; but when? There is the rub. Have we any sign or any symptom, or any group of signs or of symptoms by which we can judge in every case when to operate? Unfortunately, we have not. He would be a skilful diagnostician indeed who could say, "Here we have a simple catarrhal appendicitis," "Here there is a threatened perforation," "In this case there is a foreign body in the appendix," and so on. The time may come when we shall be able to describe the exact pathological process in the appendix before the operation, but to-day all our efforts must be centred on the question, Shall we operate? In deciding this question, on which in so many cases the life of the patient depends, we must take everything connected with the case into consideration. The age of the patient, the previous history, the general physical development, the history of the attack, the symptoms, and the result of the examination, all play a rôle in aiding us to arrive at a correct conclusion.

In regard to the signs and symptoms that may aid us, pain, tenderness, vomiting, tympanites, rigidity of the abdominal muscles, may all be moderate, and yet we may have a dangerous case before us. As a rule, not much importance should be attached to the temperature alone, but it should always be carefully measured, and never by mouth. I had a striking illustration of this recently at the hospital. One afternoon while I was operating, a patient was admitted with a pulse of 120 and a temperature of 98.6° F. I examined the case and found a marked rigidity of the abdominal muscles, and some tympanites. Tenderness was general, but more marked on the right side. The pulse was 120, as had been reported. The house surgeon suggested that the rapid pulse might be due to the transportation of the patient to the hospital. However, the man looked sick, and on inquiry I found that the temperature that had been reported was mouth temperature. The rectum showed 102.4° F. I operated at once and found a perforated appendix, beginning general peritonitis with considerable sero-purulent fluid in the small pelvis. The case had been treated with hypodermic injections of morphine for three days. The man's life hung on a thread for three or four days after the operation, but he finally made a complete recovery. Personally, I put more confidence in the rapidity and character of the pulse than in the temperature. The relation of pulse to temperature is sometimes of importance. A high temperature with a rapid pulse always means a severe inflammation, and with a positive diagnosis of appendicitis should generally indicate operation. Even more serious perhaps is a rapid pulse with low temperature. Such a relationship of pulse to temperature generally points to a perforation of the appendix without adhesions, and a consequent general peritonitis. The temperature is still low because the perforation is recent. If we wait, the temperature will go up—and so will our patient.

Some surgeons have tried to bind themselves to some hard-and-fast rule as to when they will advise operation, but they have few followers in this. True it is that if the pulse is 120 or more and remains so, we should operate. But it is a dangerous rule to say that we should wait until the pulse is so rapid before operating. In one of the worst cases of appendicitis with general peritonitis that I operated on, there was a pulse of only 100. We must take every factor of the case into consideration. If we have a frightened, neurotic woman before us, a pulse of 120 is not so serious as a pulse of 110 in a phlegmatic man. Then, again, the whole general condition of the patient must aid us. Is the tongue dry, is there much rigidity of the abdominal wall, is there tympanites, is the pain severe, is the tenderness marked, is the facial expression anxious? In the face of two of these signs or symptoms being marked, I would favor an early operation, even if the pulse was not very rapid, or the temperature high. The character of the pulse is a condition that is often overlooked. A small, compressible pulse, especially if it is irregular, even though it is not yet rapid, is to my mind a more grave symptom than a rapid, full, regular pulse. The anxious facial expression sometimes induces us to operate, and we generally find graver conditions than pulse and temperature would warrant us in expecting; or we may find complications that give rise to no symptoms. Not long ago I was impelled to operate on a woman in whom the symptoms were not very severe, but the facial expression was anxious. I found a moderately inflamed appendix with a tight stricture near its centre, and, to account for the anxious expression, a retroverted impacted uterus which gave rise to no symptoms, and which I was enabled (in Trendelenburg's position) to replace through the incision I had made for the removal of the appendix. The condition of the bowels does not often help us. We find diarrhœa or constipation in mild as well as in severe cases. The functions of the bladder sometimes aid us. Dysuria and painful micturition are important symptoms. I recollect a case in which these two symptoms, together with a small irregular pulse, led to an early operation, and we found an appendix advanced in disease.

Again, other surgeons have laid down the rule to operate on every case of appendicitis as soon as the diagnosis is made. This would make a malignant disease of appendicitis, which in very many cases it certainly is not. To quote from a recent paper of Richardson: "If in every case we operate as soon as the diagnosis is made, we may operate at that very time when the patient's best chance lies in conservatism."

Each case then must be carefully examined, and all the evidence we can collect must be weighed in the balance. I have laid down one little rule for myself that I believe has aided me in saving a few cases, and that is: "If in doubt, give the patient the benefit of it by operating."

How is it, then, with a case in which we have made the diagnosis of acute appendicitis, but in which the signs and symptoms are not severe enough to warrant an immediate operation? Here the problem is not so difficult. We keep the patient in bed, on a liquid diet. We give no cathartics, we give no opium, we give no morphine. Only in exceptional cases do we give enemata. We place a light ice-bag over the region of the appendix. We have a trained nurse at the bedside day and night; she counts the pulse every hour and measures the temperature regularly every three hours, and whenever there is any increased rapidity of the pulse. We examine the patient carefully three times in twenty-four hours and note the progress of the case. And just here lies the great danger in administering opium. We cannot correctly judge of the intensity of the symptoms if we deliberately mask those symptoms by giving narcotics. How can we tell if the pain has increased, after we have deadened it with opium? The same is true of the tenderness. Moreover, we are very apt to have tympanites develop if we give opium; and who can differentiate between such a tympanites and that of a beginning peritonitis? No, let us administer no opium, but rather give nature full sway and allow her, as the disease progresses, to display her various danger signals. What are these danger signals? If we find the pain and the tenderness (for these are two different things) on the increase; if we find the abdominal wall, which the day before was soft even on the right side, becoming rigid, then we advise operation, even though there has not been much change in the pulse or temperature. If at any time in the course of an attack a chill manifests itself, immediate operation is imperative. If the pulse, as the disease progresses, does not show a tendency to become slower, but rather more rapid, even though the temperature is but slightly elevated, the appendix should be removed. Persistent nausea or vomiting is generally associated with obstinate constipation, and means an involvement of the peritoneum—rarely operation is advisable, even in the presence of a slow pulse. A rapid pulse with high temperature early in the disease means pus; we should operate even though we cannot feel an abscess. There may be no abscess—the pus may be inside of the appendix (empyema). In some doubtful cases the presence of a marked leucocytosis will aid in confirming our diagnosis of pus. If we feel an abscess forming, we watch our patient very carefully and, if possible, wait a few days until firm adhesions form. We must not expect to get fluctuation, for we very rarely do. In the following case of an intelligent male nurse, I diagnosed the beginning formation of an abscess and waited for firm adhesions:

C. G——, aged forty-three years, September 23, 1899. The first attack began forty-eight hours ago with severe pain in the umbilical region, which soon became localized to the right iliac fossa. Pain and tenderness were more severe than at the outset. The patient had been nauseated since beginning of the attack, but had not vomited. The bowels were constipated; two enemata given before admission were ineffectual. The patient felt worse than at any time since the beginning of the attack. The abdomen was soft except over the right iliac fossa, where the rectus muscle was tense and rigid. Rectal examination was negative. Temperature 99.6° F.; pulse, 100.

September 24th: Temperature, 100.4° F.; pulse, 80–90.

September 25th: Temperature, 100.6°–101.2° F.; pulse, 97–92.

September 26th: Temperature, 99.8°–100° F.; pulse, 68–76.

During this time an abscess was made out, and it was decided to wait for firm adhesions to form.

October 1st: Temperature, 98.6°–99° F.; pulse, 66–72. The tenderness had subsided except over a mass the size of an orange, near the outer wall of the pelvis on the right side. I now decided to operate. I found an abscess behind the cæcum containing about 100 gm. of fetid pus. Search was then made for the appendix, which was found with some difficulty. It had sloughed away completely from the cæcum, its base being gangrenous, and was attached only by its mesenteriolum. The wall of the cæcum where the appendix had been attached was covered by a thick layer of fibrin. The tip of the appendix was tightly adherent low down in the pelvis over the iliac vessels. The perforation had taken place close to the cæcum where the appendix was gangrenous. The man made an excellent recovery.

If a large mass is felt per rectum or per vaginam, immediate operation should be insisted on. A very sad case I saw recently will prove the correctness of this statement: A boy was admitted to the hospital at 12:30 P.M. with an appendicitis of three or four days' standing. Pulse, 100; temperature, 101.2° F. On rectal examination the house surgeon felt an abscess low down in the pelvis. One of my colleagues was to operate on another case at 2 P.M., so the case was reserved for him. I examined the case shortly after two o'clock and could detect no abscess per rectum. The boy looked anxious; his pulse in two hours had jumped from 100 to 140, and when the abdomen was opened it was found full of pus—the abscess had ruptured. Had the boy been operated on two hours sooner, his life would have been saved. This case also emphasizes what was said above concerning the value of rectal examination. Without it no diagnosis of abscess could have been made, nor would it have been suspected, as the pulse was only 100 and the temperature 101.2° F.

During the time that elapses from the onset of the attack until the time of operation, too much care and attention cannot be devoted to a case of appendicitis. The responsibility that rests on the shoulders of the physician is even greater than that of the surgeon who performs the operation. For it is well known that, with modern aseptic technique, the removal of the appendix is not associated with much danger; provided, of course, the inflammation is confined to the appendix.

If, on the other hand, the signs and symptoms under rest in bed, fluid diet, and ice-bag locally, decrease, we should endeavor to tide the patient over his acute attack. What shall we do when we have tided him over the first attack? Shall we advise every person who has had one attack to have the appendix removed? Many surgeons and some physicians do so advise. Unless the attack has been a severe one, I would not, in every instance, advise the removal of the appendix after one attack. There are undoubtedly many cases of catarrhal appendicitis that, with careful regulation of diet, proper exercise, and mild saline laxatives, are for years following a first attack entirely free from symptoms. Such patients should have appropriate treatment, and should not be urged to have the appendix removed. At the same time, I believe it is but fair to warn them that they are in danger of having a second attack at any time, and that the second attack may be much more serious than the first. Such a patient, who has had one even moderately severe attack, should not travel in unfrequented places, or go to any place where he cannot have prompt surgical treatment if the emergency arises. It is for the intelligent patient to decide in such a case whether he wishes to have his appendix—his sword of Damocles—removed. And many such patients will so decide; especially as they often have uncomfortable sensations in the region of the appendix. But such patients should not be told that the interval operation is entirely free from danger. There is danger in every administration of an anæsthetic, there is danger in every operation. True it is, the risk is very small, especially when compared with the dangers of a second, more severe attack of the original disease. Should a patient have had two attacks, I would in every instance advise the removal of the appendix. In so advising, I am well aware that some persons get along very well even for years after a second attack; for I have myself seen such cases. But the danger of a third attack is too great, and it is doubtful if there is ever a restitutio ad integrum after two attacks of appendicitis. Moreover, the third attack is apt to be more severe than the previous ones; nor is any one able to say how near an appendix that has been twice inflamed is to perforating. I recently operated on a case that is to the point, and, moreover, the case proves the falsity of the ground held by some that an interval operation should be performed only if the appendix can be felt through the abdominal wall:

Dora H——, aged ten years, was admitted to Mount Sinai Hospital September 23, 1899. The patient had the first attack four months ago; the attack lasted six days. The second attack began twelve days ago with vomiting, and severe pain in the right iliac region. This attack lasted seven or eight days, and was more severe than the first. The patient entered the hospital with normal temperature and slow pulse. Nothing could be felt by abdominal examination.

September 26th: Temperature, 98.6° F.; pulse, 80. Operation: The usual incision was made and the colon readily found, but not the appendix. The hand introduced felt adhesions around the gall bladder. The incision was enlarged upward, and the gall bladder was found adherent to the transverse colon and to the small intestine, forming a densely adherent mass. In separating the colon from this mass, a very small abscess was broken into. With considerable difficulty the gall bladder, which was firmly adherent to this mass, was liberated, and the necrotic appendix was then felt to the left of the gall bladder and behind the liver. Owing to the deep location of the appendix and to the fact that pus had been formed, I did not deem it safe to attempt the removal of the appendix. It finally sloughed away completely; there was a slight fecal discharge for a time, but the recovery was ultimately complete.

This case was technically about as difficult a case of appendicitis as one could find; the separation of the adhesions was long and tedious, and had a perforation taken place during an acute attack, the finding of the appendix in such an unusual location would have been even more difficult and dangerous than it was. This case helps to clear up several moot points: (1) It is dangerous to wait for a third attack. (2) After two attacks, the appendix should be removed, even though it cannot be palpated. (3) We cannot tell by the most careful exaination how far advanced in disease an appendix is.

Nor is this case an isolated one. We frequently cut down on an appendix in the interval between attacks, and are often surprised at the amount of inflammation we find in and around the appendix, and that too in cases in which there is little or no pain, temperature and pulse are normal, and little or nothing can be felt on careful examination. I had a very striking illustration of this quite recently in the case of a patient who had had but one attack of appendicitis:

Miss C——, a native of Augusta, Ga., aged twenty-two years, was perfectly well until six months ago. She was at that time in bed for two weeks with an attack of appendicitis of moderate severity. Following the attack she suffered from loss of appetite, obstinate constipation, and various nervous symptoms, including fainting spells. As none of these phenomena had been present before her attack, and as she also had slight pain at times in the region of the appendix, and moreover as I could elicit tenderness on deep pressure in the right iliac fossa, I concluded that there was an inflammatory process going on continuously in the appendix. In spite of the fact that pulse and temperature were normal, I advised the immediate removal of the appendix. This advice resulted in the hasty summoning of the patient's parents from Georgia. Their arrival was followed by a consultation with Dr. Bull, who agreed with the diagnosis, but who did not consider the case so urgent as to prevent the patient's being taken to her home and having the appendix removed there. In this I did not concur, and the result was that the patient entered Mount Sinai Hospital, where I removed her appendix by the gridiron operation. I found an appendix three and a half inches long with a tight stricture one-quarter of an inch from its tip and another one half an inch from its base. The whole organ was moderately congested but not adherent. On cutting it open I found considerable brownish, muco-purulent material, and eight distinct coproliths. These were all situated between the two strictures. The mucous membrane was extensively ulcerated, and in places the ulceration had extended into the muscularis. An acute inflammation might very well in a few hours have brought about a perforation. And yet, in spite of the grave pathological condition that had for months been insidiously developing in the interior of this appendix, the only subjective symptoms were loss of appetite, constipation, and very slight pain at times. The only objective symptom that was present was slight tenderness on pressure over the appendix.

This case is not an isolated one. Many patients go about for months and months with such a chronic process in the appendix; then they develop an acute attack, and in a very few hours perforation has taken place. The lesson to be learned from these cases is obvious. If, after a first acute attack, the patient has pain (be it ever so slight) repeatedly in the region of the appendix, the removal of the organ should be strenuously insisted on; and that too in the absence of all other symptoms, and even in the face of an absolutely normal temperature and pulse rate.

To summarize:

I. Not every case of appendicitis should be operated on.

II. After a first mild attack, try regulation of diet and salines.

III. After a first severe attack, remove the appendix.

IV. After two or more even mild attacks, operate.

V. In an acute attack (1) do not give opium or morphine. (2) Operate during an attack, (*a*) if a chill manifests itself; (*b*) if the pain is severe enough to require morphine; (*c*) if the pulse is very small, or rapid, or irregular; (*d*) if there is persistent vomiting; (*e*) if there is persistent rigidity of the abdominal wall; (*f*) if an abscess can be felt; (*g*) if the general condition makes it imperative; (*h*) if in doubt.

But it must not be supposed that every case comes under one of these headings, although the great majority of them will be found to do so.

In conclusion, I would say that I have endeavored honestly to outline what I believe to be the best plan of treatment in the most important abdominal disease we meet with in this country. I have seen many patients get over a primary attack; I have seen many recover from a second and a third attack. I have seen cases free from attacks for years, and then succumb to a perforative attack. I am well aware of the dangers, both primary and secondary, of an operation during an attack. I have seen only too many cases operated on too late. I know there is a distinct danger in the interval operation, even though a very small one, and I recognize the fact that it should not be lightly entered upon. I do believe that if every case was operated on early, the mortality would be reduced. But I also believe that by exercising care and discrimination in our cases we can reduce the mortality just as much, perhaps more than if we operated on every case, and we shall at the same time only be operating on those cases that need an operation. The grand ideal in the management of these cases is the hearty co-operation of the physician and the surgeon, together with that *sine qua non*, an intelligent patient. Very often, when the pros and cons are laid before such a patient he will unhesitatingly decide on the proper course of action. May we not hope that in the near future physician, surgeon, and intelligent patient, working hand-in-hand, will reduce the awful mortality of this dread disease—appendicitis!

5 West Eighty-fifth Street.

1. ON A PECULIAR VARIETY OF PATHOGENIC STREPTOCOCCI. 2. ON A PECULIAR PROPERTY POSSESSED BY (AT LEAST SOME OF) THE PATHOGENIC BACTERIA: PRELIMINARY COMMUNICATION.

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NEW YORK,
ASSISTANT PATHOLOGIST, MOUNT SINAI HOSPITAL.

1. This streptococcus was isolated in pure culture from the mucoid portion of the stools from a case of acute entero-colitis, in the service of Dr. Koplik. Besides differing in a number of smaller details from ordinary streptococci, it possessed a feature not before described. When grown on glucose-agar, the whole agar became whitened, although the growth was confined to the surface. The same happened with lactose-agar, but not with saccharose-agar. A very marked result was obtained by growing the organism on glucose-agar to which some hydrocele fluid had been added; the medium became absolutely white, as if it had been heated or an acid had been added.

Anaerobically, a similar result could be obtained with the serum medium only. The whitening of the media seems to depend on the production of an acid (lactic acid or one closely allied) which precipitates the albumin of the media. The organism is pathogenic for mice, causing an acute inflammation of the gastro-enteric tract.

2. While working on the streptococcus above described, I tried to find out whether other bacteria might not have a similar property. To my surprise I found that a large number of the pathogenic bacteria can precipitate serum-albumin in the presence of glucose. In a general way the result seems to depend upon the amount of acid produced. Pneumococci are the only pathogenic organisms hitherto tested which do not possess this peculiar property. Many bacteria can also precipitate egg-albumin. Most of them precipitate serum-albumin in the presence of 0.1 per cent. of glucose, the amount present in the blood normally. With lactose, maltose, and saccharose the results are not so constant.

The saprophytes (I do not include the proteus group here) which I have thus far tested do not seem to possess the same property. The growth of most of the bacteria used in the experiments, including pneumococci, on a medium consisting of glucose-agar to which some serum has been added, is far in excess of their growth on any other medium.

In my complete paper, the question will be touched upon, of what importance these facts may be in relation to infections, particularly in diabetics. Likewise the possibility of differentiation of species will be referred to.

I desire to express my obligations to Dr. Koplik for the case upon which these observations are based.

180 East Sixty-fourth Street.

Report of a Case of Gunshot Wound of the Pregnant Uterus and Fœtus; Cæsarean Section; Recovery.—H. L. Nietert reports this case of a woman nineteen years old. The patient was perfectly well when last examined, three months after the operation. The case is a very rare one, a record of only one case being found in which Cæsarean section was performed for gunshot wound of the uterus. There was no infection. The skin about the bullet wound contained a large powder burn, at one side and just below the hole, giving indications that the weapon had been held near the body and that the wound had been self-inflicted. The direction the bullet had taken also pointed to this fact. The patient finally admitted this to be true.—*Medical Review*, April 21, 1900.

A Fatal Case of Congenital Bullous Eruption in an Infant.—R. H. Kennam says that bullous eruptions in the infant occur in two classes. One is pemphigus neonatorum. Descriptions of several cases of this form are epitomized by the author. The other class is the pemphigoid eruption of hereditary syphilis. The contents of the bullæ tend to become sanguineous, the differential diagnosis from the first class being made by observing the nature, time of appearance, and position of the bullæ, and the associated cachexia. He finds it difficult to bring his own case under either of these typical categories, though he does not doubt that it belongs to one of them. In this special case the bullæ appeared on the third day of life, the child dying five days later. Extended reference is made to the literature of the subject.—*Dublin Journal of Medical Sciences*, April, 1900.

The Diagnosis of Rabies.—G. Daddi says that the best method for ascertaining in a short time (twenty-four to thirty-six hours) whether a suspected animal was mad or not, is to make a histological examination of sections of the brain, cerebellum, spinal marrow, and intervertebral ganglia. The alterations in hydrophobia will consist in destruction of cells, atrophy or swelling, chromatolysis or vesicular deformation of the cells, homogeneous swelling and vacuolization of the protoplasm, granular-fatty or pigmentary degeneration, or swelling of the protoplasmic and nerve prolongations, disappearance of these prolongations and of the nucleus. A special alteration of the nerve ganglia consists in a destruction of the nerve cells and neoformation of the endothelial cells of the spaces in which the ganglia are situated. Negative results are more valuable than the positive ones obtained. A normal nervous system cannot belong to a rabid animal.—*Rivista critica di Clinica Medica*, April 7, 1900.

Society Reports.

ASSOCIATION OF AMERICAN PHYSICIANS.

Fifteenth Annual Meeting, held at Washington, D. C., May 1, 2, and 3, 1900.

EDWARD G. JANEWAY, M.D., OF NEW YORK, PRESIDENT.

Third Day—Thursday, May 3d.

Case of Filaria with Specimens of the Adult Parasite.—DR. W. T. COUNCILMAN, of Boston, read this paper. The patient was a native of Barbadoes, and had had the disease for five years. It was interesting to note that in this case chyluria was absent.

The Elimination of Deleterious Substances from Antitoxic Sera.—DR. WILLIAM H. PARK, of the board of health of New York City, read this paper. He said that antitoxins were of the nature of globulins, and at first it had been hoped to separate the toxins from other globulins in the blood that produced the rashes, but this effort had been unsuccessful. Filtering the serum had no effect in preventing rashes following their injection. The sera of different horses differed markedly so far as irritating symptoms were concerned. The sera of some horses were far less harmful than others. He thought the only way left was to select those horses whose sera were non-irritating. With an increased amount of toxins in the blood serum there was also an increase in the globulins.

DR. GEORGE PEABODY, of New York, asked if any decision had been arrived at relating to the idiosyncrasy of the toxin, *i.e.*, after a patient had once been injected with the toxins and a rash followed, would the rash appear after the second injection?

DR. PARK said that he had had only one such case, and in that a second rash had occurred.

Varieties of the Diphtheria Bacillus.—DR. F. F. WESTBROOK, with DRS. WILSON and MCDANIEL, of the Minneapolis board of health, read this paper. He abandoned the old classification of true and pseudo forms, and divided the bacilli into three groups, viz., (1) granular forms, which were metachromatic, there being seven kinds, numbered by letters from a to g; (2) barrel forms, numbered from a^1 to e^1; and (3) solid color forms, numbered from a^2 to g^2.

DR. A. C. ABBOTT, of Philadelphia, said that we did know the normal diphtheria bacillus—in fact, it was questioned if it was a bacillus. He thought that many of these forms would change by some slight alteration in the culture medium.

DR. PARK said that there was no way of telling the virulence of the organism under the microscope. Some of the forms described by Dr. Westbrook were considered in New York to be streptococci and not diphtheria bacilli.

DR. WESTBROOK said that one would be inclined to agree with Dr. Park, but for the fact that when cultures of those forms resembling streptococci were injected into a guinea-pig, death was produced, and after death the cultures showed a change in form of the organism.

Presentation of a Case of Addison's Disease under Treatment with Suprarenal Extract.—DR. W. W. JOHNSTON, of Washington, D. C., presented this case, and said that the points of interest were the acute development of the disease, together with the very rapid improvement, as shown by gain in weight, under treatment with suprarenal extract.

Venous Thombosis as a Complication of Cardiac Disease.—DR. WILLIAM H. WELCH, of Baltimore, read this paper and reported four cases that had been under his supervision. He then reviewed the literature of twenty-three cases. The first of his own cases was the most interesting. The patient was a negress, seventeen years old, who had entered the hospital with signs of mitral disease. The right arm became painful and swollen, and a diagnosis of thrombus was made. The patient died, and the autopsy showed complete occlusion of the axillary, innominate, and jugular veins. Cultures taken from different parts of the body were sterile, except those from the thrombus.

DRS. F. P. KINNICUTT and HERMANN BRIGGS, both of New York, each recalled a case.

The Nature of the New Tissue in Cirrhosis of the Liver and its Distribution.—DR. SIMON FLEXNER, of Philadelphia, read this paper. The new liver tissue was made up, he said, of elastic tissue and white fibrous tissue. The pathology was not well understood. By staining and by digesting out the fibrous tissue, the elastic tissue would be left. In this way it was possible to demonstrate what part of the new tissue was made up of one or the other forms of the connective tissues.

Cystoma of the Pancreas.—DR. R. H. FITZ, of Boston, read this paper. The case was a multilocular cyst of the pancreas, which had been removed by an operation. The patient was still living.

Degenerated Echinococcus Cysts of the Pleura.—DR. CHARLES CARY, of Buffalo, reported this case, and said that the interesting point relating to it was that the patient had never been out of the United States. The specimen was on exhibition.

Aneurism of the Aorta with Rupture into the Superior Vena Cava, Recognized during Life.—DR. ALFRED STENGEL, of Philadelphia, read this paper and reported a case. He thought that it was not only useless to do a venous section in such cases, but that it was absolutely dangerous.

Minor Forms of Cardiac Dilatation.—DR. BEVERLEY ROBINSON, of New York, read this paper. He thought that this condition was frequently mistaken for other ailments. There were several types in which this condition occurred. The first was the anæmic girl who had just passed the age of puberty. The disease might lead to organic change, but generally the cases were self-limited. The next was the obese woman between forty and fifty years of age. He said that such women often had a soft systolic murmur at the apex. The next type was that of the thin, nervous woman of about the same age. Dr. Robinson said that laboring men might not suffer from any valvular disease, but still might have some dilatation. As to treatment, he would say that even young girls did well on digitalis and stomachics.

Graves' Disease without Exophthalmic Goitre.—DR. W. H. THOMSON, of New York, read this paper. He thought that there were other symptoms besides the enlarged thyroid gland and exophthalmus by which one could make a diagnosis of Graves' disease. The most important symptom, and the one that was generally first to appear, was tachycardia. The nervous symptoms were the next in importance, and these might be either sensory or motor disturbances. Among them were pains in the eyes, colored spectra, tinnitus, insomnia, and fear, more marked in the morning than during the night. Oftentimes the patient would have shifting pains in the extremities. Dr. Thomson spoke of the weakness and tremor of the voice in these cases. The gastric symptoms were very important. There was persistent vomiting, with anorexia, nausea, and diarrhœa, which was not accompanied by pain. There was no mucus in the stools and no odor to the fæces. Loss of the hair was often characteristic. Tremor of the eyelids was the most constant symptom. Death generally took place by syncope. He thought diet had a marked effect in causing the disease, and consequently that the disease had its origin in the gastro-intestinal tract.

Perichondritis of the Larynx in Typhoid Fever, with Exhibition of a Patient and a Specimen.—Dr. M. H. Fussell, of Philadelphia, read this paper and exhibited a patient who had had the disease. It was necessary to perform a tracheotomy, and the patient recovered. The tube was taken out later, and the patient was able to speak very distinctly.

The Attitude of the Physician and Surgeon to Appendicular Symptoms Complicating Typhoid Fever.—This paper was read by Dr. H. A. Hare, of Philadelphia. He spoke of the difficulty in making a diagnosis in the early stage of typhoid fever, and said that he had seen cases in consultation that simulated appendicitis, but in twenty-four hours a typical typhoid fever had been present. He thought these cases might be explained by the fact that there really was an appendicular inflammation present, or that there was a marked ulceration in the neighborhood of the appendix.

Observations on Appendicitis.—Dr. Ira Van Gieson, of New York, read this paper. He thought that the appendix was predisposed to septic attacks because of its development, and that the attacks were due merely to mechanical interference. Acute appendicitis was not due to an accident, but was the result of a process of natural selection. He said if the appendix was removed at birth, or a short time after, the operation would interfere with that of natural selection. He spoke of the exciting causes of appendicitis as being of a bacterial origin, and mentioned the streptococcus, bacillus coli, and pneumococcus as being the most common ones.

Some Observations on Human Temperature in Disease.—This paper was read by Dr. Norman Bridge, of Los Angeles.

Study of a Mummy Affected with Infantile Paralysis.—Dr. J. K. Mitchell, of Philadelphia, read this very interesting paper. The subject was that of an Egyptian mummy, which had been embalmed about 3700 B.C. That he was an old man was shown by the worn molars, and the condition of the costal cartilages. The left leg was a little shorter than the right. There was no evidence of fracture, but there was a thickening of the femur on the left side. Dr. Mitchell said the pelvis was perfectly formed and there was no diseased condition of the vertebra. No curvature of the spine was present. These facts seemed to show that the subject walked with a high shoe made to counteract the shortening, and that the case was one of anterior poliomyelitis.

A New Modified Sphygmograph.—Dr. Robert T. Edes, of Jamaica Plain, Mass., read this paper. He paid special attention to the arterial tension.

The following papers were read by title: "The Existence of Bacteria in Normal Tissues," by Dr. G. J. Adami, for Dr. W. Ford, of Montreal: "Sub-Pectoral Abscess," by Dr. J. H. Musser, of Philadelphia; "Stone in the Kidney and Conditions Stimulating It," by Dr. D. D. Stewart, of Philadelphia; "The Circular Fibres of the Heart (Mitral Sphincter) as a Factor in Functional Disturbances of the Heart with Mitral Insufficiency," by Dr. Morton Prince, of Boston; "Graves' Disease without Exophthalmic Goitre," by Dr. D. D. Stewart, of Philadelphia: "Would It Not Be a Gain to Both Pathology and Practice if a Direct Interaction between the Morbific Agent (Noxa) and the Reparative Effect were Recognized and the Conception of an Intermediate, so-called Inflammatory Process Abandoned?" by Dr. Andrew H. Smith, of New York; "The History of a Case of Circumscribed Scleroderma," by Dr. S. B. Ward, of Albany; "Clinical Types of Uric-Acid Diathesis," by Dr. J. N. Danforth, of Chicago; "Sarcoma of the Stomach," by Dr. George Dock, of Ann Arbor; "A Case of Multiple Fibromas of the Nerves with Arthritis Deformans," by Drs. L. Hektoen and R. B. Preble, of Chicago; "Multiple Myeloma," by Dr. J. H. Wright, of Boston; "The Urea Content of the Blood in Cases of Nephritis," by Dr. J. S. Thacher, of New York; "A Study of Twenty-Four Cases of Typhoid Fever with Symptoms of Peritoneal Infection—Laparotomy," by Dr. George B. Shattuck, of Boston, for Drs. George B. Shattuck, J. Collins Warren, and Farrar Cobb.

AMERICAN SURGICAL ASSOCIATION.

Twenty-first Annual Meeting, Held in Washington, D. C., May 1, 2, and 3, 1900.

Second Day—Wednesday, May 2d.

Benign Obstruction of the Pylorus.—Dr. Frederick Kammerer, of New York, read this paper. He divided the subject into two heads, congenital and acquired. Under the first he considered the acute form, absolute at birth, and congenital hypertrophy of the pylorus. Among the most important of the acquired forms were fibrous stenosis, benign tumors, syphilitic gummata, gall stones obstructing the pylorus, and spastic contractions of the pylorus associated with hyperchlorhydria. In regard to the treatment he emphasized the necessity of dietetics and of faithful lavage. These failing, surgical measures should be resorted to, dilatation, even up to 40 French, via the mouth, having been shown to be not only dangerous but ineffectual. The mortality from this treatment was about twenty-seven per cent. Of the operative procedures, he spoke first of resection of the pylorus; second, of Loreta's operation; third, of division of the pyloric adhesions. He said that total pyloric resection for benign tumors had been abandoned. Divulsion was also passing into disuse because of recurrence, though it was still used by the English, who obtained good results in cases of hyperchlorhydria associated with spasm. Adhesions might be the sole cause of obstruction, and might be entirely relieved by breaking down; but these cases were rare. He described one of his own. The speaker then made a comparison of the two procedures, pyloroplasty and gastro-enterostomy. The technique of the last had so improved that the mortality (fifteen per cent.) was evenly divided, as was shown by recent German statistics. Pyloroplasty was contraindicated by dense adhesions, but this was not so of gastro-enterostomy, which was here the operation of choice. As to the technique of the operations, he said that posterior gastro-enterostomy was unquestionably the better. The anterior union was almost always complicated by a spur, as well as by serious vomiting. He emphasized the advantages of Murphy's button over the purse-string suture, agreeing in this respect with Czerny, and stated that in placing the button the constriction must be made very tight. Another advantage of the posterior operation was that complications arising from the immediate pressure of the jejunum and colon were not possible. In regard to the immediate and remote results of these two operations he pointed out that with the contraction of a dilated stomach, after gastro-enterostomy the opening was almost certain to contract, particularly if the purse-string method had been used. He spoke of biliary regurgitation in this operation, and of vomiting, and stated that entero-anastomosis often counteracted these and other untoward symptoms. The speaker advised pyloroplasty when the pylorus was not seriously involved, because of the absence of post-operative complications. On the other hand, this operation was uncertain, particularly in cases of motor insufficiency. In such a condition, particularly with adhesions, posterior gastro-enterostomy, by means of the Murphy button, was the operation of choice.

Gastric Dilatation; Gastroptosis.—Dr. B. F. Curtis, of New York, read this paper. He began by outlining the normal position of the stomach. If the pylorus and lesser curvature were palpable, this one sign was enough to diagnose disease, for they were normally far beyond reach. Gastrectasia was more than a simple enlargement. It involved, just as in kindred conditions of the heart, dilatation and motor insufficiency. This insufficiency was relative, in proportion between the pyloric diameter and the stomach walls. The condition was very rare, except as associated with malignant disease, benign pyloric stenosis, or gastroptosis causing obstruction at the pylorus. Referring incidentally to acute dilatation, he said that the etiology was practically unknown. Brown, in *The Lancet*, reported a case of a man aged fifty-five years, who was seized with intense pain, thirst, suppression of urine, vomiting, dyspnœa, dizziness, pulse of 40, and collapse—evidence of epigastric tumor. Operation revealed a cyst, supposedly pancreatic, which yielded three pints of green fluid. The autopsy, five hours later, showed this cyst to be an enormously dilated stomach. It was interesting to note that this acute form might possibly be due to trauma of the vagi, for, experimentally, section of these nerves resulted in uræmia and gastric disturbances. Speaking of the symptoms of gastroptosis, he pointed out that it was invariably associated with the downward displacement of at least one other organ, and very frequently with a general enteroptosis. As to surgical treatment of gastroptosis, operation was indicated when medicine failed. The results of gastro-plication were good, if, at the same time that the stomach was given support, the neighboring displaced organs were put into their normal positions. Particularly was this true in women, who were peculiarly subject to gastroptosis; in these cases the ligaments of the genitalia should be shortened. In order that there might not be a disassociation of terms, Dr. Curtis said he preferred to use the term gastrorrhaphy for this operation. As to the pathology of gastroptosis one of several conditions might be found, viz.: (1) The cardia was invariably fixed. (2) The lesser curvature might be vertical. (3) There might be descent of the centre of the organ, the pylorus and cardia being fixed. As to symptoms, there was almost always a progressive emaciation, along with the usual clinical evidence of dilatation. Concluding, he said that since Treves' first operation, in 1895, a number of cases had been reported, with good results; that the outlook was bright for gastrorrhaphy, provided the accompanying enteroptosis was coincidentally corrected.

Hour-glass Contraction of Stomach.—Dr. F. S. Watson, of Boston, read this paper. He spoke shortly of the different forms of hour-glass contraction and of the functional and pathological changes associated with them; also of the symptoms and the diagnosis. Referring to the operation, gastro-anastomosis, for the relief of this condition, he gave a summary of cases, of which there had been thirty-five reported. As to the technique, he spoke of the great influence which the character of the contraction had on the type of operation, and mentioned the German method, which amounted to a lateral anastomosis of the two bulbs. The speaker then drew attention to an operation he had devised for the relief of this condition. It consisted in opening the lesser bulb, washing it free of stomach contents, superimposing it on the greater, cutting the apposed walls with one stroke of the knife, and suturing these; finally, suturing the first wound and closing the abdomen. In one case the patient was well on the twenty-first day. A second case he found complicated by very dense adhesions, and autopsy revealed an undiscovered perforating ulcer at the isthmus of the bulbs. He concluded by saying that his operation offered the following advantages over lateral anastomosis: (1) It avoided the great blood-vessels. (2) It avoided the stomach contents. (3) The opening was large and free. He added that gastro-enterostomy was contraindicated in cases of hour-glass contraction, because it lost to the patient the very valuable pyloric mucosa.

Diagnosis of Cancer of Stomach.—Dr. John C. Hemmeter, of Baltimore, spoke on this subject. He said that it seemed reasonable that an early diagnosis was extremely difficult to reach, chiefly because, as yet, we knew nothing of the causative factor in neoplastic growth. In ninety-nine per cent. of cases of cancer of the stomach which had been operated on the patients died of recurrence. In the one per cent. saved, an early diagnosis was made, that is to say, the cancer was discovered before subjective symptoms of gastric neoplasm had become evident. Czerny, Rindfleisch, and Kraske opposed operating after the development of these characteristic symptoms. Of the means at hand to assist in early diagnosis, he mentioned chemical, microscopical, and physical examination. The subjective symptoms were of little value, for reasons stated. Age, likewise, was no longer thought to be of value. There was undoubtedly a period of three months—the incipient stage of the cancer—which was usually diagnosed as nervous dyspepsia or as chronic gastritis. These were very vital moments. If the case refused to yield to good medical treatment, despite the absence of any subjective carcinomatous symptoms, recourse should early be had to the clinical tests. These he considered as follows: Absence of hydrochloric acid was valuable; but in those neoplasms derived from ulceration it was very generally present. Lactic acid was simply a sign of stagnation, and was due to carbohydrate fermentation. Although it was found in eighty-four per cent. of the cases, it was obviously of little value, for no stagnation could occur till the growth was too far advanced for operation. The Oppler-Boas bacillus was present in fifty-three per cent. of the cases. It was about as valuable as lactic acid due to stagnation. In regard to tumors, three-quarters of them were not palpable. The *x*-ray test was futile. As to the gastroscope, German reports gave little hope. It was extremely dangerous to use. Gastric curettage was the very latest method of procedure. It was practised with a weighted soft-rubber tube, run in and out. There was no hope of seeing carcinomatous architecture, but the cell nuclei revealed certain changes now thought to be constant and characteristic. Mitosis was found to be irregular, one important feature being that the chromozones were not equally divided between the poles. If found, this was extremely suggestive. He said that the future treatment of gastric carcinoma would not be surgical; when the knowledge of carcinoma advanced, it would be along the lines of the biology and chemistry of the neoplastic cells, and, ultimately, surgery would be discarded for a more scientific mode of treatment.

Adhesions of the Stomach.—Dr. A. T. Cabot, of Boston, spoke on this subject. He said that adhesions were particularly prone to involve the stomach, because of the nearness of organs, themselves peculiarly liable to inflammatory change. Of the symptoms, there were two types—first, those which closely resembled biliary colic, and, second, those in which the attacks simulated chronic dyspepsia. Pain was marked in all cases, often lancinating, and might girdle or shoot down the right shoulder. Recognition in mild cases was as yet impossible; severe cases were usually operated on for gall stone. Efforts should be made to diagnose the mild cases, as they often led to a destruction of the patient's physical power and were almost always accompanied by nervous hyperæsthesia. He cited a case which came to operation after fifteen years of medical treatment; a slight kink being removed, complete cure resulted. He closed by advising an exploratory laparotomy in such prolonged cases.

Stricture of the Œsophagus following Typhoid Fever; Gastrostomy.—DR. FREDERIC S. DENNIS, of New York, presented a case of gastrostomy, on which he had operated two years ago. The cardial stenosis was a sequel of typhoid, and prior to operation no food had passed the man's mouth for three months. His condition was deplorable. He now weighed one hundred and eighty pounds. He fed himself with comfort; had no excoriations or pain at the opening, and was able to do his daily heavy work. This case was illustrative of the value of gastrostomy.

Cases of Gastro-Enterostomy.—DR. FISHER, of New York presented an analysis of several cases of gastro-enterostomy in which Dr. R. F. Weir had operated. In order to make such an analysis, it was necessary to watch the cases for years prior to operation, and for as long after the intervention. Watching consisted in making frequent analysis of the gastric contents for hyperacidity, together with observations on dilatation. He found that in cases of hyperacidity with dilatation there was a gradual increase of these objective symptoms, together with the usual subjective ones, until operation. After intervention in nearly all cases the hyperacidity was reduced, and the dilatation also. Coincidently, the subjective symptoms were permanently relieved. In regard to the lasting effect of operation on the objective symptoms, it was probable that the dilatation was much reduced, or entirely negatived, except in cases far advanced, while the hyperacidity was but changed from a constant to an intermittent condition.

Hip Dislocations.—DR. OSCAR H. ALLIS, of Philadelphia, spoke (by request) on various hip dislocations, and demonstrated the mechanism of displacement on the cadaver. Making fast the pelvis to a table specially constructed for this purpose, he produced, by manual effort, and without section of capsule or tendons, inward and outward dislocations of the hip. He spoke of the danger of involving the sciatic nerve in reducing by Bigelow's method of circumduction, and mentioned that his method was free from this objection. He then showed an upward dislocation and demonstrated an outward displacement, associated with fracture of the shaft, just below the trochanter. The principle of reduction was the same in every case: the head of the bone was lifted to a position opposite the acetabulum, and was supported there by an assistant, and the thigh was wrung in such manner as to allow the hand to be used as a fulcrum. In closing, he said that he wished to be remembered as having taught that no hip reduction should be attempted until the pelvis was absolutely immobilized. Under such conditions, and with the exploited technique, almost any form could be successfully reduced.

Third Day—Thursday, May 3d.

Surgery of the Stomach.—The discussion of this subject was opened by DR. W. W. KEEN, of Philadelphia. He divided the subject into two classes: (1) treatment of general stomach disease; (2) treatment of malignant stomach disease. The latter he considered by far the most important, and confined his attention to it. Prior to operating on these cases, the surgeon met two kinds of medical men: the family physician and the gastric specialist. The first was too often baneful; the second was of the utmost use. He was of use because through him alone could the surgeon reach a diagnosis early enough to hope for success. The speaker dwelt on the grave importance of the first two or three months, and urged that if so much as a possibility existed of neoplasm, exploratory incision should early be made. A palpable tumor contraindicated operation. He closed by saying that success in the future depended on early operation.

DR. M. H. RICHARDSON, of Boston, said that he wished to be put on record as opposing indiscriminate explorations. They were attended with a certain degree of danger. He felt that exploration was warranted only in cases of gastric hemorrhage which would not yield to medical treatment—in cases of gastric perforation—but urged the danger of laparotomy and the need of conservatism. He could add nothing to what Dr. Mayo and others had already said on carcinoma. With the very valuable assistance of the gastric specialists, whose skill in early diagnosis surgeons can never hope to equal, he felt that more lives would be saved by early operation in the future than were now lost through delay. As to the view taken by Dr. Curtis on the position of the normal stomach, he said he had been surprised to find in how many cases of apparent perfect health the greater curvature reached below the umbilicus. Nor did he agree with Dr. Curtis in the extreme rareness of acute dilatation. He expressed surprise at the statistics of Dr. Hemmeter as to recurrence in gastric neoplasm (ninety-nine per cent.), and said that it seemed to him high, though all his own patients had died. Finally, he said that by early operating we should get in the future as good results in gastric neoplasms as in breast and other superficial forms.

DR. MCGRAW said that he wished to show a method applicable to general intestinal anastomosis, but particularly useful in gastro-enterostomy. It was the elastic ligature. He first used this in 1891, with good results, but the Murphy button, coming in just at that moment, caused him to discard the elastic for the metal connection. He now felt that this was a mistake. A small, round darning-needle was threaded with an elastic band, which was of greater diameter than the needle (2–3). The rubber knot he tied with a bit of thread. These ligatures cut through in about three days. There could be no leakage, because of occlusion of the needle wound. He closed by saying that elastic ligature was the safest, the quickest, and best method of doing gastro-enterostomy.

DR. MIXTER, of Boston, spoke of the case of acute gastric dilatation to which Dr. Richardson had referred. The tumor was very large: it reached from the pelvis to the ribs. A singular factor was the utter impossibility of passing a stomach tube. Autopsy showed a kinked œsophagus. The fatal result was due to making the anastomosis of the stomach to the ileum. He therefore urged the need of care in tracing the duodenum to the jejunum, and there joining to the stomach.

DR. ALLEN said that in the West there were two kinds of gastric specialists, medical and surgical. He agreed with Dr. Richardson in that exploration was attended with risk, and cited a case to substantiate this view.

DR. RANSOHOFF, of Cincinnati, emphasized the point that there should be two steps in the more complex gastric operations. This was particularly true of pylorectomy, in which gastro-enterostomy should precede by perhaps two weeks. This was of value locally and constitutionally. He noted that the posterior operation seemed to him difficult, as the posterior wall was hard of access.

DR. C. B. NANCREDE, of Ann Arbor, spoke most interestingly on the evil influence of morphine used in post-operative work. In those anastomoses followed by peritonitis, the colon bacillus was constantly the exciting cause. Experimentally, some animals which were normally immune to this germ died from septic infection by it if morphine was given. In the absence of exact statistics, he felt that in man one-tenth the fatal dose of bacillus coli communis would kill if morphine was used. As to the percentage of mortality (ninety-nine) mentioned by Dr. Hemmeter, he felt that it was too high. If it was true, the surgeon had absolutely no right to do anything more radical than gastro-enterostomy.

Dr. J. E. Moore said that surgery must depend on medicine for diagnosis. All the means for early diagnosis should be exhausted; this takes but a week. Then laparotomy should be done. He cited a case of a man aged forty-two years, sick for only three weeks. There was no vomiting. The only symptoms were emaciation and absence of hydrochloric acid. He had pain for ten days only. Operation revealed an inoperable carcinoma. In closing, he touched on the importance of examining the upper end of the duodenum in cases in which the bleeding point could not be found in the stomach.

Dr. S. H. Weeks, of Portland, Me., continued the discussion by speaking on the importance of recognizing that surgical intervention could, at best, be but palliative now; and he strongly advocated gastro-enterostomy. He emphasized the use of catgut in all buried work. It could be made absolutely sterile by boiling in juniper oil. He criticised Dr. Watson's technique in gastro-anastomosis, saying that he felt the advantages claimed for it were more than counterbalanced by the additional cut, and advised the ordinary lateral anastomosis.

Dr. L. C. Tiffany, of Baltimore, urged the necessity of early diagnosis. He had seen but one case (at autopsy) favorable to operation, but recognized that if all cases of dyspepsia were treated as had been recommended, very many needless operations would be done. He considered the operation for the relief of gastric neoplasm still in its infancy, and felt that, before we could hope to know much about the condition, hundreds of cases must be diagnosed by operation, just as was done, first, in ovarian disease; second, in appendicitis. We must see the diseased stomach a vast number of times; then only should we learn.

Dr. F. B. Harrington, of Boston, said that pyloroplasty was not a desirable operation for the help of immediate conditions.

Dr. Robert F. Weir, of New York, said that in these gastric cases operation was done to meet one of four conditions: pain, hemorrhage, gastric dilatation, and delayed food expulsion. As to technique and choice of operation, he was much disposed to favor gastro-enterostomy combined with entero-anastomosis, because this did away with all untoward symptoms better than anything else he had tried. His last eleven cases had been successful. He referred to Dr. Cabot's remarks on adhesions, and cited a very complicated case of his own in which the pylorus had been kinked by bands, the relief of which proved a very important factor in the operation. He spoke in favor of the Murphy button, saying that the cicatrices which had made Senn's and Abbe's operations obsolete did not develop after its use. He strongly deprecated the employment of any technique the chief recommendation of which was a reduction in the time of operating; speed was of but little value. In closing, he drew attention to the importance of using cocaine in abdominal work.

Dr. Rodman asked that the section might hear from Dr. Armstrong, of Montreal.

Dr. Armstrong, in speaking of hemorrhage from the stomach, divided it into two classes—first, that in which the blood came from capillaries and small veins; second, that in which it came from the great vessels. In this class medical treatment did no good, and operation was indicated if the hemorrhage recurred within seventy-two hours. The first hemorrhage was rarely fatal. He spoke of the necessity of a broad opening in the anterior gastric wall, and cited a successful operation for gastroptosis. He closed by indorsing pyloroplasty.

Dr. L. M. Tiffany, of Baltimore, gave an important aid in searching for the bleeding point. It was to insert the hand and turn the stomach wrong side out.

Here the discussion was closed, and the first volunteer paper was read.

The Methods of Closing Abdominal Incisions.—Dr. M. H. Richardson, of Boston, read this paper. He placed immediate emphasis on the great advantages of the through-and-through suture over suture *en étage*, claiming, first, that it left no blind spaces; second, that it was very quickly done. The materials he indorsed were silk, silver wire, and silkworm gut. Of two thousand cœliotomies at the Massachusetts General Hospital which were sutured through and through, and which healed by primary union, but twelve returned with recurrence. Buried sutures should be non-absorbable, for they should add strength to the tissues in which they lie, and silk was to be preferred. In closing, he emphasized the point that accurate approximation of the abdominal layers was not necessary for strong union.

Dr. J. B. Deaver, of Philadelphia, agreed heartily with Dr. Richardson, and emphasized the need of carefully dressing the wound.

Dr. Weir said that in New York suturing by layer was widely in vogue. He spoke of the need of leaving the sutures loose; constriction formed a slough, which gave a nidus for the skin germs which might be found in every wound.

Dr. Fowler, of Brooklyn, showed a multiple figure-of-eight suture, which, starting within, obviated the "dead spaces" and seemed to combine the best features of both types of sutures.

Dr. Freeman, of Denver, objected to unabsorbable materials on the ground that, if left in place, they could do no good after a few days.

Dr. Coley, of New York, indorsed Dr. Weir's position; he claimed that catgut could be absolutely sterilized, and stated that while prior to the use of rubber gloves there had been six per cent. of infection in hernia cases at the Hospital for the Relief of the Ruptured and Crippled, since their introduction there had been but one infection in the last one hundred and fifty cases. Catgut had been used in all.

Dr. Mixter, of Boston, spoke of the importance of the suturing technique, laying stress on two points—to cut through muscle, and not to tie the sutures too tight.

Dr. George B. Johnson, of Washington, said he had used all kinds. He had used the method advised by Dr. Richardson till a few years ago; now he was returning to the through-and-through method, feeling that it was the best.

Dr. Nancrede said that catgut could be made sterile. He did not think that non-absorbable materials gave added strength.

Dr. Carson, of St. Louis, had used Dr. Fowler's cross-suture, and liked it. In a series of experiments not yet complete a bit of skin was removed from the wound, and this, together with an end of the catgut suture, was cultured. The staphylococcus albus (from the skin) was invariably the only germ found, and that with considerable constancy. The gut was sterile.

Dr. Ransohoff showed a purse-string suture of the peritoneum, which seemed of great value in preventing adhesions, and advised a continuous suture for the other layers. Thus he would avoid horizontal scars.

Dr. Fowler agreed that the purse-string suture reduced the danger of peritoneal adhesions.

Dr. Richardson, in closing, said that he objected to catgut more because of the difficulty in tying it than because he feared it would infect. He referred to the extremely low percentage of hernia in his records, and spoke of the good effects of gloves and mask. He ended by urging the use of the through-and-through method.

Strangulated Hernia through a Traumatic Rupture of the Diaphragm; Laparotomy; Recovery.—This paper was read by Dr. E. W. Walker, of Cincinnati. He spoke first of the extreme rarity of these cases. In his case there was a severe trauma, the injury being received in the small of the back. When the patient was seen by him, twenty hours later, his condition was very desperate. Shock was well advanced; dyspnœa was marked; there was excruciating pain over the left breast, and cough with bloody expectoration. Flatus was present, and tympany over the left lung. The heart was pushed two inches toward the right. The seventh and eighth right ribs were fractured. Median incision revealed a great rent in the diaphragm through which a large mass of bowel had slipped into the chest cavity. With great difficulty this coil, eight inches long, was withdrawn. The opening admitted three fingers. Closure was very difficult, and before it was accomplished the patient grew too weak for it to be continued. It was accordingly left unfinished, and the operation was concluded. As to technique, it was of great interest to consider the choice between the abdominal and the trans-pleural paths. He preferred the abdominal incision.

Dr. S. J. Mixter showed specimens of his case which was of great interest, because of its having resulted from muscular exertion. He found a gangrenous mass, and the gut burst during efforts at reduction.

Dr. Freeman, of Denver, advocated the trans-pleural route because of its greater ease.

Dr. R. Matás, of New Orleans, said that the trans-pleural route should always be used if a possibility of strangulation existed. It was less dangerous than the abdominal, and was preferred by Italian surgeons.

A Case of Sub-Pubic Hernia through the Pelvic Floor; Operation.—Dr. F. B. Harrington, of Boston, read this paper. He spoke of the varieties of vesical hernia, citing some of the causes. His case was that of a woman aged forty-six years. The symptoms came on very suddenly, the gravest being acute retention. When he saw her, she had a tumor eighteen by eight and one-half inches protruding from the pelvic floor. Two years before she had been operated on for fibroid of the left labium majus. Undoubtedly the present tumor had some relation with a recurrence of this condition. A vesical sound showed the tumor mass to be largely composed of bladder, but every attempt at reduction failed. After laparotomy, however, this was easy. The ovaries and tubes were removed and the uterine fundus was brought down to cover the rent in the pelvic wall after reduction. This treatment proved in every respect successful.

A Case of Acute Tuberculosis of the Mesenteric Glands of the Ileo-Cæcal Coil; Removal; Permanent Recovery.—This paper was read by Dr. M. H. Richardson, of Boston. He urged the necessity of dissecting diseased mesenteric glands, saying that it seemed as important here as in the neck. The condition was a common one; the glands were often cheesy or calcified. He suggested the possibility of a relationship between such glands and appendicitis. To show how readily such acute adenitis might be confused with appendicitis, he cited a case which presented the classical symptoms of appendicitis, but in which the appendix was normal. A great mass of glands was found and removed. The operation was a permanent success.

Dr. Allen, of Cleveland, recalled a similar case.

Apropos of the relationship which Dr. Richardson had said might exist between appendicitis and tuberculous glands, Dr. Nancrede said that he had been vainly seeking for many years a tuberculous appendix.

In the absence of Dr. J. W. Elliott, of Boston, his paper on "Successful Removal of Acutely Inflamed Tuberculous Mesenteric Glands" was read by title.

The society then went into executive session.

Afternoon Session.

In the absence of Dr. De Forrest Willard, of Philadelphia, his paper on "Congenital Cystic Tumor of the Pelvis" was read by title.

Extirpation of a Very Large Aneurism of the Renal Artery.—Dr. W. W. Keen, of Philadelphia, read this paper. Reviewing the history of this condition, Dr. Keen said that there had been reported but twelve cases. Three only had been operated upon—the first by Albert, of Vienna; the second by Hahn, of Berlin, in 1893; the third having been Dr. Keen's case. The patient was a woman aged forty-five years. She had had pain over the gall bladder for four years, with swelling on the right side of the abdomen. A vertical incision was made through the right rectus, and immediately the tumor sprang up to view. He was uncertain of its character till after its removal, when it was split; this showed it to be an aneurism. Dr. Keen spoke of the differential diagnosis; also of the fact that, presumably because of the small size of the renal artery in proportion to the size of the aneurism, pulsation was absent. The tumor was large, 14.5 cm. in diameter; it weighed 970 gm. In conclusion, he spoke of the encouraging outlook in this class of cases. Of the three patients operated on, three lived.

A paper on "Carcinoma of the Rectum," by Dr. John B. Deaver, of Philadelphia, was read by title.

Spontaneous Disappearance of Carcinoma of the Lip; Union following Pathological Fracture of the Femur due to Secondary Carcinoma.—Dr. Leonard Freeman, of Denver, read this paper. He described a case having had the characteristic reforming crust, which had disappeared entirely after the removal of a very rough tooth that continually irritated it. Of the osteoporosis induced by neoplastic growth, Dr. Freeman said that union took place much more frequently than was generally supposed. He showed a striking specimen of this in a firmly united femur, in which union had taken place despite the neoplastic growth. Nor was this union composed of spicules merely, as had been taught.

The remaining papers were read by title, as follows: "Multiple Coccygeal Fibromata," by Dr. H. R. Wharton, of Philadelphia; "The Removal of the Seminal Vesicle," by Dr. N. B. Carson, of St. Louis; "Complete Absence of the Uterus and Vagina, with Creation of New Vagina," by Dr. N. B. Carson, of St. Louis; "A Study of Twenty-Four Cases of Laparotomy for Peritoneal Infection in Typhoid Fever," reported by Drs. George B. Shattuck, J. Collins Warren, and Farrer Cobb, committee of the Boston Society for Medical Improvement, presented by Dr. J. Collins Warren.

Officers Elected.—*President*, Dr. Roswell Park, of Buffalo; *First Vice-President*, Dr. John E. Owens, of Chicago; *Second Vice-President*, Dr. Clayton Parkhill, of Denver; *Secretary*, Dr. H. L. Burrill, of Boston; *Recorder*, Dr. De Forrest Willard, of Philadelphia; *Treasurer*, Dr. George R. Fowler.

The next place of meeting will be Baltimore, Md., May 7, 8, and 9, 1901.

THE AMERICAN GYNECOLOGICAL ASSOCIATION.

Twenty-fifth Annual Meeting, Held at Washington, May 1, 2, and 3, 1900.

First Day (continued)—Tuesday, May 1st—Morning Session.

Discussion on Fecal Fistula.—DR. DUDLEY said that in operating for cancer, and in breaking up the adhesions, he had broken the small intestine in two. He had put in a Murphy button. He could not remove the uterus, even the rectum being involved, so he looked upon the case as helpless. The Murphy button was recovered, having worked down to the rectum and out through the fistula behind the uterus. The fistula healed, and the woman recovered.

DR. MUNDÉ said he had understood his friend, Dr. Noble, to say that fistula was always the result of unclean surgery, and while this was generally true, still sometimes fecal fistulæ did occur when the surgery had been perfectly clean. He had had within a year three cases of fistula resulting from intentional opening of the intestines to relieve obstruction to the bowels tending to general peritonitis following some abdominal operation. In the first case a Murphy-button operation was performed, as the fistula refused to close spontaneously. The patient did not survive the second operation. In the second case the patient recovered. The woman had fecal fistula through the vagina following hysterectomy for double intraligamentous abscesses. This fecal fistula in the vagina closed spontaneously, but the abdominal fistula was so large that after two attempts to close by freshening the intestinal suture through the wound it was resected and the Murphy button applied. In one case of fistula above the sigmoid in which the gut was adherent the layer operation gave a cure. In another Szymanowski's operation was performed, which consisted in paring the one side of the skin and sliding it under the other lifted-up side. This gave complete closure of the open gut. He agreed with Dr. Currier that it was well to wait in fistula of the small intestine; but with fistula of the large bowel the abdomen should be opened.

DR. MANN was disposed to be very conservative in his management, giving the fistula a long time to heal. With the small intestine the condition was somewhat different; the opening would not heal as well as one of the large. The farther up the lesion in the small intestine the less likelihood was there of healing. The nearer to the stomach the harder was it for healing to occur; the gastric juices seemed to interfere with the reparatory process. Therefore it was almost always necessary to open the abdomen in these fistulæ of the small intestine. Further treatment depended upon the size of the opening; if close to the mesentery, it would be dangerous to sew it. If the opening was large, it could not be sewed for fear of stricture. In these cases we were obliged to resect. In one or two cases the result had been satisfactory from a plastic operation on the abdomen without opening the abdomen and cutting down upon the intestines.

DR. PETERSON described a case of fecal fistula which had remained open for a year, at which time he had removed the uterus, hoping to close it from below. This had failed. Under these conditions it seemed to him very dangerous to advise patients to undergo abdominal operations when the fistula was low down.

DR. I. S. STONE said, in closing, that the deeper fistulæ along the sigmoid and the rectum were those which gave the most trouble. In regard to the claim of priority made for Lawson Tait and Greig Smith in the method he had pursued, he replied that he could not see how the method was a typical flange suture. Dr. Mundé's method was applicable in a large number of fistulæ in which the sinus was uncontaminated with fecal matter. In the presence of fecal discharge his own method had the advantage of dividing off the fascia and leaving an opening entirely clean.

The Remote Results of Conservative Operations on the Ovaries and Tubes: An Analysis of Eighty-five Cases.—DR. W. L. BURRAGE read this paper. He said he had performed one hundred and thirty-seven operations on diseased uterine appendages with the object of preserving one ovary or a portion or portions of one or both ovaries with their tubes, or as much of the tubes as was reasonably normal in appearance. In eighty-five of these reliable information as to the present condition could be obtained at least a year after operation, and the results were included in the tables accompanying the paper, the cases being divided into the more severe and the less severe. In comparing the two it was found that gonorrhœa and syphilis were more prevalent, and that the symptoms had resulted more frequently from difficult labors or abortions among the more severe, and that the tubes were closed in a majority of the more severe, whereas they were open in all but one of the less severe. Pregnancy followed operation in four of the more severe and in all of the less severe. In none of the cases in which the closed tubes had been opened and new ostia formed did pregnancy follow operation. In all of the cases of subsequent pregnancy in both classes, except two of the less severe, the patients had had previous pregnancies. Anatomical cure was recorded in thirty-three out of fifty-seven cases which came under observation, and symptomatic cure in sixty out of eighty-five cases. It was advisable to do conservative operations in all cases in which the ovaries and tubes were not hopelessly diseased in all parts of their structure, except on patients who were near the menopause, on patients who had pronounced gonorrhœa of long standing, and on the rare cases of malignant disease. With the present methods of performing resection of the tubes, if both tubes were found closed subsequent pregnancy was not to be expected. In severe grades of inflammation of the appendages irrespective of causation, if the ostium abdominale of one tube was patent the prospect of subsequent pregnancy after the preservation of a portion of the ovary was about one in four and a quarter, or 23.5 per cent. In less severe grades of inflammation under similar conditions of tube and ovary, the prospect of subsequent pregnancy was about one in two and a quarter, or forty-four per cent. In women who had borne children, in both classes, subsequent pregnancy might be expected in thirty-five per cent., whereas in previously sterile women it might be looked for in only five per cent.

DR. EDWARDS said that if one thing was more important, it was the tube rather than the ovary. He would always leave the tube, for nature did a wonderful amount of repairing. He recalled two cases of unmarried women, past the age of thirty years, who married after he had operated, and in both cases the ovary had been buried down below the cul-de-sac. Such women should have the benefit of the operation as much as if they were younger.

DR. DUDLEY said that last year he had reported one hundred and twenty-three cases of such operations and this year one hundred and thirty-eight without death. In a case of double pyosalpinx he had taken the tube off, left the ovary hanging, and brought the uterus up and split the fundus in two. He was absolutely sure that the ovary grafted, and to day the patient was menstruating every twenty-eight days. He had collected five such cases, and in all of them he was sure the ovary had grafted. Two of the women were menstruating; in one only five weeks had elasped. He was of the opinion that the function of menstruation should be conserved, aside from its effects in preventing reflex disturbances.

Dr. Noble asked why Dr. Dudley cut the ovary loose from the natural blood supply if his only object was to retain the influence of the ovary; also if he put it in the uterus to see if pregnancy would result.

Dr. Dudley replied that it was to try the experiment of bringing about pregnancy that he had planted the ovary. The woman upon whom he had done the first operation was pregnant two months afterward.

Dr. Philander A. Harris said he was glad to hear Dr. Burrage speak as he had. In these cases there was often no disease in the ovary itself. Aside from a condition in which there was ovarian abscess, and the follicle had at the time of rupture involved or in any way developed abscess, he did not see why we could judge of a condition which had resulted from inflammation. The Graafian follicles might be mistaken for beginning cystic degeneration. For the past two years he had scarcely removed an ovary, the only cases having been those clearly of ovarian abscess, and he knew that pregnancies had occurred subsequently. The personal inferiority a woman felt when menstruation had ceased was a matter not to be forgotten. It was not the mere matter of having children, but there was a personal element to be considered. He was interested to know how many cases of pregnancy had occurred in women from whom both tubes had been amputated close to the uterus.

Dr. H. N. Vineberg congratulated the writer of the paper on his excellent clinical report. He was pleased to see that he did not claim one hundred per cent. of anatomical cures or one hundred per cent. of clinical cures. Speaking in a general way, the class of cases which in his hands had given the poorest results had been those in which the lesions had not been so very severe.

Dr. Mann said he had done a great many conservative operations. One case in point was that of a woman operated on, from whom one tube and ovary were entirely removed, and the other tube and ovary were in bad condition. The tube was opened, and after breaking up the adhesions the ovary and tube were left. The woman married and had had four children, three girls and one boy, which settled the question of sex in regard to one ovary.

Dr. J. Riddle Goffe said he had done nearly one hundred of these conservative operations. His work had been done very largely through the vaginal incision, as he very much preferred that route of attack. When there were large, bulging ovaries, he used the cautery to resect, and when there was a cystic condition he used the cautery to burn out the cyst.

Dr. Burrage said he had operated twice on cases in which there was no symptomatic and anatomical cure, though there were several other cases in which operation was required. Here the patients would not be operated upon. He had used the cautery on many cystic ovaries after the manner described by Dr. Goffe. He had seen no case of pregnancy follow amputation of both tubes, or when both tubes were closed. He had had pronounced neurasthenics above the age of thirty-five years, and it seemed that complete total removal or no operation was indicated. They did not do well after resections. Careful bacteriological work in this line was needed in order to determine upon which cases to operate from the gross appearance. Few would wish to do an operation when tuberculosis was pronounced.

Internal Secretion of the Ovary.—Dr. A. W. Johnstone, of Cincinnati, read this paper. Retained secretions, he said, were the causes of nearly all nervous conditions. There was no proof that the ovary had any other function than the manufacture of eggs. For fifty years we had known that the ovary was active during intra-uterine life, and that it began to ripen Graafian follicles at the sixth month of gestation; that these ripened rather rapidly until after birth; that during infancy the Graafian follicles still ripened occasionally, but not so rapidly as before birth, and persisted in the same ratio up to puberty. At puberty the follicles ripened more rapidly, but at no time did they amount to as many as the number of menstruations in a year. During and after the menopause the Graafian follicles still continued to ripen. Of all the ovaries that he had removed after the menopause, he had never found one that did not possess a small number of Graafian follicles in an immature state, and he had frequently found those that had recently ruptured. The ovary was in no sense a gland. Its epithelium was arranged for the purpose of being cast out and lost, and it was not so placed that its secretion, if it had any, could be absorbed either by ducts or blood-vessels. The adherents of the internal-secretion theory claimed that it was like the suprarenal, the thymus, or thyroid gland. This he could state positively was not correct. The thymus gland was nothing but a larger lymphatic gland. It did the work of the lymphatic structures during intra-uterine life. Its lymph vessels were just the same as those of the axilla or groin. The thymus gland and suprarenal capsule had no lymphatics that amounted to much, but a very rich supply of blood-vessels; each epithelial cell was closely approximated to a venous radical, thus providing for a rapid absorption of whatever secretion its cells might make. So far as we know, these cells were never entirely removed except by a low form of colloid degeneration, which material was readily absorbed by the blood-vessels close to it. But the ovary was a true duct through which its epithelium when cast out passed off *en masse* to the outer world. If it was a lack of an internal secretion that caused the nervous menstruation disturbances of the menopause, why was it that the little girl did not have them; why was it that delayed menstruation in a child-bearing woman would produce identically the same symptoms as those of the menopause? He would lay it down as a rule, that if a woman's menstruation was delayed for any reason except pregnancy, she was apt to have symptoms closely approximating those of the change of life. Hence he believed that the internal secretion of the ovary was a myth.

Afternoon Session.

The Technique, Indications, and Ultimate Results of Suturing the Round Ligaments to the Vaginal Wall for Retroversions and Flexions of the Uterus.—Dr. Hiram N. Vineberg, of New York, read this paper. He deemed it necessary again to describe the technique in detail, as he had found that the method had not been correctly understood. The patient was prepared as she would be for a vaginal hysterectomy. He then described the several steps of the operation in minute detail. When the uterus was unusually large and heavy, or when the utero-rectal ligaments were put in high tension by anteverting the uterus, it was wise, according to his experience, to employ a single uterine fixation suture in addition to the round-ligament sutures. This suture should not be placed too high upon the uterine wall, in order to avoid the possibility of dystocia in the event of pregnancy. Any operation on the cervix that might be called for was now done, and the posterior vaginal wall or perineum subjected to any plastic operation that might be deemed necessary. The patient was kept in bed for twelve days, when the round-ligament sutures could be removed, with the uterine suture if present. With very few exceptions a curettage preceded the operation. He had performed anterior and posterior colporrhaphy in fourteen cases, and amputation of the cervix in seventeen cases; trachelorrhaphy in six cases; Tait's operation for complete laceration of the perineum in two cases; excision of a vaginal cyst in two cases; salpingo-oöphorectomy in five cases; ovariotomy in two cases; conservative surgery upon the tubes and ovaries in twenty-five. Thus, in sixty-four per cent. some surgical work upon the adnexa was found necessary. The results showed no mortality in the fifty-three consecutive cases. He drew attention to the fact that in every instance the peritoneum was opened and the adnexa were visually inspected. Convalescence was uneventful in forty-eight cases. In five cases there were some complications. In only one case was there an absolute failure, the uterus being found in retroversion six weeks after the operation. The indications and contraindications for the operation were given in detail.

Dr. Currier thought that fixation of the uterus in this way merely by suturing the round ligament did not give much to hold it forward, and thought it could be done better through the abdomen. His own idea was to limit this operation to those cases in which another operation was necessary. As an operation of election when no other operation was required on the uterus or perineum, he preferred very much opening the abdomen, rectifying any difficulty, and then, if desired, confining the operation to the round ligaments, which could be doubled on themselves and turned two or three different ways.

Dr. Sutton spoke of having seen Dr. Vineberg carry out the procedure described, and had since repeated it with uniformly good results. He expressed the hope that soon the abdomen would not be opened so often as now, since these conditions could be attacked through the vagina, and the uterus turned out and myomectomy or supravaginal hysterectomy done; and that the various diseases of the ovaries would be attacked almost exclusively by the vaginal route. He was the more persuaded that this time would come since the French and American operators were removing large fibroids by the vagina after reduction by morcellement.

Dr. J. W. Bovée stated that as a matter of principle he had little use for the shortening of the round ligaments, stating that in his opinion the Alexander operation possessed an advantage over the shortening, inasmuch as it did not require the opening of the peritoneal cavity. He thought there was danger in following these operations of losing track of the fact that most of the cases of dislocation of the uterus were due either to injuries to pelvic fascia, or in the nullipara to abnormal attachment of the ligaments to the uterus. He thought the point of necessity was to adjust the ligaments. Constipation and over-distention of the bladder lessened the efficacy of the shortening of the round ligaments.

Second Day—Wednesday, May 2d—Morning Session.

The meeting was called to order at nine o'clock.

The discussion of Dr. Vineberg's paper was continued.

Dr. J. Riddle Goffe, in answer to Dr. Sutton's hope that all pelvic work would be done through the vagina, expressed the belief that he would not have to wait very long. He had been doing the work for the last three years, and had taken the position that no man was justified in doing laparotomy until he had endeavored to relieve the patient by a vaginal incision. He had found that disease confined within the pelvis could be reached just as effectually through the vagina as through the abdominal incision, and stated that he had covered through the vagina almost every condition that existed in the pathological pelvis. In only one case within the last few years had he been compelled to resort to laparotomy to complete the work. He had removed seven fibroid tumors by myomectomy through the vagina. In these cases there had been retroversion at the same time, which was relieved by shortening the round ligaments after doing myomectomy.

Dr. Vineberg, in closing the discussion, said that he had tried to limit the operation to certain cases and still thought that the cases might require to be selected for the vaginal route; that some cases were best approached from the abdomen. He had frequently removed small fibroids through the vaginal incision.

A paper entitled "A Comparison of Vaginal and Abdominal Operations," by Dr. G. Richelot, of Paris, was read by title.

Demonstrations of Casts Illustrating the Anatomy of Pregnancy and Labor, also Models Used in Gynæcological Teaching.—Dr. J. Clarence Webster, of Chicago, gave this demonstration. He offered for inspection these casts, which had much value in teaching. No work of this kind had been done in America except that done by Dr. William Lusk in New York two years ago. Many clinical observations made by Dr. Webster in regard to the topography of pregnancy had been reproduced in frozen sections. The series included casts illustrating a vertical mesial section of the pelvis, in a woman who died of pernicious vomiting; another showing the beginning of the fifth month of pregnancy; another showing the beginning of the eighth month of pregnancy; a cast of the amniotic cavity at the beginning of the eighth month of pregnancy; a cast showing labor in the advanced second stage; also one with the fœtus *in situ*.

Dr. Mann desired to know whether these models had been put upon the market, and whether it would be possible for teachers of gynæcology to procure them.

Dr. Webster replied that he was under the impression that the Italian moulds had been kept by the makers, and that he had not had sufficient time to see whether they could be reproduced.

Dr. Mann suggested that some arrangement be made by which reproductions could be obtained.

Dr. Buckmaster spoke of a way of reproducing the method of an operation by paraffin. The cervix and pelvic floor, or whatever part desired, was covered with the paraffin, and by placing plaster over this a perfect cast could be obtained without discomfort to the patient.

A paper by Dr. E. E. Montgomery, of Philadelphia, on "Combined Nephrectomy and Ureterectomy" was read by title.

The Anastomosis of the Ureters with the Intestines: An Historical and Experimental Research.—Dr. Reuben Peterson, of Chicago, read this paper. He stated that anastomosis of the ureters with the experimental work forming the basis of this article was undertaken with the view of studying the changes resulting from anastomosing the ureter with the intestinal tract, and of determining whether the procedure could with safety be employed in human beings. The first part of the article was devoted to an exhaustive review of the literature; the second part was given to the description of the author's own experiments, from which, together with the work of others, general conclusions had been drawn. The most striking fact, in the writer's opinion, yielded by a study of the experimental work was the exceptionally high mortality attending the operation, whether one or both ureters were implanted in the bowel. Out of sixty dogs operated on by the various experimenters, when one ureter was implanted in the intestine thirty-five recovered, a mortality of sixty-one per cent. Out of sixty-five dogs undergoing bilateral ureteral anastomosis only eight survived, a mortality of eighty-seven per cent. The majority of deaths resulted from peritonitis through a giving-way of the uretero-rectal stitches and the subsequent escape of the urine into the peritoneal cavity; or an overwhelming infection of the kidney ascribed to nephritis or uræmia. The method which called for the least amount of suturing of the ureter itself would be found to give the best results. In none of the cases operated upon was it demonstrated that the kidney was normal after the corresponding ureter had been implanted in the rectum. The speaker then gave a short abstract of the twenty-eight uretero-intestinal anastomoses in man, showing the primary mortality of thirty-two per cent. to be high. The subsequent history of the successful cases placed the operation in a still more unfavorable light. His experimental work, covering a period of eighteen months, was given in detail. Three series of experiments were conducted: (1) Bilateral uretero-intestinal anastomosis; (2) lateral uretero-intestinal anastomosis; (3) uretero-trigono-intestinal anastomosis. The general conclusions were that the primary mortality of the uretero-intestinal anastomosis both in experimental work on animals and in man was exceedingly high; that all efforts to prevent ascending renal infection in animals or in man had proved futile; that it was impossible to determine the extent of the infection, and that the operation was unjustifiable either for the purpose of making the patient more comfortable or for malignant disease of the bladder.

Dr. Ford, of Utica, referred, in the discussion following, to a case illustrating the toleration of the bowel for continuous service as a bladder. The case was that of a young girl with total suppression of urine lasting over a week. There was no history of stone, and after six weeks she recovered without nephritis. She passed all the urine through the bowel, and was in comparatively good health.

A paper by Dr. George M. Edebohls, of New York, on "Migrated Ovarian Tumors," was read by title, as was also a paper by Dr. J. W. Bovée, of Washington, D. C., entitled "A Critical Survey of Ureteral Implantation."

The Evolution of My Technique in the Treatment of Fibroid Uterine Tumors.—Dr. Howard A. Kelly was the author of this paper. He referred to the fact that it was three years since their fellow-member, Dr. Charles P. Noble, had given an admirable historical résumé of the evolution of the various methods of treating the fibroid uterine tumors, from the earliest efforts in the fifties down to the perfected technique of his own work in the Kensington Hospital for Women. Inasmuch as Dr. Kelly had been closely connected with the development of this subject since his first publication in *The American Journal of Obstetrics*, January, 1886, he thought it might be of more than personal interest to trace his work in the successive advances up to his present, as he believed, perfected technique, and he expressed the belief that if each member would do the same much valuable and interesting information would be available. One of his first operations was an atypical one, performed September 6, 1884, on a patient who had suffered from severe bleeding from several sessile fibroid tumors occupying the lower segment of the uterus. The wound was closed with a glass drainage tube, through which the pelvis was repeatedly washed out with weak carbolized water for ten days, when it was removed. The patient recovered with a large ventral hernia, which she still had ten years later. The next operation was more radical. In this he adopted in several instances the treatment advocated by Hegar, consisting in the control of the vascular supply of the stump by means of a rubber mass ligature. This plan involved far less risk to life than the more ideal method of Schröder. The author's next advance was described in a paper entitled "A New Method of Performing Hystero-Myomectomy," being an address delivered before the College of Physicians of Philadelphia, January 2, 1889. He there advocated the plan successfully carried out October 10, 1888, of tying off the broad ligament, controlling the circulation from the uterine vessels by means of a temporary rubber ligature; cupping out the stump; turning out the cervical mucosa, and obliterating the raw cupped surface of the cervical stump by means of several rows of buried continuous catgut sutures. Most important of all Dr. Kelly considered the description of the method of controlling the uterine vessels, which was detailed. and which was considered a remarkable advance upon anything which had preceded. This met the objection to the Hegar operation by doing away with the rubber ligature, and was the method practised by the writer since that date. Dr. Kelly detailed his method briefly in dealing with very difficult cases, such as large adherent tumors. There were three ways of dealing with these tumors and meeting the complications: (1) By median sagittal bisection of the uterus with the tumor; (2) by a coronal bisection of the uterus in its cervical portion; (3) by a bisection of the tumor alone. He then stated that the situation and the relations of the tumor should be thoroughly studied after the abdomen was opened before attempting its removal. The principle of the operation was the same in all cases. The method of enucleation was to seek first to isolate and ligate the ovarian vessels of one side; then to expose the uterine vessels of the same side; then to cut across the cervix, clamping the opposite uterine artery, the round ligament, and lastly the ovarian vessels.

The President's Address.—The president, Dr. George J. Engelmann, of Boston, in his address gave an historical review of the various periods in gynæcological progress through which we have passed in the last twenty-five years. He believed that Robert Battey, by teaching that the comparatively normal organs could be removed with impunity, opened the way for the successful surgical procedures of to-day. Our methods now should be to reduce the morbidity as we had reduced the mortality. He referred to the work which the society had done in inquiry, investigation, and observation, and thought the Transactions might fairly represent the national contributions to gynæcology. The trend of modern medicine was toward research for cause and prevention. The first step in prevention was the study of condition and cause. The main cause of suffering would be found upon the great waves of a woman's life—puberty, menstruation, labor, and the menopause. Statistics were given to show the tremendous susceptibility and almost feverish activity of the system in the prepubertal period. Statistical tables with diagrams were used to illustrate the increased blood tension, temperature, nerve excitability, and muscular power before, during, and after the menopause.

An Appreciation of Kelly's Method of Removing the Fibroid Uterus by the Abdomen.—Dr. A. Lapthorn Smith, of Montreal, presented this paper. Twenty years ago the writer was strongly opposed to operative treatment of fibroids on account of the high mortality then prevailing among the best operators. Ten years ago he became a strong advocate of Apostoli's method of electrical treatment, by which he had cured the hemorrhage permanently in sixty-three out of a hundred and two cases in ten years. Eight years ago Price lowered the mortality enough to induce him to operate in certain cases with the serre-nœud. Baer further reduced the mortality, and he adopted his method and operated oftener. Three years ago Kelly perfected an ideal method which had almost no mortality, and which the author had adopted, and to which he gave the preference over all other treatment in every patient with fibroid who suffered enough to consult him. He claimed that he had acted consistently throughout, being guided by the one test question, "What was the mortality?" In his last ten successive cases, seven last year and three this year, all the patients had recovered. Therefore the operation was now almost devoid of danger, while it was absolutely effective. Kelly's method was by far the best, and to it was due, he believed, his absence of mortality in these ten cases. The great advantage of Kelly's method was that we began on the easy side, and after securely tying the ovarian, round ligament, and uterine arteries, and separating the bladder, we cut across the cervix and rolled the tumor out, thus obtaining plenty of room to tie the arteries from below upward. Another great advantage of this method was that there was much less danger of injuring the ureters. This accident was most likely to happen on the most difficult side; that is, the side where the tumor filled all the space between the uterus and the wall of the pelvis. But it was precisely on this side that the tumor was dragged away from the ureter while it was being rolled out, and by the time that it became necessary to cut anything on that side the ureter was at least two inches away and quite out of danger. Doyen's method had this advantage on both sides because he pulled the tumor off the bladder and ureters, and from the first cut he was getting farther and farther away from the bladder and ureters. But Doyen's method had the great objection of opening the vagina and thereby increasing the time of anæsthesia, loss of blood, and risk of infection, besides the æsthetic one of shortening the vagina. The author laid even greater stress than Kelly did upon the importance of feeling for each individual artery and tying it before cutting it, and then putting a second ligature on it, as the first one might loosen after the tension of the tumor had been removed. He also strongly advised chromicized catgut prepared by each operator himself, or else Red Cross cumol catgut prepared by Johnson, of New Brunswick, N. J., which he had found reliable. Besides the six primal arteries there were two small arteries which required tying on each side of the cervix. There was no need of disinfecting the stump beyond wiping away the little plug of mucus; but the cervix should be hollowed out so as to make anterior and posterior flaps, which were securely brought together before the peritoneum was sewed up. The omentum, if long enough, should be brought down to meet this line of suture, thereby preventing the intestine from sticking to it or to the abdominal incision. The speaker was opposed to leaving the ovaries and tubes, although he admitted that in young women so doing diminished the discomforts of the premature menopause. But in the majority of cases the appendages were diseased, and we ran the risk of the whole success of the operation being marred by leaving in organs which would sooner or later cause more symptoms than did the fibroid itself. His experience of leaving in ovaries or portions of ovaries had been most unfortunate, having received no thanks for his conscientious endeavors but a great deal of blame for having failed to cure the pain, which in the patient's estimation was much more important than the tumor. He was also much opposed to myomectomy; the operation was quite as dangerous as hysterectomy; there was very seldom any reason for it, as most of the women who had fibroids were at too advanced an age to raise children to advantage, or had passed the child-bearing age altogether. After submitting to such a serious operation the patient had a right to be guaranteed against a second or third one for the same disease. So many women had been disappointed by these incomplete or so-called conservative operations that their friends who really could be cured by an operation hesitated to undergo it. He would make an exception, of course, in case there was apparently only a single polypus no matter how large, or a single pediculated subperitoneal tumor. He held the opinion that all fibroid uteri should be removed as soon as discovered, because the woman with a fibroid was liable not only to the hemorrhage, which might not be great, but to reflex disturbances of digestion and circulation. Besides, every day it grew its removal became more dangerous, and the chances of its becoming malignant were greater. He was opposed to a preliminary curetting because it was unnecessary, and second, because when done it was seldom done effectually; having examined immediately after removal a fibroid uterus which had been curetted just before, he had found only about a twentieth part of the uterine mucosa removed. He was strongly opposed to vaginal morcellement, which was not to be compared with Kelly's method. It was much more dangerous, much more difficult, and kept the patient a much longer time under the anæsthetic. The operation was carried on in the dark, and the ureters were frequently wounded, while complications such as adhesions of the vermiform appendix and tears of the intestines, which were easily dealt with by the abdomen, with the patient in the Trendelenburg posture, were almost impossible to manage when working from the vagina. Moreover, nearly all women with fibroids were nulliparous, and the vagina was consequently narrow; they were nearly all elderly, and the passage was consequently inextensible. No more unsuitable class of patients could therefore be chosen for this difficult vaginal work. Besides, in morcellement clamps were used, and these compressed the nerves in the broad ligament, and a woman who had been operated upon with clamps took much longer time to recover than one who had only the arteries tied. Also, with clamps the peritoneum was left open, and, worst of all, the air of the hospital was contaminated with the sloughing tissue in the vagina. The author strongly advised the closure of the abdomen with through-and-through silkworm-gut sutures left in for three or, better still, four weeks. If they were not tied too tightly, and the wound was dressed with boracic acid in abundance, the one dressing or at most two dressings would suffice from the beginning to the end of the case. Besides, these sutures could be passed very quickly, thus saving ten minutes in the duration of the anæsthesia.

Intra-Abdominal Amputation of the Uterus; a Modification of Hysterectomy.—Dr. F. H. Davenport, of Boston, read this paper. He stated that the indications for hysterectomy were pretty well established, and that interest was now centred upon the technique. He called attention to a modification of so-called abdominal hysterectomy which he had practised for about two years. When it was possible in a young married woman to leave the cervix, he preferred to do so; hence for suitable cases he chose the abdominal route. He operated by the vagina for cancer of either the cervix or body. If a patient who was single or near or past the menopause, with a small or medium-sized fibroid which was non-adherent, objected to the scar of the abdominal operation, he operated by the vagina. On the other hand, in a young married woman he chose the abdominal route; it was of a good deal of importance that the vagina be preserved. When the uterus was to be removed for chronic inflammation or its results there was usually concomitant disease of the appendages, and the abdominal route gave full opportunity for seeing the exact condition of all the pelvic organs. The essential feature in which his method differed from that usually employed was that the uterine arteries were not ligated. He then described his method in detail. His results had been satisfactory.

The papers of Drs. Kelly, Smith, and Davenport were discussed jointly.

Dr. W. R. Pryor stated that the essence of the operation was the reduction of the mass by morcellement to produce a symmetrical tumor. The ovarian arteries being tied, the anterior wall of the uterus was split through; traction forceps were applied, and the intra-ligamentary nodule was seized and taken out of its bed. The moment the nodule was taken out the side from which it was taken became symmetrical. If the nodule was in front it could best be approached by tilting the tumor forward.

Dr. Gordon said that the continuous suture of which Dr. Davenport spoke was the one he had followed since he had been doing hysterectomy. He objected to the use of chromicized gut as used by Dr. Smith, for the reason that its absorption required a long time and sometimes never occurred. He further objected to Dr. Davenport's continuous suture with silk. He had used nothing but catgut since 1884, except in the through-and-through suture of silkworm gut in abdominal section.

Dr. Mann felt that the trend of sentiment seemed so decidedly in favor of the method pursued by Dr. Pryor and Dr. Kelly that he hesitated to mention a different method which made the operation easier. In a case in which the tumor was held down in the pelvis by the broad ligaments he thought that if the upper part of the broad ligaments was cut first and then the tissues cut across, the tumor would come up out of the pelvis and would be more easily gotten out.

Dr. J. M. Baldy referred to a case he had had within the past week, of a fibroid tumor in which the nodule extended down over the vagina. He was forced to approach it posteriorly instead of anteriorly as Dr. Kelly had done. Enucleation was performed similarly to the method claimed by Doyen. As to cutting down one side, amputating, and coming up on the other side, he had done the operation shortly after Dr. Pryor, and considered it exceedingly dangerous and one to be used only by the most expert.

Dr. Reynolds considered the principal point in the method of Dr. Davenport to be that of tying the uterine artery. The operation was thus made much simpler.

Dr. Johnstone thought that most of Dr. Kelly's troubles were of his own making; that when the uterus was wedged down in the pelvis, and there was danger of hemorrhage, the arteries should first be tied, thereby cutting off the blood supply as effectually as a plumber turned water off from the yard.

Dr. Kelly, in closing, called attention to the fact that the bisection method was applicable to all inflammatory cases. There was no risk to the ureters on the side if the bladder and the tissues were pushed down. He considered it safe to cut the uterine arteries and clamp afterward.

Third Day—Thursday, May 3d—Morning Session.

The discussion of the papers of Drs. F. H. Davenport, Howard A. Kelly, and A. Lapthorn Smith was resumed.

Dr. Smith emphasized the great advantage he had found in the operation by going down on one side, the easy side, and coming up on the other. He considered it important to leave the cervix. He believed that Doyen's reputed high mortality was due to the fact that he took out the cervix. He thought the risk of infection from hemorrhage and the length of operation were thereby increased. He had reported ten cases of large fibroids removed in this way, all of which resulted in recovery. He used chromicized catgut which had been in potassium solution for one hour. In the cervix this lasted but ten days. He would never leave any kind of silk in the abdomen. He agreed with Dr. Gordon that there was nothing like silkworm gut for closing the abdomen, and with it he had not had a hernia for four years. He did not concur in Dr. Baldy's opinion that this operation was made for only the most expert operators.

Bronchial Disease Not Invariably a Contraindication for Ether Anæsthesia in Abdominal Surgery.—In this paper Dr. T. A. Reamy, of Cincinnati, stated that his personal experience with surgical anæsthesia covered eight thousand cases; his obstetrical work, three thousand deliveries. Two thousand of these were under chloroform anæsthesia. For surgical work he considered ether in every way preferable as an anæsthetic. He had, however, never lost a patient under either ether or chloroform. He considered the prejudice against the use of ether in the presence of acute, subacute, or even chronic bronchitis largely unfounded, provided proper conditions were observed in its administration. He insisted that the inhaler must be so constructed as to permit reinhalation of the vapor, which was therefore mixed, from the beginning to the end of the operation, with carbon dioxide. He objected to most of the inhalers in use, and presented a simple one of special form constructed by his nurses, and which answered the purpose perfectly. It was likewise cheap and clean. The ether was poured on absorbent cotton in the bottom of the inhaler. No additional ether was used unless the operation lasted more than forty minutes. He began the administration of the anæsthetic himself. He regarded the assuring words of the surgeon to the patient, as the inhalation commenced, as very important. He insisted upon great care in the protection of the patient on removal from the operating-room to her own room, the temperature of which must be for several hours not below 80° F. He had witnessed but one case in which pneumonia was probably produced by ether inhalation. He had seen bronchitis, both acute and chronic, at once cured as a result of ether anæsthesia. In some instances he did not hesitate to administer it to patients suffering with severe bronchorrhœa. He would not use ether in the presence of emphysema. He would not, of course, employ it when the patient was suffering from Bright's disease, but he had rarely seen damage to the kidney follow its administration in properly selected subjects.

Dr. Malcolm McLean, in discussing this paper, pointed out that the elevation of the temperature of the room deserved a great deal of consideration. This he thought was very much overlooked, and he said that trouble following anæsthesia was often attributable to the low temperature of the room. The operator felt comfortable in a temperature of 72° F., but the patient under anæsthesia was not in a safe condition. He also referred to the unnecessary confusion in the etherizing-room, the result being that the patient required much more ether. He considered that with the patient in a secluded place, and without unnecessary intrusion, one-third of the amount of ether generally used would place her under full anæsthesia. This had been his experience for over twenty years. His rule had been never to let a person speak to the patient after the anæsthesia had commenced.

Dr. Philander A. Harris stated that he had had ether administered to himself quite a number of times, and so could corroborate the wisdom of remembering that reference to anything, except just the business of the ether, should be entirely dispensed with. He considered this important not only for the patient's feelings, but in consideration of the ease and advantage with which one could anæsthetize without these disturbing elements.

Dr. Reamy, in closing the discussion, said that conversation in the room was one of the most damaging things that could occur. As a rule his patients did not have the reflex cough, for they were put under the anæsthetic within four to six minutes, in almost every case. The room must be hot, and the ether must be given in the operating-room, that the temperature might be even from beginning to end. The inhaler was not removed unless the patient developed cyanosis.

A paper entitled "The Treatment of Full-Term Ectopic Gestation: Should not the Child Receive More Consideration?" by Dr. Edwin B. Cragin, of New York, was read by title.

The Relationship between Dysmenorrhœa and Appendicitis.—Dr. Archibald McLaren, of St. Paul, read this paper. He considered the influence of pelvic and inflammatory conditions on menstruation. In cases of cystic ovaritis and ovarian abscess he had seen some particularly satisfactory results follow the removal of overlooked appendages. In two hundred laparotomies he had had one hundred and fifty-eight cases in which inflammatory appendages had to be removed, and the appendix showed indications for removal in forty per cent. The conclusion drawn from the histories was that the trouble had originated in the appendix and spread to the ovary and tube. During the same time he had operated on seventeen cases of appendicitis in which there was no evidence of extension of the inflammation. He did not advocate the removal of the appendix in every case. The speaker gave the technique of his earlier operations, and stated that later he had adopted the method of Kelly.

Dr. A. J. C. Skene stated that the relation of appendicitis to dysmenorrhœa was a new idea to him, and he consequently accepted what had been said by the author of the paper as being perfectly reliable science. The paper explained to him certain observations which he had been unable to account for, *i.e.*, ovarian pain undoubtedly caused by appendicitis, the pain in the ovaries being always aggravated at the menstrual period, giving rise to the condition known as dysménorrhœa ovarienne. In those cases the ovarian pain had disappeared when the appendix had been removed. He considered that the extirpation of the appendix was better and more quickly accomplished by the use of the hæmostatic forceps, which had the advantage over other forceps in absolutely and permanently closing the canal of the appendix and the opening into the intestine. By this means there was no ligature to be disposed of, and reopening and establishment of fecal fistulæ were avoided.

Dr. A. Lapthorn Smith's experience coincided with that of Dr. McLaren; in nine or ten cases operated upon for tubal pregnancy or pus tubes he had found the appendix firmly embedded in the tumor. In one case of tubal pregnancy the specimen could be held up by the appendix. The salpingitis communicated from the appendicitis was probably the cause of the tubal pregnancy. In another case the appendix could be followed by a probe about an inch deep in a mass of exudation. He believed that if the plan of tying the ligature around the appendix and cutting off was abandoned there would be no fecal fistula. Treatment as in a bullet-wound would be the simplest procedure. He regarded constipation a strong factor in the production of infection, bacilli being increased in number in proportion to the number of days the bowels were unmoved. The presence of pus tubes in young women was satisfactorily explained by the appendicitis.

Dr. McLaren, in closing the discussion, considered the point mentioned by Dr. Smith, of young women having pus tubes, very important. He had seen several young women whose reputation had been smirched by the very fact that they had pus tubes, when operation showed appendicitis to be the cause of the suppuration. Such cases were usually confined to the right side. Out of fifty-nine cases he had removed the appendix twenty times. Operation did not affect the mortality. He thought the bullet-wound treatment safer and more surgical than the removal with the cautery.

A paper by Dr. Egbert H. Grandin on "Clinical Data Relating to (*a*) Urinary Toxæmia; (*b*) the Operative Treatment of Uterine Displacements; (*c*) Ectopic Gestation; (*d*) Certain Complications of Uterine Fibroid," was read by title.

A Certain Chart for the Demonstration of Pelvic Asymmetry from a Very Simple Method of External Pelvimetry.—Dr. Philander A. Harris, of Paterson, N. J., demonstrated the use of this chart. He believed that the best interest of the patient and physician demanded the study of pelvic measurements. The instrument employed was exhibited. Dr. Harris also showed photographs exhibiting the advantages of employing certain backgrounds in the photography of pathological specimens.

Dr. E. Van DeWarker said that the shadows which were troublesome in photography were gotten rid of by suspending the specimen in water in the glass tray with the illuminator under it. The effects secured by this arrangement were exceedingly satisfactory.

A Contribution to the Management of Face Presentations, with Report of Two Cases.—Dr. Malcolm McLean, of New York, read this paper. He gave in detail a description of his method of dealing with these faulty presentations. The patient being under full chloroform anæsthesia, the hand was passed carefully within the vulva, with the outside hand seizing the body of the child. In the entire absence of uterine contraction the chin was pushed away from the pelvic brim as much as possible, from the point toward which the chin was pointing in the direction of the occiput, *i.e.*, pushed obliquely from behind forward. At the same time the fingers of the vaginal hand were pushed up alongside of the head in one or other of the oblique diameters of the pelvis, so that they could reach the sub-occipital portion of the head. The thumb at the moment steadied the brow, and with a slight elevated motion imparted to the whole head it was caused to rotate on its axis as described—the chin passing upward above the ischiatic notch as the occiput was drawn down below the pubis. Flexion could be considerably hastened by pressing down the occiput by the outside hand as soon as the face was dislodged from its wrong position. The author detailed cases illustrating the usefulness of the method.

Dr. C. M. Green had always believed it was hardly possible to flex fully the extended head in the pelvis in the way described. He had never seen a face presentation with the chin posterior, with the head within the pelvis, in which he had not succeeded in delivering with forceps, or in allowing the mother to deliver. He had often been asked by students whether in these posterior presentations flexion by the head was not possible, but had always been obliged to say he had never tried it because he had succeeded in rotation of the chin forward by the hand. Everything depended on the relations between the head and the pelvis; if the pelvis was sufficiently large, or the disproportion was not extreme, and the operator was fortunate in having a small hand, he might accomplish it. He thought that much more could be accomplished than was supposed by the use of the hand in the pelvis. He believed the body should be turned at the same time to secure success. He thought that many of these face presentations were due to slight antero-posterior contractions at the brim, and it was a question, unless the child seemed very large, whether it was not wise to let it enter the pelvis.

Dr. R. A. Murray referred to the dictum that when there was irregular presentation of the child there was something faulty in the pelvis, and that the child should always be kept in mind. Examination should be thorough before remedial operation was undertaken. The mere introduction of the hand to determine the cause gave means to determine the size of the pelvis and relative size of the head to the pelvis, and so would be a guide to remedying these faulty presentations. To wait for the effective application of the forceps exhausted the patient, and the child was almost invariably lost unless it was very small. Schatz's method would be very good, but for the fact that it had to be applied at the superior strait. He called attention to the fact that when the operation was difficult on account of the head being wedged, and when there was difficulty in getting the patient under anæsthesia, very great aid could be obtained by putting her either in the knee-chest position or in Sims' position, in order to take away the head from the superior strait.

Dr. Edward Reynolds said that in the treatment of the presentation of the face posteriorly in the pelvis the suggestion which he had borne in mind for some years was that if the ordinary manipulative corrections of the presentation failed he should expect to render them easy by symphyseotomy.

Dr. McLean, in closing, emphasized the point that in these cases the head had the ordinary relation to the size of the pelvis. This was mentioned because since the author's first report it had been asserted by two or three prominent teachers that there must have been great disproportion between the size of the head and the size of the pelvis. The proportions were normal or below the normal relations as regards the width of the conjugate in the mother. In other words, the conditions were those of the average; he simply took advantage of the flexible portions of the pelvic passage.

A paper by Dr. E. P. Davis, of Philadelphia, on "The Pernicious Nausea of Pregnancy, with a Report of Cases and Autopsy," was read by title.

At the close of the scientific business of the society the retiring president, Dr. George J. Engelmann, thanked the members for courteous helpfulness which had made the duties of the president pleasant and easy.

The newly elected president, Dr. E. Van DeWarker, of Syracuse, was then introduced.

Other officers elected were: *Vice-Presidents*, Drs. Charles Jewett and R. B. Maury; *Secretary*, Dr. J. Riddle Goffe (re-elected); *Treasurer*, Dr. J. Montgomery Baldy. The other members of the council were Drs. M. D. Mann, W. R. Pryor, S. C. Gordon, and J. T. Johnson.

The place selected for the meeting in 1901 was Chicago.

Afternoon Session.

The afternoon of the closing day of the meeting was devoted to anniversary exercises at Marshall Hall, on the Potomac.

Dr. T. Addis Emmet, of New York, read a paper entitled "Personal Reminiscences Associated with the Progress of Gynæcology."

"The Status of Gynæcology in 1876 and in 1900" was the subject of a paper by Dr. Alexander J. C. Skene, of Brooklyn, N. Y.

Dr. James R. Chadwick gave some "Reminiscences of the Foundation and Early Years of the Society."

The programme was completed on the boat on the return to Washington, by a paper by Dr. E. Van De Warker, of Syracuse, N. Y., on "The Personal Factor in the Work of the American Gynecological Society," and a poem entitled "Some Kaleidoscope Pictures in Rhyme," by Dr. Thaddeus A. Reamy, of Cincinnati.

AMERICAN NEUROLOGICAL ASSOCIATION.

Twenty-sixth Annual Meeting, Held in Washington, D. C., May 1, 2, and 3, 1900.

Second Day—Wednesday, May 2d.

Adiposis Dolorosa.—Dr. F. X. Dercum, of Philadelphia, read the report of a case of adiposis dolorosa, with autopsy. The patient died from fatty degeneration of the heart. There was fatty infiltration of all of the internal organs and the muscular system. Microscopical examination revealed interstitial neuritis of the peripheral nerves, degeneration of the columns of Goll in the cervico-dorsal region, and unusual pigmentation of the cortical cells in the cerebrum. The pituitary gland was normal. The thyroid structure was hypertrophied.

Dr. Charles W. Burr, of Philadelphia, had made an autopsy in a similar case with practically the same findings. There was also a new growth affecting the pituitary body, which was probably the cause of the hydromyelia.

Dr. Dercum mentioned that marked improvement resulted from the administration of thyroid extract.

A discussion of the neuron doctrine in its relationship to diseases of the nervous system followed.

The Anatomico-Cytological Relationship of the Neuron to Disease of the Nervous System.—This was the title of a paper by Dr. L. F. Barker, of Baltimore. The paper dealt with the present status of knowledge of the units in the nervous system. The history of the neuron doctrine was traced. The conception originated with the pathologists (Ford), was supported by the embryological work of His, and by histological studies made by Golgi's method. Waldeyer, in 1891, collected the evidence in favor of the view, and gave to the nerve units the name "neurons." The speaker saw in the neuron doctrine nothing more than the application of the cell doctrine to the nervous system. Until it was shown that the axis cylinder of a nerve fibre and its end-ramifications were integral parts of a single cell, it was impossible to apply the cell doctrine intelligently to the nervous system. The "nerve cell" of the books was only a part of the real nerve cell. The contact theory was regarded as refuted; it was not an integral part of the doctrine of the nerve units or neurons. The retraction theory had never had any adequate basis. The studies of Apàthy and Bethe were regarded as extremely important as bearing upon the intimate relations which existed between the nerve units; they did not interfere in any way with the retention of the idea of the units themselves.

The Pathological Changes in the Neuron in Nervous Disease.—This paper was read by Dr. W. G. Spiller, of Philadelphia. He regarded the limitation of degeneration to certain systems in some nervous diseases as indicative of alteration of distinct groups of neurons, and therefore as evidence that distinct neurons existed. He then discussed the questions: (1) Whether a neuron was affected in its entirety by disease; and (2) whether the disease of one neuron had any influence on another neuron with which it might be functionally related. He attempted to show that when a neuron was injured in any way it suffered alteration in all its parts, although in some cases this alteration might be slight. He took his illustrations chiefly from his own investigations. He referred to complete atrophy of the cells of Clarke's columns from a cervico-thoracic lesion, and spoke of retrograde atrophy, describing a case of chronic neuritis with changes in the cells of origin and one of facial palsy of six months' duration, with changes in the facial nucleus. He described the chromatolysis he had found in the nerve cells of the lower part of the cord after a hip-joint amputation. Cases were reported to show that degeneration of the axon did not occur so promptly as changes in the cell of origin; also two cases of atrophy of the cortical nerve cells from injury of their axons. These and other illustrations were given as evidence that the structure known as a neuron suffered more or less in its entirety when diseased, and that this involvement was indicative of the functional individuality of the structure. Dr. Spiller then discussed the influence of one neuron upon another. He said he had been unable to find atrophy of the cells of the anterior horn of the cord on the side of the degenerated pyramidal tract in hemiplegia either of cerebral or spinal origin; even in the case of compression of the cervico-thoracic cord in early life, in which the cells of Clarke's column had disappeared, the cells of the anterior horns were not distinctly diseased. In a case of complete paralysis from unilateral internal hydrocephalus the cells of the anterior horns were not distinctly affected. In three cats in which the posterior roots had been cut he failed to find alteration of the motor spinal cells. In the case of unilateral syringomyelia of the cervical cord, reported previously by Dr. Dercum and himself, in which the posterior roots of one side were destroyed, the cells of the anterior horns were not seriously affected. Dr. Spiller therefore did not believe that injury of the central motor tracts or of the posterior roots had much influence on the cells of the anterior horns. He referred to cases to show that disease of the peripheral motor neuron did not cause degeneration of the central motor neuron. He said he had never seen involvement of the lemniscus following degeneration of the posterior columns, and cited cases to show that two neurons in connection with one another did not degenerate to the same degree and with the same rapidity from one lesion. He concluded, therefore, that a difference in structure must exist at the point where these two neurons came together, and that the essential elements of one neuron were not the same essential elements of another neuron. A study of pathological changes, he believed, afforded considerable evidence of the existence of neurons, and the results obtained in this way must be harmonized with those derived from anatomical investigations.

How Far does the Neuron Doctrine Affect Our Conception of Nervous Disease ?—This was the title of a paper by Dr. B. Sachs, of New York. He concluded that the nerve force must pass from one unit to the other, and that the health of the cell body depended in a great measure on the health of the distal parts. The cell-body was functionally co-ordinate and dependent upon the entire neuron system. He believed that the neuron doctrine had aided our conception of many forms of nervous disease, such as tabes, amyotrophic lateral sclerosis, multiple neuritis, and progressive muscular atrophy.

The Physiological Significance of the Size and Shape of the Neurons.—Dr. H. H. Donaldson, of Chicago, read a paper with this title.

Dr. J. J. Putnam, of Boston, thought we should abandon the notion of the cell-body as a storage centre for memories, etc., as the mechanism acted as a whole.

Dr. F. W. Langdon, of Cincinnati, said that anatomically the doctrine had helped us to make order out of chaos, and had led to better diagnosis and prognosis and possibly to more intelligent treatment.

Dr. Ira Van Gieson, of New York, expressed the view that the fundamental theory of the neuron could not be doubted, and required no defence at the present day. We must depart from morphology and go to physiology for elucidation. As to the theory of neuron retraction, it must proceed from the deductive method.

Dr. Charles K. Mills said that as to nomenclature it would be better to adhere to the term nerve cell or cell body, instead of using confusing terms. The term neuron had done harm in teaching the new doctrine. The facts that had been established must stand. It seemed to him that the nerve cell was nutritionally and ideo-plastically a unit.

Dr. F. X. Dercum considered theories as good working hypotheses, and spoke in support of the retraction theory.

Dr. Morton Prince, of Boston, thought the difference of opinion as to the doctrine was the difference of concept of the neuron theory. It had changed our views in regard to the interpretation of clinical and physiological facts. The retraction theory was valuable as a working hypothesis.

Dr. Joseph Collins, of New York, opposed the retraction theory. He believed the neuron doctrine had aided in the interpretation of many obscure classes of cases as explained by Dr. Sachs.

Third Day—Thursday, May 3d.

Clinical and Anatomical Analysis of Cases of Diffuse Myelitis.—A paper on this subject was read by Drs. J. J. Putnam and E. W. Taylor, of Boston. They expressed the opinion that diffuse myelitis was a distinct disease with clinical and anatomical characteristics, and reported a case which was associated with pernicious anæmia.

Dr. F. W. Langdon said there were two groups of pernicious anæmia in which spinal degeneration occurred in the posterior and lateral columns. This did not occur, however, in every case of pernicious anæmia. In one of his cases mucous colitis was present in conjunction with the spinal degeneration.

Dr. William G. Spiller asked if it was a systemic degeneration or a degeneration from disseminated foci, or a posterior root degeneration.

Dr. Putnam replied that it would seem to be a systemic degeneration. At the present time it was a matter of uncertainty. The anatomical lesions did not explain the clinical symptoms.

Section of the Posterior Spinal Roots.—Dr. Morton Prince, of Boston, read the report of a case in which section of the posterior spinal roots was performed for the relief of pain caused by neuritis of the brachial plexus. The operation was followed by cessation of pain in the affected region. Subsequently Brown-Séquard paralysis developed, involving the same area, and pain occurred in other areas as a result of laminectomy. He thought that one of the dangers of laminectomy was the possibility of an artificial blood-clot being formed in the cord.

Central Fissures of the Brain.—Dr. Burt G. Wilder, of Ithaca, exhibited the brain and gave a revised interpretation of the central fissures of the educated suicide's brain presented to the association in 1894.

The report was discussed by Drs. Langdon, Donaldson, Spiller, Meyer, and Mills.

Malaria Presenting the Symptoms of Multiple Sclerosis, with Necropsy.—Dr. W. G. Spiller referred briefly to some of the clinical cases of paralysis resulting from malaria, and described the following case with the symptoms of multiple sclerosis: A man of middle age, a sailor, under the care of Dr. Dercum, was in good health until about 1890. He then began to have headache, dizziness, and ringing in the ears. These symptoms lasted until 1895, when they were controlled by medicine, but they soon returned. In 1892 he had a slight transitory hemiplegia of the right side. In 1895 he suddenly lost power in the left half of his body, but the attack of paralysis was not accompanied by any loss of consciousness and was of short duration. When he came under observation in 1896, his sway was decidedly increased when the Romberg test was made. He was extremely ataxic in the left lower limb, but not in the right, and he had a very marked intention tremor on the left side. He presented a very somnolent appearance. Marked vertical nystagmus was easily elicited. The speech was scanning. The knee jerk was exaggerated on the right side, but was normal on the left, and ankle clonus was obtained only on the right side. The man died in 1899 after a severe diarrhœa, probably of malarial origin, lasting one week. Fever had been observed only during the last week of the patient's life. The right crossed pyramidal tract was slightly sclerotic, and the sclerosis was traced as high as the left internal capsule. Every capillary of the central nervous system was filled with the æstivo-autumnal form of the malarial parasite containing pigment, and numerous small hemorrhages were found. The capillaries under low power looked as though they had been injected with black powder. The symptoms were those of multiple sclerosis unilateral in type. This was the only case on record of malaria presenting the symptoms of multiple sclerosis in which a necropsy had been obtained. Some clinical cases had been reported. The slight unilateral sclerosis, in the right crossed pyramidal tract was sufficient to prevent tremor and ataxia such as were observed in the left limbs. The symptoms of multiple sclerosis were due to the thrombosis of the capillaries by the parasites and not to areas of sclerosis. The case showed that the disseminated sclerosis of malarial origin was a pseudo-sclerosis.

Dr. Mills said that while malaria was undoubted in this case, it was questionable whether the ataxia was due to a toxæmia, as there were numerous hemorrhagic lesions of small size. In several cases of uræmic hemiplegia gross lesions have been found. The symptoms were not necessarily attributable to the toxæmia. He had seen cases in which the symptoms of tabes were due to malarial poisoning. He referred to a patient with pseudo-tabes who recovered under anti-malarial treatment.

Dr. Langdon spoke of a patient with profound coma and elevation of temperature. Blood examination showed the presence of malarial organisms, and quinine subcutaneously effected a cure.

Multiple Sclerosis with Autopsy.—A paper on this subject with the report of a case was read by Drs. Charles W. Burr and D. J. McCarthy, of Philadelphia. The patient presented, during the course of seven years, the clinical picture of locomotor ataxia; ataxic paraplegia (combined system disease); and finally spastic paraplegia, without at any time having the typical symptoms, intention tremor, nystagmus, scanning speech, etc. The autopsy revealed extensive degeneration of the cortex with proliferation of the glia; sharply cut areas of sclerosis in the brain substance; extensive involvement of the pons, medulla, and spinal cord. None of these lesions produced secondary degeneration. Microscopically the usual sclerotic areas of multiple sclerosis were seen: retention of the axis cylinder in the sclerotic areas with destruction of the myelin was noted. Around the blood-vessels a reticular network of nucleated cells was present, probably due to low-grade irritation of the blood-vessel walls by the growing glia. The interest in the case lay in the fact that with such extensive involvement of pons and medulla there should be no bulbar symptoms, and with extensive involvement of the optic nerves and commissure there should be so little failure of vision.

Dr. Adolf Meyer, of Worcester, Mass., gave a demonstration of a few reconstructions of parts of the nervous system.

Tumor of the Spinal Cord.—This was the title of a paper by Dr. John Jenks Thomas, of Boston. He reported two cases of tumor affecting the spinal cord. The first case was that of a young woman, twenty-one years of age at the onset of the disease, who during the course of ten months gradually became paraplegic. At the time of admission to the hospital the sensory and motor paralysis and the paralysis of the sphincters was practically complete, and certainly so at a later period, and from that time on the patient seemed to have had no pain. Gradually very marked contraction developed, and the patient remained in much the same condition for a period of thirteen years, except for an outbreak of mental trouble with excitement, from which she made a good recovery. Death took place from exhaustion and diffuse nephritis, and chronic cystitis. At the autopsy there was found a tumor of the dura in the mid-dorsal region, which had completely compressed the cord beneath it. The tumor was an endothelioma. The cord was atrophied and showed the usual ascending and descending degeneration of the various tracts. The second case was one of intramedullary glioma in the cervical region in a boy of six years. The symptoms developed after a slight injury, beginning with weakness of the right hand and arm, the left forearm being congenitally absent, and with pain in the shoulder, and rotation of the head to the left. Later the paralysis of the arm became more marked, and there was diminished electrical irritability of the muscles of the arm, and slight paresis of the right leg with increased tendon reflexes in that extremity. Two weeks later, and seven weeks after the onset of the first symptoms, the patient died suddenly with symptoms of interference with respiration. The autopsy showed a glioma of the whole of the cervical enlargement of the cord, into the upper part of which a large hemorrhage had taken place, and with another hemorrhage in the lower part of the growth and in the central part of the cord, extending well down into the thoracic cord. Sudden death from hemorrhage into the tumor was much rarer in cases of tumors of the cord than in those of the brain where it not infrequently occurred, though small hemorrhages into the cord tumors were frequent. The case was also unusual because of the rapid course from the time of the first development of the symptoms, and because of the youth of the patient.

New Members.—The following-named gentlemen were elected to membership: Dr. S. E. Jelliffe, of New York; Dr. J. W. Courtenay, of Boston; Dr. Llewellys F. Barker, of Baltimore; Dr. Pearce Bailey, of New York; Dr. Henry M. Hurd, of Baltimore; Dr. D. J. McCarthy, of Philadelphia.

Election of Officers.—The following officers were elected for the ensuing year: *President*, Dr. G. L. Walton, of Boston; *Vice-Presidents*, Drs. Charles W. Burr, of Philadelphia, and Henry L. Stedman, of Boston; *Council*, Drs. E. D. Fisher, of New York, and F. W. Langdon, of Cincinnati; *Secretary and Treasurer*, Dr. G. M. Hammond, of New York.

AMERICAN PEDIATRIC SOCIETY.

Twelfth Annual Meeting, Held at Washington, D. C., May 1, 2, and 3, 1900.

Second Day—Wednesday, May 2d.

The Treatment of Hydrocephalus by Craniectomy.—This paper was by Dr. Edward P. Davis, of Philadelphia. He related the case of an infant six months old. The mother was previously healthy. Two brothers were not well nourished. The birth was easy and natural, the child weighing five and one-half pounds. When six months old it weighed nine and one-half pounds, and was 54 cm. long; chest circumference, 34 cm.; cranium, 41 cm. There were no teeth. The general appearance was that of a case of intrauterine rachitis. Double inguinal hernia existed. The child was stupid and showed that there was intracranial pressure. The child was trephined without trouble, and a sterile silver cannula introduced to draw off the clear serum. Silkworm gut was left for permanent drainage. The patient collapsed and died. The speaker questioned whether such operations were justifiable.

Dr. Rotch, who spoke from considerable experience, declared the operation in itself to be simple and free from danger. A little fluid should be withdrawn daily. The results were invariably bad, as the operation was in no way curative. Lumbar puncture was no better.

Dr. Dorning mentioned a child aged nine months from whom two ounces of fluid was drawn by lumbar puncture. The convulsions ceased and the case improved for three weeks, when it passed from observation.

Dr. Koplik spoke of three cases of chronic hydrocephalus, one child being two years old, whose anterior fontanelle was drained. It did well for a time, but died with stupor and convulsions. In a case of a child seven months old, with stupid days and nights of crying, it was subjected to lumbar puncture. From 10 to 20 c.c. of fluid was removed weekly for six weeks. The temperature then rose to 108° F., a peculiar rash appeared, and the child died in convulsions. Infection was suggested, but could not be proven, as great care and antisepsis had been maintained. No tubercles were found at the autopsy.

Dr. Davis preferred direct drainage to puncture. In one of his cases the child had a head increasing in size notwithstanding the puncture.

The Nephritis of Influenza in Children.—Dr. Rowland G. Freeman, of New York, read this paper. He said that nephritis was among the rarer organic lesions in childhood. In most cases with high temperature there was albumin in the urine, but real nephritis rarely occurred. Minor mentions four hundred cases of influenza with only one per cent. of nephritis as a complication. In 55,263 cases in the German army, only ten patients were noted as having nephritis. In Lichtenstein's four hundred cases there were but two with complicating nephritis. The complication was more common in children than in adults. The literature supplied only seventeen legitimate cases in both adults and children. Five occurred under the age of twelve years. Only two of twelve patients died. The prevailing type was the acute hemorrhagic. The urine was diminished; blood and albumin were present. His case was that of a boy aged four years who had influenza each winter. The temperature was 102.5° F. The urine was normal on the fifth day, red on the sixth, scanty and full of blood on the ninth; casts and epithelium were present. In ten days it was again normal. The patient passed thirty ounces daily for weeks, usually of low specific gravity, but on one occasion 1.050. The child recovered, as was usual in such cases.

Dr. Fruitnight emphasized the rarity of the affection. He had examined the urine of fifty-seven children with influenza and found albumin in but one.

Dr. Dorning remarked that the condition seemed to be rare, but it would stimulate physicians to more careful analysis in all cases. He cited three cases occurring during the past winter; one in a boy of nine years, with œdema of the face and urine showing thirty per cent. of albumin, with blood and casts; also a child four years old in the same family. A third had smoky urine with fifty per cent. of albumin, and was not yet well. He advocated baths and laxatives with abundance of water.

Dr. Jennings had had but one case, and that followed the double infection of influenza and measles. The child was six years old, and passed urine of 1.015 specific gravity, containing abundant albumin and casts. All cleared up in three days. There was neither dropsy nor languor. The temperature was 102° F. on the second day, but fell rapidly.

Dr. Rotch called attention to the indefiniteness of the symptoms compared to the lesions. It was not so in adults. We had few basal notes for conclusions, but it seemed that interstitial nephritis was usual, while glomerular nephritis was common in scarlatina. The diet should always be carefully regulated in order not to overtax the kidneys, even in simple cases.

Dr. Dorning asked if the amount of albumin determined the variety, to which Dr. Rotch replied that it was not known yet. Pathological findings were not in accord with symptoms.

Dr. Carr cited a case similar to that of Dr. Freeman, except that the patient also had rupture of the ear drum. The child showed a sudden liking for sugar, and the urine reached a specific gravity of 1.040 with abundant sugar, the albumin disappearing. Of fifty cases of influenza examined, none presented albumin.

Dr. Churchill, of Chicago, said that physicians did not examine the urine enough, and frequently looked for albumin alone. The infectious diseases of childhood often led to kidney changes that became serious lesions late in life. Renal irritation was common with infectious diseases, and cylindroids then abounded, with a few casts. He mentioned a patient with appendicitis who was found to have chronic parenchymatous nephritis. He had had influenza six months before. When four years old he had had measles and suffered ever since from intestinal troubles. The speaker asked which disease led to the nephritis. Urinary sediments should always be examined.

Dr. Augustus Caillé stated that albumin and blood casts made the clinical diagnosis. The prognosis was always good, as children had wonderful recuperative power in kidney diseases. He instanced a case of a patient, now well, which he had watched twenty years, since nephritis of childhood.

Sudden Death from Perforation of Trachea and Bursting of a Caseous Gland.—Dr. Caillé presented this case. It was that of a girl, four years old, who was sent to the hospital with a diagnosis of bronchitis. She was full of life and energy, running about the ward, when she suddenly complained of pain in the neck, and soon fell over unconscious. A large O'Dwyer tube was introduced, and the trachea was also opened without relief. After death, which shortly occurred, there was found a cold abscess the size of a walnut at the bifurcation of the trachea. Both bronchi were plugged by its contents. Two similar cases had been reported to the New York Pathological Society. The patient had no pain nor fever and only a few râles over the sternum.

Dr. Rotch said he had been endeavoring to get symptoms of bronchial nodes, but could find few recorded. Their presence was serious and modified the prognosis in all cases of cough. No symptomatology was in the literature. They were much more difficult to detect than were mesenteric and cervical glands.

Dr. Freeman noted the similarity between these cases and post-pharyngeal abscess. He had known one in the foundling asylum to rupture low and suffocate the child. He had opened two post-pharyngeal abscesses, but the patients died later.

Dr. Blackader said there were in these cases a characteristic lack of expansion and slight recession at the bases of the lungs on deep breathing. A case he had seen with symptoms of slight bronchitis had such marked recession that large bronchial glands were diagnosed. The upper superficial veins were distended. Large nodes interfered with the entrance of air, causing slight cyanosis.

Dr. Fruitnight considered elevation of the chin to the horizontal line absolutely useless so far as producing a characteristic murmur was concerned.

Dr. West reported several cases, and declared that the murmurs could be brought out. Three cases showed clear murmurs that disappeared as the glands subsided, but reappeared as the glands again enlarged. Four showed weaker respiratory movement on one side. The cough in all resembled whooping-cough.

A Congenital Cardiac Malformation with Endocarditis and Anuria.—Dr. A. C. Cotton, of Chicago, presented this paper and specimen. The child's mother had neither syphilitic nor rheumatic history. The child weighed seven pounds four ounces, and appeared healthy when born, but its respiration was delayed. Pallor and grayness changed finally to cyanosis. The temperature was 102.5° F.; pulse, 160; respiration, 48. Over the heart was a loud, harsh diastolic murmur. No urine was passed; the bladder was empty. On the third day the child nursed, and was not restless or irritable. There was no eclampsia. On the fifth day it died. Numerous subpleural hemorrhages were found, but no bronchitis. The heart was large, especially the left ventricle. The right side was normal. The size of the heart was $4\frac{1}{2}$ by 5 cm.; weight, 42 gm. The foramen ovale was normal. The mitral orifice was small. There were smooth nodules on the chordæ tendineæ. The anterior segment of the valve was held by a band-like bridge. There was a bulging of the wall between the aorta and pulmonary artery as though they had failed to meet. The beginning of the aorta was wider than usual. In the kidneys were uric-acid infarctions. Three hundred cases of fœtal endocarditis showed the left side only affected. Uric acid might be formed from the nuclei of leucocytes, or be present through imperfect oxidation. Both theories added interest to this case.

Dr. Adams asked if the temperature did not indicate a septic endocarditis. He had found only two cases of congenital septic endocarditis in the literature. He considered that there was no direct relation between the anuria and heart condition. Infarcts were common in the kidney, and were usually septic, not due to uric acid. He always used hydrotherapy.

Dr. Cotton mentioned seeing six fatal cases of anuria, even though the books spoke so lightly of it. Four of these patients had anomalous hearts, as seen at the autopsy. Two others were recognized as "blue babies."

Enteric Fever in Childhood.—Dr. A. D. Blackader read this paper. It was a careful analysis of one hundred consecutive cases in private practice and two in hospitals. All were of children under fifteen years of age. Four were of infants under two years old, the youngest thirteen months. This one had early symptoms like incipient meningitis. It had four or five loose stools daily, and died after five days. The Widal reaction was present. The proportion of cases increased regularly in number with the years of age. As the disease was comparatively rare, all continued fevers of remittent type should be carefully investigated. There was no dividing-line where adult and infantile forms differed. Less than fifteen of these cases were mild. The duration averaged three weeks. Eighty-three per cent. of the patients had headache, forty-nine per cent. anorexia; twelve were chilly; thirty-six had loose stools, and ten had real diarrhœa. In only four did this require treatment. Twenty-three had epistaxis. One had a convulsion, but it was attributed to food. Several had subnormal temperature, one having a rectal temperature of 95° F. for four days. Thirty-seven had temperatures of 104° F. or over. Fifty-five had rose spots. Four had bloody stools. As a rule the pulse was slow, showing the effect of toxins on the pneumogastric. Three cases required catheterizing, and five showed albumin in the urine. Widal's reaction was tried in forty-three cases, in three of which it failed. Cold water after Brand was the regular treatment. Strychnine was the heart tonic. The great value of baths was shown as a general and nerve tonic, not as antipyretic alone. The duration and temperature of these baths must be as carefully modified to the case as doses of medicine. Regularity in baths was necessary for definite effect.

Dr. Cotton inquired whether laxatives were given for constipation. He had reported one hundred cases seen in Chicago. The constipated cases usually had a high temperature, which fell after an enema of glycerin and oil.

Dr. Adams said there was no doubt of enteric fever occurring in patients under one year of age. He had seen them typical at one year. Twice he had seen insanity follow typhoid in children. The child should be put in a bath if necessary. It was harmful to put a child in a bath of very low temperature; 90° F. was enough. He cited a case of a patient who lived on ice-cream.

Dr. Northrup maintained that it was proven that children under two years of age were little susceptible to typhoid. They might acquire it surely, as did a seven months baby, the sixth case in one family, or another infant who was fed milk by and with its sick father. Typhoid was not an infants' disease. It was hard to detect. If they really had it, all symptoms were clear, more so than in adults. Large intestinal follicles did not indicate typhoid. Most of the doubtful cases were of entero-colitis. The child should be cooled with water inside and out, but the feet must be kept hot. Ice-cream might be given, as it was only iced cornstarch.

Dr. Griffith remarked that too much typhoid was seen in Philadelphia. It was "the physician's privilege but the city's disgrace." As diarrhœa was not common he thought the previous speaker's statements were illogical. Typhoid was difficult to recognize because many symptoms were so often lacking, but now the Widal reaction made the diagnosis sure. He had seen cases in children aged seven months and three months. All were liable, but still it was rare in the very young. Children did not bear water so well as adults; it should not be of lower temperature than 85° F. Warm bathing was good and should be revived.

Dr. Rotch said all evidence pointed to the possibility of the occurrence of typhoid; but why emphasize it? Young and old were affected alike, but the young in a less pronounced manner. Rose spots were more common in the young. Cold baths were not necessary. If the child was wrapped in wet gauze and fanned, it would lower the temperature.

Dr. Wilson declared that no single series of cases could settle treatment. There could be no question that infancy did carry a certain immunity, because few were liable to exposure. There were two types of typhoid in adult and child, and the two were often reversed. In infancy there were not all the clinical criteria. Most cases were mild, and hence the prognosis was good. Baths must be used systematically, but modified from the original Brand method. The treatment should begin with a bath of 90° F., and each three hours followed by one a little lower. The child should be kept in only eight or ten minutes, and soon came to like it. The bath was not essentially an antipyretic. Its regular use modified the nervous symptoms, secretions, excretions, and general nutrition. Very cold water was not needed, as there was danger of over chilling. The superficial area of a child was great in proportion to its resistance. The adult was helped by the cold shock, but not so the infant.

Dr. Fruitnight cited a case of intercurrent measles and typhoid. The measles developed about the twentieth day with a temperature of 105° F., delirium, and prostration.

Dr. Freeman stated that milk epidemics of typhoid should show many cases in children, as they were more likely to drink it.

Dr. Miller commented on the lack of autopsies.

Dr. Dorning reported three cases in children under a year old. All came to autopsy and presented the shaven-beard appearance of Peyer's patches, which was thought characteristic. Physicians should use water more freely and learn how powerful it was both for good and for harm. The individual power to react should be considered. Hot and cold were only comparative terms. If one went in a hot-air chamber at 170° F., and had water at 110° F. poured on one's self, it would seem like ice. Discrimination must be had with baths, and friction to the surface should be always employed. He mentioned three patients who took solid diet without ill results, and seemed to regain health most rapidly.

Dr. Northrup reported that he had made two thousand autopsies on foundlings under two years old, eleven hundred being those boarded outside of the hospital. None had shown typhoid lesions. He wished to encourage a healthy scepticism as to its occurrence in children under the age of two years.

Dr. Blackader, in summing up, said that each case demanded its own treatment. Warm baths had no tonic effect, nor did sponging, their only result being antipyretic.

Third Day—Thursday, May 3d.

A Case of Rhachischisis.—Dr. T. M. Rotch, of Boston, read this paper. The case was that of a girl three days old. The head was enormous and delivery was accomplished by forceps. The child was viable. There was marked caput succedaneum. The occiput rested on the spine of the upper dorsal vertebra, the front of the neck bulging forward. There existed a cleft an inch and a half long in the laminæ of the vertebræ. The extremities were normal, also the eyes. The child could not swallow. Rhachischisis often occurred with spina bifida; not so here. When the rhachischisis was total it was often combined with anencephalus. Any region might be affected, perhaps two spots, each including four or five vertebræ. It was caused by the two portions of cord failing to unite in the early development. In this case the viscera were normal.

A Fatal Post-Otitic Cerebral Abscess with Amnesic Aphasia.—This paper was read by Dr. J. Henry Fruitnight, of New York. He said this case well illustrated that the extent and gravity of lesions were not always indicated by grave symptoms. The laity should therefore be educated to the gravity of chronic ear troubles, as physicians should themselves be instructed. In this case the child was twelve years old. It had otalgia and later otitis media, followed by an abscess. The pus was let out. The child was neglected by the mother, who considered the trouble only a running ear. After the pus had been discharging eighteen months, an acute otitis occurred. The vomiting, temperature (100° F.), headache, and prostration pointed to mastoid abscess. Operation was refused. After convulsions set in, operation was allowed and performed by Dr. Herman Knapp. The eyes were found normal, and sensibility was normal. There was no tenderness over the mastoid bone. Word blindness was marked. Epidural meningitis was suspected. The bone was opened and the attic laid bare; all caries was chiselled away. There was no external pachymeningitis. Both the middle and posterior fossæ were opened. A black spot on the dura showed where the abscess lay. In three days there was no word blindness; the next day there was failure on some words; a day later the patient jumped out of bed and died suddenly. The third ventricle and left lateral ventricle contained much pus, with a zone of softening in the brain around. The abscess was in the middle temporo-sphenoidal lobe, and had perforated in two places. The symptoms had indicated meningitis from the beginning, with no characteristics of abscess until the last twenty-four hours. The thick capsule showed that the abscess had been of long standing.

Dr. Herman Knapp said that the case was remarkable and instructive because it was rare to be able to make a certain diagnosis of abscess, and more rare to locate it. Word blindness was located in the lower end of the anterior gyrus, but that was healthy. In the roof of the tympanum was a dark spot 3 mm. in diameter, a certain proof of an abscess. One case occurred, having an abscess wall two lines in thickness, which an aspirator needle would not pierce. Thrombosis was more frequent than these cases, and meningitis still more frequent. The speaker cited a case of right hemianopsia with optic neuritis following long suppuration from the ear, in which the diagnosis was made, the abscess located and operated upon with success. This was the only one in which the scientific inferences were correct throughout. The lesson in prophylaxis was that otorrhœa should never be left alone; caries will later produce mischief.

Dr. H. D. Chapin said that there was a type of mastoid disease in which the brain was not affected, the pus burrowing in front of the ear. He mentioned a case with tenderness behind the ears, but no swelling, all of which was relieved by incising the drums.

Dr. W. P. Northrup spoke of a case with pronounced opisthotonos as a beginning symptom. Pneumonia was suspected, there having been no discharge from the ear. All symptoms were relieved by an operation.

Measurements of Chicago School Children.—This paper was read by Dr. W. S. Christopher. The work had been done during the past year and embraced fifty-six hundred observations. Height and weight were taken in the usual manner, the weight of the clothes being found to be 5.8 per cent. of the total weight. The grip was determined by a special but accurate dynamometer, which was shown. Vital capacity was reckoned equal to the amount of air expired in the spirometer. Hearing was measured by an electrical apparatus. Fatigue and endurance were measured on an apparatus in which the middle finger of the right hand raised seven per cent. of the body weight every second for a minute and a half. The high-school pupils from comfortable homes presented better records than the school whose pupils were of mixed nationality and inferior housing. The energy as recorded on the ergograph showed increasing power of endurance steadily from the age of six years to twenty, except for a year or two at puberty. Another ergographic record showed graphically that endurance fell from ten to twelve o'clock daily and also from the second hour of the afternoon session. The first hour of each session was much the best. This demonstrated the necessity and advantage of dividing the sessions by long intermissions. A nervous child with chorea worked the ergograph for three minutes without apparent fatigue, and only stopped because the record sheet was exhausted. As this was double what could be done by a man in health, some interesting inferences might be made on nerve versus muscle strength. Other experiments were quoted showing that the energy developed by voluntary effort and that by electrical stimulation were the same. It was found that the best mental development went with the best physical development, low mentality being accompanied by low stature. All the various physical conditions followed similar lines in the charts. The extremes of stature in some grades, though few, showed the necessity of each room being fitted with some adjustable desks.

Endurance was naturally found to increase with years, the greatest elasticity being in the upper grades. Vision was counted imperfect at $\frac{20}{30}$. At six years there were few damaged. At twelve years thirty-six per cent. were defective, but at fourteen only twenty-three per cent. were so found, vision seeming to improve with the increasing development at that period. School life therefore did not continuously impair sight. In considering backward children, we must look to the brain or cord, and the motor tracts. The existing defects were caused by (*a*) heredity, (*b*) nutrition, (*c*) infection, and (*d*) trauma. To remedy the evils as well as study conditions required the close conference and discussion of pedagogue, physician, and psychologist.

Dr. Macdonald, of the Washington board of education, gave experiences in measuring twenty thousand children. It was found that the public were active in their interest in scientific research in the polar regions, in rocks and wild animals, but could not readily see the utility of studying the human species. It was ideal science versus practical. Boys and girls were found to diverge at fourteen years, the girls maturing more rapidly. Observation had been made on three thousand cases to learn the ability to feel or endure pain, to learn if the first-born was most acutely sensitive, etc. Thirteen thousand observations showed clearly that children born in summer did best in every way. Interesting figures, possibly practical, were obtained abroad, *i.e.*, that twenty per cent. of the aristocracy were blondes. It was interesting to compare the strength with the vital capacity, or weight with the same, etc.

Dr. Yale, of New York, presented the practical application. It was well known that a child grew "weedy," tall, but not tough—grew beyond his strength. It was not over-study that the child suffered from; it was that he had not the physical strength to keep up the study. He could not study because he was ill.

Dr. Fruitnight noted the lack of vigor toward noon. The school-day should be divided so that the child was out of doors from 10:30 A.M. until 2 P.M., especially in winter.

Dr. Cotton laid stress on the importance to the future of all these observations on the developmental period. He was gratified that so much of this work emanated from the Pediatric Society. There was a want of appreciation by the lay public, though they were keenly alive to commercial investigations.

Dr. Chapin spoke of investigations in one thousand children at the Juvenile Asylum. Many of these were committed for petty offences, and all were of poor heredity and surroundings. Many with five stigmata of degeneration were considered brightest by their teachers.

Dr. Rachford declared that we did not as yet know what the ergograms meant, muscle or nerve fatigue. The nervous girl, for instance, did more work than a strong man, but the tracing was itself like a choreic action. If brain strain could be measured the energy of the pupils should be less at the end of the term than in the beginning. He asked if there was a physical basis for precocity, and what amount of development was necessary for sustained work in school. There should be a physical examination for entrance to school as well as mental.

Dr. Ware asked if it was to be inferred that children had less likelihood of eye strain if they remained out of school until the eighth year; also if the tracings for both ends of the school year were alike.

Dr. Yale replied that there was very little difference. Some lost weight in summer, depending upon the manner of spending the vacation, whether at home, at work, or in the country. The observations of teachers varied so greatly that the grade standing was found the more positive indication of ability. Color blindness in whole or part was found very common.

Epidemic Paralysis in Children.—Dr. Henry D. Chapin, of New York, read this paper. He said the prevailing view was that this was a special form of paralysis due to an infection. The abrupt onset, convulsions, epidemic and endemic outbreaks favored this view. The symptom complex resembled that of Landry's paralysis. Some evidences suggested a chemical change in the blood as in rheumatism, or change in metabolism not understood. Cold, refrigeration, was a suggested cause. Paralysis from microbes was not always confined to the extremities. There were often groups of cases in one family. The Poughkeepsie epidemic occurred in July and August. The city was usually healthy otherwise. There was no paludism. The speaker saw seven cases and learned of more than twenty-five in the vicinity. A type was the case of a child, four years old, taken with vomiting, high fever, pain in the limbs; temperature, 104° F.; pulse, 120. On the fourth day both legs and arms were paralyzed. All the cases were similar. The blood examination was negative. A few minute diplococci were found but might have been due to contamination. The blood plaques were increased, showing dissolution of the red elements. The great amount of pain in the limbs suggested neuritis. One child, two years old, died in convulsions twenty hours from the onset. The microscopical examination of the cord showed nothing especial. There was cloudiness about the anterior horns, with diplococci and marks of degeneration. One would hesitate to infer much from these appearances. In all the other cases the patients recovered, though not all were free from paralysis. Several cases were of typical anterior poliomyelitis; one child was still paralyzed. Two forms were evident—those with spinal and those with peripheral lesions. A third set seemed to include both forms. The epidemic at Bridgeport was of the same character.

Dr. Griffith narrated two cases that occurred in the same family without apparent cause. They must have been infectious. One list of cases of epidemic paralysis included a scurvy case.

Atresia of the Larynx due to Faulty Intubation, with Specimen.—This was presented by Dr. W. P. Northrup, of New York. He said that the causes of retained tube were a faulty tube or a faulty operator. The specimen of larynx was shown; it happened to be the last case seen by the late Dr. O'Dwyer. The child had snatched the thread and tube out too quickly for the young operator, and several attempts were made at reintroduction. Later urgent dyspnœa demanded tracheotomy. The child died later of pneumonia. The larynx showed an hour-glass contraction below the glottis, caused by a band of new inflammatory tissue where the walls had been abraded by the frequent introduction of the tube.

Dr. Miller thought the speaker too severe on the operator, as the most skilful had like troubles.

Dr. Cotton said it would be interesting to know how many cases there might be with malformed larynx. He had seen a girl, aged thirteen years, die with symptoms of diphtheria, at all events of dyspnœa. Intubation failed, and after death stenosis was found and a cul-de-sac in the larynx. The author's moral was, not every one could intubate.

Three Cases of Head Nodding and Head Rotation.—This paper was read by Dr. Milton Miller, of Philadelphia. He said that in Budapest fourteen cases occurred among fifty-two thousand persons in two years. Seventy-eight were now in the literature. The term spasm was misleading; head nodding was more appropriate. He described the case of a negro male child, five months old. He was breast-fed but had gastro-intestinal disorders. His weight at birth had been eight pounds. The ribs were beaded. He cut the first lower incisors at nine months. Massage, baths, and cod-liver oil improved him. The head nodded ninety times per minute, but ceased during sleep. There existed vertical and diagonal nystagmus. The movements lasted four months, when he became well. The second case was that of a girl, aged twelve months, fed upon condensed milk. She had alternating constipation and diarrhœa. Rickets was well marked. The head movements had existed since she was seven months old. She recovered. In the third case there was no nystagmus, only nodding. Hygiene and salt baths cured. The cause in these cases seemed to be gastro-intestinal disturbance. The second case was aggravated by intercurrent measles.

Of the seventy-eight cases recorded, eleven had convulsions; falls preceded twenty-two; nystagmus of both eyes existed in forty-three, in one eye in forty-two; five had strabismus. Twenty-two were examined with the ophthalmoscope, and twenty-one of them were found normal. The nodding had been thought due to uncertain line of sight, and bandaging had been suggested to lessen the habit. The bromides were less efficient than diet in cure.

Dr. Koplik had had twelve cases investigated. As a rule nystagmus was more marked in one eye than the other.

Dr. Lewi had visited the homes of patients and found that eye strain could not be attributed to their surroundings. Rachitis was always present.

Dr. Miller, in closing, said in his cases the children were living in good rooms and were rachitic. His view was that the disease was a functional one due to exhaustion.

Cresoline Poisoning.—Dr. S. S. Adams, of Washington, described two cases. The first case was that of a child a year old, who was found in coma, with stridulous breathing and cold clammy sweat. The urine had been black for twenty-four hours. Recovery was prompt in the open air. The second case was that of a baby six months old, said to be dying of broncho-pneumonia. The pupils were dilated; breathing was stridulous; temperature, 100° F. Pulmonary œdema was present. The urine was not black. Recovery was complete in the open air.

Officers Elected.—*President*, Dr. Booker, of Baltimore; *First Vice-President*, Dr. Frederick A. Packard; *Second Vice-President*, Dr. Morse; *Treasurer*, Dr. J. Park West; *Secretary*, Dr. S. S. Adams; *Editor and Recorder*, Dr. W. L. Carr; *Member of Council*, Dr. F. M. Crandall.

The society adjourned to meet at Niagara Falls on May 27, 28, and 29, 1901.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Meeting Held at Washington, D. C., May 1, 2, and 3, 1900.

First Day—Tuesday, May 1st—Morning Session.

President's Address.—The annual address was read by the president, Dr. Henry W. Stelwagon, of Philadelphia, who said that the ultimate aim of physicians, the diminution of suffering and the cure of disease, could be attained only by the combined results of the clinician, the therapeutist, the pathologist, and the bacteriologist. Bacteriology, especially, played an important part; and the hereditary receptivity and family vulnerability, the environment, and the state of the general health, were factors of moment in many cases. Dr. Stelwagen spoke of the increased importance now attached to the teaching of dermatology in the medical colleges, and also referred to leprosy as a disease which could be properly handled only by the national authorities.

Bullous Dermatitis (Dermatitis Herpetiformis?) in Children.—Dr. J. T. Bowen, of Boston, presented five cases following vaccination. He exhibited photographs of the cases, in three of which the eruption appeared within two weeks after vaccination, and in at least four of which there seemed to be reason for the assumption that the vaccination in some way influenced the appearance of the eruption. The localization of the lesions was striking, there being a tendency to grouping about the mouth, chin, nose, and ears, and upon the backs of the hands and feet; moreover, the extensor aspects of the extremities were prominently affected. The itching was not pronounced. Dr. Bowen said that our present knowledge of the bullous dermatoses was such that it was imprudent to draw deductions from any but a large number of carefully reported cases.

Dr. George T. Jackson, of New York, read a paper on "Loss of Hair," which will appear in full in the Medical Record.

An Unusual Phenomenon of Syphilis: Othæmatoma.—Dr. Joseph Zeissler, of Chicago, reported a case in a physician, forty years of age, who had a small wart-like lesion on his right thumb, which was removed by excision and cauterization with nitric acid. The glands of the axilla became much enlarged, and six weeks afterward a copious roseola made its appearance. Mercurial injections and inunctions were given. A year later an othæmatoma appeared on the right auricle. Iodide of potassium was liberally administered, and the othæmatoma promptly and permanently disappeared. Dr. Zeissler explained the case on the basis of perichondritis due to syphilis.

Dr. Ravogli, of Cincinnati, referred to two cases of othæmatoma which he had seen in idiots.

Evening Session.

Case of Brocq's Erythrodermie Pityriasique en Plaques Disseminées.—This case was reported by Dr. J. C. White, of Boston. The patient was a healthy Irishman, with a negative family history, who twelve years ago noticed red spots of considerable size on his lower leg, which disappeared in the spring and reappeared each autumn, invading more and more the general surface, until the entire surface was almost covered. They showed themselves every year at the beginning of cold weather, remained unchanged throughout the winter, and vanished in April. They had never given rise to any subjective symptoms. On inspection his face and neck were largely occupied by bright red areas of irregularly circular outline, varying in size from one-half inch to two inches in diameter. They were mostly smooth, not at all elevated even at the margin, and were not thicker than the normal skin. Another case was seen about the same time by Dr. Charles J. White, in a young German aged twenty-six years. The two cases bore a strong resemblance to each other in the general appearances, but were far from identical, the second one covering much larger individual areas uniformly and being more scaly, as in Brocq's case. It also lacked the peculiar brownish tint of the first case.

Dr. Sigmund Pollitzer said these cases bore very little resemblance to parakeratosis variegata, or lichen planus.

The Prophylaxis and Control of Leprosy in this Country.—This paper was read by Dr. Prince A. Morrow, of New York. He referred to the growing likelihood of contagion from our recently acquired possessions in the Philippines and Hawaii, and the necessity for national action in order to prevent the spread of the disease. He suggested the employment of skilled experts as quarantine inspectors. He deprecated the mediæval conception of the horror and virulence of the disease, which was now known to be no more contagious than tuberculosis. Isolation or segregation undoubtedly was the most effective means known to sanitary science for the control of this and other contagious diseases. Homes or asylums with suitable hygienic surroundings should be provided by the national government for the care and maintenance of lepers. Such asylums should be made comfortable and attractive, and be arranged with especial adaptation to the requirements and peculiar needs of its inmates. In view of the chronicity of the disease, lepers should not be condemned to close confinement in inactivity, but should be provided with interests, means of employment, and recreation. As a large proportion of lepers are able to engage in some kind of industry, such institutions might be made partly or wholly self-sustaining from the proceeds of these industries.

The Prevalence of Parasitic Diseases of the Skin, and Measures Necessary to Limit their Spread.—This paper was read by Dr. William Thomas Corlett, of Cleveland. In considering the class of diseases known as parasitic, the author spoke of the necessity of enlarging the group, since recent investigations have demonstrated that other microorganisms of the vegetable kingdom, such as the bacteria, blastomyces, and actinomyces, were active agents in producing diseases of the skin. The distinction that these latter were not limited to the skin, but produced grave disturbances of the viscera, was held untenable, as instances were recorded of ringworm and favus attacking the mucous membranes. As to the frequency of the parasitic dermatoses, the speaker quoted from the statistics of the American Dermatological Association, showing that next to eczema parasitic diseases were the most common of all diseases of the skin. Favus was of minor importance, being almost wholly an imported disease. The writer had met with it mainly in Poles and Hungarians, seldom in persons from Scotland and only once from France. Tinea versicolor, he held, derived its importance mainly from the danger of its being mistaken for more serious affections. Of the greatest importance among the vegetable parasitic diseases of the skin he placed the ringworm family. He maintained that the severity as well as the frequency of ringworm differed in different countries, being especially prevalent and more severe in low, tropical countries than in high northern altitudes. This afforded a striking contrast to that observed among the animal parasitic diseases, particularly scabies, which throve best in cold countries. As an example he mentioned scabies Norvegica. In the writer's experience ringworm was mainly a disease of children and adult males, although all conditions and ages were liable to become affected. In children the scalp was the part most frequently attacked, while in men the chin and sides of the bearded face and crural region were most frequently involved. He had observed the disease but seldom after middle life. Pediculosis capitis had been most commonly encountered in children and women, pediculosis pubis in young men, and pediculosis vestimentorum he regarded as almost wholly limited to the uncleanly, and as seen in public clinics was one of the tortures of old age. As to whether or not parasitic diseases of the skin were diminishing in frequency in this country, the speaker again referred to the statistics of the American Dermatological Association during the last twenty years, in which it was found that while there had been a slight decrease in the animal parasitic diseases there had been an increase in the number of diseases of the skin due to vegetable parasites. He attributed the decrease in the former to improved hygienic conditions, and especially to the free bathing establishments in large cities, which encouraged frequent ablutions. Among the most potent factors in increasing the prevalence of vegetable parasitic diseases, especially ringworm, he mentioned asylums, schools, barber shops, the roller towel in the washroom of hotels, and domestic animals. Among the measures recommended to limit the spread of the vegetable parasitic disease of the skin, he spoke of the imperative need of admitting children to asylums, which oftentimes rendered it impossible to exclude certain infectious diseases. When isolation was found impossible, the scalp must be shaved and an impermeable dressing worn to prevent the diffusion of the contagium throughout the apartment. The medical director should exercise great caution against admitting cases of ringworm to asylums. The speaker strongly urged the exclusion of ringworm from kindergartens and schools. That this might be successfully carried out he advised that there should be in all communities a medical inspector of schools. Nothing short of rigid quarantine would succeed in eliminating the various forms of ringworm. Barber shops should at least be under the supervision of the board of health. Minnesota already had a law in force requiring all barbers to obtain a license. No barber should be allowed to use the same brush, sponge, or towel on different patrons, without these articles being first boiled, subjected to dry heat (250° F.), superheated steam, or otherwise disinfected. Absolute alcohol, a solution of formaldehyde, fifteen per cent., or corrosive sublimate (1 : 1,000) were among the necessary adjuncts to a barber's outfit. Any disease existing on the skin or hide of domestic animals, especially dogs, cows, and horses, should be looked upon with apprehension, and care exercised by those coming in contact with them.

A Report of Two Cases of Persistent Exfoliation of the Lips.—This paper was read by Dr. Henry W. Stelwagon, of Philadelphia. The first case was that of a young woman, aged about eighteen years. The urine showed considerable deposit of urates. The condition was limited to the vermilion of the lips, overstepping neither the mucous portion of the mouth nor the cutaneous integument. The lips when free from the scale or crust formation appeared normal, at times showing scattered points of superficial abrasion. The first stage in the formation of an exfoliating film consisted of a slight, scarcely perceptible thickening. In a short time, from two to five days, the affected parts broke up into plaques by a cracking of the film, and the edges of the plaques gradually became everted, and slowly loosened and detached themselves. If pulled off or forcibly detached, the lips were red, slightly abraded, and somewhat tender. The exfoliative process went on unceasingly. The disease was still persistent, but was no longer under the reader's care. The second case was that of a woman aged thirty years. The patient was profoundly neurasthenic. Both lips were to a great extent involved, although the central parts were most markedly affected. There was slight seborrhœa capitis in both cases. The reader was inclined to consider the disease as allied to eczema seborrhoicum.

The Etiology and Pathology of Cutaneous Cancer.—Dr. A. Ravogli, of Cincinnati, said that from the greatest antiquity the clinical conception of cancer had been an ulcer, especially of the skin and glands, with exuberant growth of granulations, which, when removed, had a tendency to relapse, gradually spreading and under marasmic conditions causing death. The true etiology was first given by Billroth, who considered as carcinoma only those new growths which resulted from epithelial production, together with an infiltration in the connective tissues. It was quite natural that the masses of epithelial cells, crowding themselves into the midst of the connective tissues, must produce an irritation which caused a proliferation of the connective-tissue corpuscles. These corpuscles, which had the task of providing for the nutrition of the connective-tissue fibres, were greatly developed in the embryonic stage. In adult life they were very much smaller, but on account of some inflammatory exudation they returned to their embryonic stage, increasing in their volume; their nuclei proliferated, and they increased in quantity, producing hypertrophy of the connective tissues, until they reached the form of papillary growths. In carcinoma the presence of sharp epithelial cells, crowding down upon the delicate structure of the connective-tissue fibres, caused the connective-tissue corpuscles to take part in the proliferation; hence carcinoma was a malignant production consisting of masses of epithelial cells embedded in a connective-tissue structure, inflamed and infiltrated.

Second Day—Wednesday, May 2d—Morning Session.

General Discussion—Malignant Diseases of the Skin. Their Classification and Clinical Features.—Dr. E. B. Bronson read this paper. The import of the epithet malignant as applied to disease varied according to the circumstances under which it was employed. As most generally used the term implied a rapid, destructive course, tending to a fatal issue. It was thus used to designate certain forms or varieties of a disease of a severe and dangerous type, in contradistinction to other forms of the same disease that pursued a relatively milder or "benigner" course. Thus we had malignant and benign forms of syphilis and tuberculosis. Pernicious cell growths might originate either in the epithelial structures or in the connective tissue. In the one case the resulting disease was carcinoma, in the other sarcoma. All known "malignant" growths pertained to one or the other of these two diseases. An epithelioma, though in the common acceptation of the term a skin cancer, was not necessarily a malignant growth; only potentially so. A promising field for the study of malignancy in diseases of the skin and of the conditions relating to it was found in those diseases that, beginning as an inflammation or simple perversion of growth, ended in malignant cancer. The epitheliomas that developed on old syphilitic lesions, on lupus, or from some indifferent local irritation of the skin, were common instances.

Their Etiology and Pathology.—Dr. M. B. Hartzell discussed this part of the subject. He said that heredity, age, traumatism, and long-continued slight irritations had long been considered as predisposing, in greater or less degree, to the occurrence of cancer. While heredity was no longer believed to play the important rôle formerly attributed to it, yet it was apparently well settled that cancer was apt to occur in successive generations of some families, due, as was now believed, not to the inheritance of the disease, but to an inherited susceptibility. The influence of age upon the appearance of carcinoma was so very evident that it was no longer a matter for debate; in the great majority of cases the patient with cancer was past forty years of age, the exceptions to this rule being in most cases examples of rodent ulcer. Ribbert produced numerous tumors in the abdomen, uterus, diaphragm, and pleura of an animal (a rabbit) by allowing free epithelial cells to diffuse through the peritoneal cavity. Cancer possessed a considerable number of features, clinical and pathological, which suggested the possibility of its being an infection, although other explanations were not absolutely precluded. We might regard it fairly well demonstrated that this neoplasm resulted from a profound and more or less permanent alteration of the mechanism of cell-division. This alteration might result from long-continued irritation of a mechanical or chemical kind. The immediate causes were therefore multiple. In cases of xeroderma pigmentosum it might be assumed that some inborn defect of the skin existed.

Their Treatment.—This paper was by Dr. F. J. Shepherd, of Montreal. As a surgeon had to treat all kinds of malignant disease, wherever situated, excision of the growth and the adjacent lymphatic channels and glands seemed the most scientific procedure in the majority of cases. He said that all now believed in the local origin of cancer, and also that whenever found it should be quickly and completely removed. The disease being local, only local treatment was curative. Constitutional treatment was of no avail. There were two forms of local treatment—removal by knife and removal by caustics. Surgeons favored the former and dermatologists the latter. The weak point in the treatment of malignant disease of the skin by caustics was that it postponed the removal of the neighboring lymphatic tissue and glands. Dr. Shepherd held that there might be malignant disease of the glands, and yet they could not be always felt, as in the axilla and submaxillary region. Even the microscope failed to detect the disease in the glands, the cancer cells in the very early stage being so few and far between. He instanced the magnificent results of the removal of mammary cancer by modern methods of very extensive operations. In Paget's disease of the nipple he advocated removal of the whole breast. In cancer of the lips, scrotum, penis, vulva, and wherever the skin was loose, removal by excision was advocated. Certain malignant ulcerations of the skin he admitted might be successfully treated by caustics, especially rodent ulcer and the slow-growing forms of epithelioma situated in regions somewhat removed from glands, as the nose, forehead, temples, cheeks, hands, and when the glands were not early affected. He had successfully employed free curetting and the after-application of caustics in such cases. The best caustics were arsenic, chloride of zinc, and caustic potash. Some held that arsenic had a selective action, *i.e.*, an inflammation might be produced which would destroy cancer cells but not normal tissue. Before employing arsenic the ulceration should be curetted, or the epidermis over it should be destroyed by caustic potash. Several other methods of treatment were alluded to, such as the parenchymatous injections of alcohol, nitrate of silver, or chloride of zinc, with electrolysis, aniline dyes, and the injection of toxins. Coler's treatment was more suited to sarcoma than carcinoma. In sarcoma of the skin early and complete removal was the best treatment if the growth was local. When general some cases had been successfully treated by the injection of a solution of arsenic. The injection of toxins had not proved successful in Dr. Shepherd's hands.

The discussion of the entire subject was participated in by all the members.

A Case of Nævus-Cancer; Metastasis; Operation; Cure.—Dr. S. Pollitzer, of New York, read this paper. The patient was thirty years old when a small, slightly pigmented mole on the back, about an inch to the left of the eighth dorsal vertebra, began to ulcerate. During six years of treatment the ulcer never healed, and finally began to exceed the limits of the original mole. It was then excised, the skin stitched up, and the wound healed well, producing a linear scar. Six months later the skin in the neighborhood of the scar became raised, red, and glistening over an irregular area about two inches in diameter, and broke down at two points, producing small ulcers. Soon after the patient consulted the speaker. There was then, in addition to the condition described, a small, hard, round tumor clearly below the skin, and an inch and a half from the edge of the red glistening patch. The patch including the scar and a large extent of healthy skin were excised. The subcutaneous tumor was found within the substance of the trapezius muscle, and the latter was stripped up from its attachment to the spines of the ninth to twelfth dorsal vertebra and cut out to an extent that included the tumor. Microscopical examination showed the cutis throughout the red glistening area to be filled with round, oval, and irregular tracts of cancer cells, without connection with the surface epithelium. Examination of the tumor in the muscle showed it to be made up of large nests of cancer-cells separated by dense masses of connective tissue which had replaced the muscle fibres. Six years had elapsed since the operation, and the patient was entirely free from any sign of a recurrence. Cases of nævus-cancer were usually of such striking malignancy that the favorable result in this case, in which a metastatic deposit had already occurred, made it worthy of record.

Syphilitic Lesions of the "Wheal" Type.—Dr. H. G. Klotz, of New York, described an unusual eruption observed during the early period of secondary syphilis, and quoted similar descriptions from Taylor and Langlebert. The lesions resembled wheals, except for the absence of itching and other sensory symptoms, and their long duration. Nevertheless he believed it justifiable to accept the lesions as wheals, especially as the conditions found in the wheal of urticaria by several authors would fully account for the clinical features. Dr. Klotz called attention to the want of actual knowledge in regard to angioneurosis, and mentioned a recent paper by Brillippsoro which attempted to establish the origin of the so-called angioneurosis from embolism.

Dr. Joseph Zeissler said he had never had his attention called to this distinct syphiloderm as an independent form, but he had seen a case much like that described by Dr. Klotz.

Dr. J. Hyde, of Chicago, saw no reason why the introduction of a poison, such as syphilis, into the system should not bring about a series of changes in the skin.

Dr. J. Grindon, of St. Louis, said we should expect, reasoning *a priori*, to see such eruptions in syphilis.

Dr. Klotz stated that he was inclined to consider it a syphilitic eruption, differing from erythema and similar affections.

Endothelioma of the Skin Developing in the Scar Tissue of Lupus Vulgaris.—Dr. John A. Fordyce reported this case. A nodular growth developed in the scar tissue following various operative procedures on the lupus tissue on the forearm. The tumor upon excision proved microscopically to be an endothelioma, probably starting in the perivascular lymph spaces surrounding the smaller vessels. It was impossible to differentiate the growth in question from a small-celled epithelioma from the appearance of the cells alone. Their grouping about the dilated blood spaces enabled a diagnosis of endothelioma to be made. Although epitheliomas springing from lupus tissues had been not infrequently reported, Dr. Fordyce believed the case in question to be a unique one in that connection. Several cases of angiosarcoma were referred to in which tumors were found identical in structure with the so-called idiopathic pigmented sarcoma of Kaposi. These growths were histologically to be differentiated from the true endotheliomas.

Two Cases of Rhinoscleroma.—Dr. C. W. Allen, of New York, presented by title, with colored drawings and photographs, two cases of rhinoscleroma, one of which had been under his observation since 1889, the other for about three months. Both were already known to literature. In the first case the portion of the growth involving the centre of the upper lip, gum, and inferior portions of the nose broke down in a gangrenous suppuration, and within the period of a fortnight was completely thrown off, leaving the bones denuded. These subsequently became covered over with a reproduction of the new growth, so that eating, breathing, sleeping, etc., became more natural, and life was prolonged after it had been despaired of. In the case of the man, whose affection had existed for nineteen years at least, there was enormous enlargement of the external nose, with dilatation of the nostrils, which were also practically occluded. For nine years a tracheotomy tube had alone made breathing possible, and the stenosis extended the whole length of the pharynx, shutting off the posterior nares by bands and masses of fibrous tissue. Despite the severity of the condition present in both cases, there had been recent improvement in the general health.

An Unusual Form of Tumor of the Scalp.—Dr. Allen also presented a colored painting, gross specimen, and microscopical preparation. The tumor, which had been of slow growth upon the scalp of a woman advanced in years, had been widely excised after the diagnosis of probable carcinoma was made. The chief clinical feature of the tumor was its extreme hardness, almost like that of ivory. This was due to a central encapsulated mass which had undergone hyaline or colloid degeneration. Sections made by Dr. Martin Ware, to whom the reporter was indebted for a description of the appearances, showed an alveolar arrangement of polyhedral cells, growing in a very atypical manner. These cells were arranged about a central canal indicating that the growth emanated from glandular structure, either sebaceous or sweat gland. The cells did not take the hæmatoxylin and eosin stain well, because of the degeneration they had undergone.

A Case of Xanthoma Tuberculatum Diabeticorum, Showing Rapid Disappearance of Lesions under Anti-Diabetic Regimen and Treatment.—Dr. S. Sherwell reported and showed some excellent photographs of a case of this rare and interesting disease of the skin occurring in the person of a married woman, aged forty years. She was a somewhat plethoric and robust woman, as was usual in these cases. The patient was first seen January 9, 1900. The disease being recognized she was put under anti-diabetic regimen and diet alone until she was shown at a meeting of the New York Dermatological Society on January 23, 1900. A marked improvement had followed this course in the fortnight's interim. The subjective glycosuric symptoms had become less, the objective markedly so, say about twenty per cent. improvement. She was thereafter continued on strict diet, and some medication appropriate to the condition, with the result that in two months the lesions, even the pigmented stains resulting from the papular and tuberculate masses, had also disappeared. The amount of sugar, primarily enormous, was now slight, though always present. The speaker cited some of the more important authors on the subject, as Trök, Robinson, Walker, James C. Johnston, Toepfer, etc., and agreed with the opinions of those who had seemed to go into the question of etiology and pathology most closely, that it was an inflammatory disease resembling xanthoma, rather than a true xanthoma; but still he advocated retention of the name as sufficiently descriptive. Only somewhat over thirty cases of this peculiar disease had been so far recorded. Another case of the sort had been sent by him to Dr. Robinson in the fall of 1890.

Dr. James C. Johnston in another paper gave findings (histo-pathological) of one or two tumors excised from the patient's leg.

Blastomycetic Dermatitis and its Relations to Yaws.—Dr. Isadore Dyer, of New Orleans, read this paper. In many particulars the case fulfilled the clinical characteristics of yaws. Dr. Dyer examined specimens and confirmed the diagnosis of blastomycetic dermatitis. Under the iodide treatment the improvement was rapid; the lesions flattened, and the exudate diminished. Finally mercurial plasters were applied to all of the lesions, successfully reducing the granulations. At the present time the face showed a smooth, glossy area, marked here and there by a fibrous tab, and with a large, branching, somewhat keloidal scar in the lower part of the area. Over all there was a fine linear network of scars, soft but marked.

Three Cases of Blastomycetic Infection of the Skin, One of Them Producing a "Tumor" of the Lower Lip.—These were shown by Drs. F. H. Montgomery and H. T. Rickets.

A Review of the Subject of Blastomycetic Infection of the Skin, with a Report of Two New Cases.—Dr. J. N. Hyde, of Chicago, read this paper.

These two papers formed the basis for a general discussion of the subject of blastomycetes.

A Case of Erythema Elevatum Diutinum (?).—This was reported by Dr. T. C. Gilchrist, of Baltimore, who said that the case did not recall the diagnosis of lichen planus, and did not at all resemble Galloway's case of ringed eruption.

Dr. Hyde said he had seen a case which was almost identical with that of Galloway.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Twenty-second Annual Meeting, Held at Washington, D. C., May 1, 2, and 3, 1900.

Second Day—Wednesday, May 2d.

President, Samuel Johnston, M.D., of Baltimore.

Discussion: The Early Diagnosis and Treatment of Laryngeal Cancer.—The discussion was opened by Dr. J. N. Mackenzie, of Baltimore, who spoke on "Methods of Diagnosis and General Principles of Treatment." The speaker said he would confine his remarks to certain phases of the question which were at the present time more pressing and of immediate importance. Omitting the matter of a possible cancer bacillus, there were three methods of arriving at a diagnosis: (1) The naked-eye appearances combined with the clinical history; (2) thyrotomy, as affording a more complete inspection of the parts; (3) microscopical examination of a removed fragment. The second method was frequently a part of the first. The latter was the most practical of all, though we had unfortunately relegated it to a subordinate place. The removal of a fragment for examination generally so stimulated the malignant growth that it marked the beginning of the end. As to the clinical history no one solitary symptom was of unequivocal value. Many cases might be positively diagnosticated by this first method. He asked whether, when reasonable doubt existed, a piece should be removed for microscopical examination. In the view of the speaker, he should answer absolutely in the negative. Under the term thyrotomy, we might include even a more extensive division of the cervical tissues than mere laryngo-fissure. This was allowable in cases of reasonable doubt or when there was failure to define the exact territory occupied by the disease. Even here it might be impossible to map out the whole of the affected area. There might be a diffuse infiltration difficult, if not impossible, to recognize fully. As to removal of a piece for microscopical investigation it must be said that the patients were at once exposed to the danger of auto-infection or of metastasis. There was also the danger of stimulation of rapid increase of the neoplastic area. The method was unsatisfactory, inconclusive, misleading, and often impossible. As to the nature of the infectious element in cancer we were still in the dark. It might be a bacillus or inhere in some peculiar vital characteristic of the cancer cell. As to treatment, the time would probably come when the treatment of cancer would be not surgical but medical. An antitoxin would probably be discovered. At the present time the only safe procedure was the total extirpation through healthy tissue of the cancerous mass, together with complete ablation of the neighboring glands and lymph channels. Surgical methods in the past had been incomplete, and eradication had been only partial. It was indeed often difficult to determine the limits of disease, and the microscope would show infiltration in areas which to the eye appeared normal. There was often a diffuse infiltration or there might be a deep-seated epitheliomatous mass which only slowly approached the surface. If the disease approached the middle line, removal of tissue should be early and complete. Such operations should be undertaken only by surgeons of skill, and there should be the proper ethical relation between surgeon and patient, so that the latter should authorize the former to do whatever seemed most advisable. Under these circumstances the laryngologist must come to the aid of the general surgeon. The removal of the lymph structures in the area under consideration was one of the easiest dissections of major surgery. A low tracheotomy should be done. The chief danger was the recurrence of the disease in the cervical lymphatics. In cases seen very early, in which the growth was small and papillomatous in appearance, circumscribed, not in the median line, and not especially malignant looking, we might remove one-half of the larynx. Sometimes growths which seemed pathologically malignant were clinically benign. If there was no evidence of malignant infiltration in the pedicle, we might possibly be justified in removing simply the growth as it appeared without the more formidable operation. But even here there was doubt as to whether we had completely removed all the malignant deposit. As to removal of one-half of the larynx, the remainder was not of especial service so far as voice production was concerned. Intra-laryngeal operations in cases of extensive disease were to be condemned. Simple thyrotomy with curettage was not up-to-date surgery, and was a reversion of procedure to the status of fifty years ago. No operation could be assumed as correct which did not include the removal of the lymphatics. Success by partial removal might be explained by a mistake in diagnosis. Many adenomata had mistakenly been classified as true carcinoma.

Methods of Treatment and the Statistical Results.—This aspect of the question was discussed by Dr. D. Bryson Delavan, of New York, who exhibited elaborate statistical tables not included here. The speaker had made, seven years ago, an earnest plea for the full reporting of all cases, not only those which were successful, but those which were not. The tables presented were a careful compilation of one hundred and sixty-three cases occurring in the practice of some eight continental surgeons. No one had been included who had not had at least ten personal cases. This excluded all American operators. The current statistics on the subject were faulty because they were too promiscuous. The cases were confused and there was a resulting repetition. In some instances the patient had undergone more than one operation, and so appeared in more than one category. Finally in the published statistics there was no sharp line of demarcation between thyrotomy and partial resection. Out of the entire number of cases studied there had been only six per cent. of recoveries, that is, the patients were alive three years after operation.

The Surgical Procedures.—Dr. J. Solis-Cohen, of Philadelphia, said that before undertaking operation permission should be secured from the patient to do whatever seemed necessary. If the mass was of such a shape that a section could be punched out through the whole thickness, thus allowing examination of the cut surface, this procedure was permissible. If the growth affected the vocal band, a thyrotomy might be done and a knife be employed to remove the circumscribed diseased area. Partial extirpation was not reliable. In the performance of laryngectomy he would call attention to the following points: (1) In order to prevent the entrance of septic matter into the lungs, we should operate with the head of the patient in a semi-inverted position. Some material might be aspirated into the lungs, but this happened with a tracheal tampon, for absolute protection with the latter device is impossible. (2) Preliminary tracheotomy should be done, otherwise we may be troubled by the descent of the trachea. (3) The epiglottis should be retained if possible. (4) We should shut off all communication of the mouth with the air passages. In attaching the upper part of the trachea to the skin, the tube should be slit longitudinally for a short distance. (5) All dressings should be avoided. No packing should be allowed, as it caused a constant desire to swallow. Feeding by enema should be done and no tube be used per os. (6) The larynx should be removed from below upward, and after operation the foot of the bed should be elevated. For the proper attitude toward the practical problems of these operations a combination of the laryngological and surgical minds was needed.

Dr. C. C. Rice, of New York, expressed the conviction that the laryngologist should not turn over these cases to the general surgeon until the diagnosis was positively established. It was difficult to make an early diagnosis. He believed in giving the iodides and carefully watching the progress of the case before advising operation.

Dr. Emil Mayer, of New York, called attention to the fact that cases often diagnosticated as laryngeal cancer showed the origin of the growth to be in the œsophagus. He thought that there was a very decided limit to the extent of applicability of endo-laryngeal methods.

Dr. W. K. Simpson, of New York, could not advise total extirpation without a microscopical examination of a fragment removed for this purpose. No one could always make a diagnosis from appearances alone. If the case came to us early and showed an isolated deposit, we might use endo-laryngeal methods. In one of his own cases thus treated the man was alive four years after operation. In view of his personal experience, he could not advise total extirpation.

Third Day—Thursday, May 3d.

Secondary Hemorrhage after the Use of Suprarenal Extract.—This paper was read by Dr. F. E. Hopkins, of Springfield, Mass. He gave the histories of three cases of posterior exostoses of the septum in which the extract had been used, and in which secondary hemorrhage resulted. The object of the paper was to give the opinions of various clinicians to whom the author had written, as to the liability of hemorrhage under the conditions named. Almost all agreed that there was considerable danger, and that safety required the use of intranasal packing after the extract had been employed. In regard to the remedy causing coryza after being sprayed into the nose, there seemed to be an idiosyncrasy in this respect, and it could not be determined beforehand just who would and who would not be benefited by this procedure.

Dr. H. L. Swain stated that he had had more hemorrhage with cocaine and the extract combined than with either alone. It should be remembered that the latter acted on the muscular fibre of the arterioles and did not lead to the formation of any coagulum. Consequently when the vessel relaxed there was liability of bleeding.

Dr. J. W. Farlow, of Boston, had had no hemorrhage with the extract and had seen some remarkable cures of coryza follow its use. Yet it might benefit a patient at one time and cause him much discomfort at another. This experience had recently been met with in one of his patients. He had succeeded in removing headaches from intranasal conditions, sometimes in a very remarkable way. The question arose in such cases, how long it was judicious or safe to continue the use of the remedy.

Dr. A. W. Watson, of Philadelphia, had seen more hemorrhage with the use of the extract than without. He thought that after its use patients should be kept in the office for half an hour or so. Then if any dangerous degree of vascular relaxation occurred, they would be under direct control. He had seen acute coryza follow the intranasal use of the extract, and in his own person had had under these conditions what he believed to be a general acute sinusitis lasting ten days. He had thought that in the latter instance the solution might have become infected.

Dr. Swain said that if the fresh glands could be obtained, it was possible to make a solution of their active principles in acetic acid, and that this solution might be put up in glass tubes and kept indefinitely.

A Case of Ozæna of Probable Sphenoidal Origin.—This paper was read by Dr. J. W. Farlow, of Boston. His patient was a girl aged twenty-one years, with a crusty, odorous discharge from the left naris. There was considerable atrophy of the intranasal structures, but the discharge seemed to come definitely from the posterior portion of the naris. The probe seemed to pass into a cavity which was regarded as the sphenoidal sinus. Syringing with peroxide of hydrogen and an alkaline antiseptic, and later curetting, practically relieved all the symptoms.

Dr. S. W. Langmaid, of Boston, remarked that the recent epidemic of influenza would probably cause much sinus disease. That it did produce much acute trouble was in accord with his own experience, for he had recently seen five acute cases in two weeks. If the influenza attack passed off quickly, trouble in the sinuses would not result, but if for any reason the latter became obstructed, inflammation would be very probable.

Dr. A. W. Watson believed that ozæna could occur independently of atrophy, or there might be crusts without ozæna. He was inclined to regard true ozæna as due to sphenoid and posterior ethmoid disease. He preferred a very weak formalin solution for the irrigation of these upper and posterior regions.

Dr. Farlow, in closing the discussion, said that it was always advisable in looking at these cases to have the patient wait after the nose had been thoroughly cleared out, for then it would be possible to ascertain the exact site of discharge.

Bullous Middle Turbinates.—Dr. J. Payson Clark, of Boston, read this paper. He reported two cases, both in women, the prominent symptom being headache. The enlarged turbinates were removed without incident by the cold snare, with complete relief to symptoms.

Cyst of the Larynx.—Dr. Clark also read this paper. The mass was situated on the middle of the right vocal cord and from its hardness suggested a fibroma. The forceps slipped from its surface at the first attempt at removal, but it was cut with a laryngeal knife, when a fluid escaped showing degenerated epithelial cells and leucocytes. The firmness was probably due to the deep situation of the cyst in the substance of the cord.

Dr. Jonathan Wright, regarding the first paper of Dr. Clark, said that he was inclined to doubt the statement which had been made that these bullous conditions were the result of development from fœtal conditions and presented no inflammatory evidences. He had examined several of these masses and had found on the convex surface what appeared to be osteoblasts, and on the concave what appeared to be osteoclasts. The former produced bone while the latter absorbed it. The conditions met with might be due to the unequal activity of the two classes of cells beneath the embryonal layer of mucosa. It was a striking fact that most of these cases occurred in women and after the establishment of puberty.

Fibroma of the Larynx.—This paper was read by Dr. A. B. Thrasher, of Cincinnati. The patient was a woman aged fifty-six years, who had complained of dyspnœa and hoarseness. Her family history was negative. The posterior and lateral walls of the larynx seemed to be the seat of some deposit, so that the true cords appeared pushed in and were defective in abductor movement. A fragment of the mass was taken for examination. The report was fibroma. Iodide of potassium was given in increasing doses, but in a week the patient was seen again and was much worse. After a preliminary tracheotomy with the head dependent and gauze packing, the larynx was split, and it was seen that there was a submucous hypertrophy extending down to the cartilage. It appeared to be simply connective tissue. It was removed with forceps and the patient made a good recovery. The voice was now rough and hoarse, but audible. Two similar cases were described. The rarity of the case consisted in the extensive connective-tissue deposit.

Singular Exhibitions of Partial Paralysis of the Vocal Cords due to Over-Use of the Telephone.—Dr. C. C. Rice, of New York, read this paper. He said that he would make its title a query, for he desired to obtain the consensus of opinion as to the possible effect of over-use of the telephone on the voice. He had had two cases. The first was a nervous man, aged forty-five years, who had been accustomed to use a desk transmitter with his head in a cramped position. The cords showed evidence of fatigue of the thyro-arytenoid muscles, and there was a loss of sustaining power in the other outer muscles, for the cords trembled and the arytenoid cartilages separated immediately after approximating for phonation. The man was directed to take a rest from business and to use the telephone with head erect so as to afford perfect freedom of the cervical muscles. Recovery had been only partial. The other case was that of a man who was stout and not at all nervous. On the right side of the larynx there was fair adduction. The edge was straight but there was a lack of tension, with an incomplete view of the cord, which was obscured by the overhanging and congested parts. By rest and the assuming of a proper attitude while using the telephone, this patient completely recovered.

Dr. T. A. DeBlois opened the discussion by relating the case of a man whose head was violently bent forward as the result of a fall. As a result, a sudden strain was put upon the muscles of the neck, and he became hoarse from inability to approximate the cords.

Dr. W. E. Casselberry mentioned the case of a clergyman who was accustomed to become very much excited in his pulpit work, and gradually developed a similar condition to that seen in the cases mentioned by Dr. Rice. Rest and the formation of the habit of more quiet speech greatly improved the condition.

A Case of a Pin in the Larynx for Two Years; Removal by Endo-Laryngeal Methods.—This paper was read by Dr. A. W. de Roaldes, of New Orleans. The patient was a young girl in whose larynx a pin was found situated on the posterior portion, having pierced the apex of the right arytenoid at its inner side. Its head was embedded more deeply on the right side just above the false cord. Forceps was applied, the left index finger being placed behind the larynx to steady it. The forceps slipped, but the finger caught the pin, which was thrown out of the mouth. In such cases, when the head of the pin was below, it might at first have passed some way down the trachea and then have been coughed upward so that the point engaged. Moreover, the head of the pin impeded its migration so that it did not move about in the tissues as a needle would. The Roentgen rays might often locate the pin when it was impossible to make out its exact position by the mirror. Another point of interest in this case was a hard swelling in the neck which was probably due to infection which had stopped short of suppuration.

A Peculiar Case of Migratory Foreign Body with X-ray Illustrations.—Dr. D. Braden Kyle, of Philadelphia, read this paper. The patient was a woman, who constantly complained of a feeling as if a foreign body was moving about under the scalp. She suffered from intense neuralgias, which at times seemed to focus in the mastoid, and at other times in the ethmoid or antral regions. In one of these latter attacks there had been a discharge of purulent material from the naris and in the discharge was a piece of a needle. The symptoms continuing, it was concluded that still another piece was somewhere in the tissues, and an *x*-ray picture was made, showing a dark line in the neighborhood of the antrum, though it was impossible to tell whether the body was actually in the antrum or on the bone corresponding to one of its walls. The antrum was opened and its cavity illuminated, but nothing was found. In a short time a gumboil formed which discharged, giving escape to another piece of the needle. From this time all symptoms disappeared.

Dr. S. W. Langmaid called attention to the fact that attempts at swallowing often caused great changes in the location of foreign bodies in the upper air tract.

Dr. W. K. Simpson commended the trial of forceps and other instruments upon material similar to the foreign body before actually attempting the removal of the latter. He found sharp forceps better than merely roughened blades.

Dr. Kyle closed the discussion. He stated that the patient had suffered from an *x*-ray burn, and remarked that the time of the exposure causing the burn was not so long as the exposure on previous occasions when no burn had resulted.

Tracheal Injections in the Treatment of Pulmonary Tuberculosis.—This paper was read by Dr. T. Morris Murray, of Washington. He gave a short history of the development of this procedure, and then mentioned his personal experience with thirteen cases of pulmonary tuberculosis. In all there was at first a slight explosive cough, but in all the general effect on the cough had been good. No spasm had been noted. The solution used consisted of thyme and eucalyptus oils in olive oil. His experience had been that cough and expectoration had both been lessened, while the temperature had fallen and the general condition had been improved.

Dr. W. E. Casselberry believed that the benefit from this plan of treatment was confined entirely to the bronchitic element of the disease. He had no confidence in its alleged effect upon the general course of the tuberculosis. It did, however, benefit some of the symptoms attributable to the mixed infection which pulmonary tuberculosis presented.

Dr. J. Solis-Cohen observed that this was not a new plan of treatment, as it had been practised forty years ago. Its greatest benefit was seen in cases of bronchiectasis.

Correction of Deviations of the Nasal Septum.—Dr. John O. Roe, of Rochester, read this paper. It was an exposition of the plan of operation previously presented by the writer, whereby the septum was fractured by a fenestrated comminuting forceps. Of all deviations five per cent. involved the posterior part of the bony septum, twenty-five per cent. the anterior cartilaginous part, and from sixty-five to seventy per cent. the osseo-cartilaginous junction. Other descriptive terms simply referred to varieties and not to location. For anterior deviations he advocated a horizontal incision and an oblique bevelled incision, forming more or less of an angle with the first. By this device, the flaps would more easily slide by each other.

Surgery of the Turbinal Bodies, with a New Method of Operating.—This paper was read by Dr. J. E. Boylan, of Cincinnati. He advocated the removal of large portions of the turbinates when the obstruction had resulted from hyperplastic changes. The obstruction was more apt to be located at either end of the turbinate. Posterior obstruction was rarely of a hyperplastic nature. For instruments he used the saw, snare, and scissors, especially the snare. In this way he obtained better results than from the cautery.

Dr. W. E. Casselberry used the cautery but was careful to make deep linear incisions, and in this way had had no septic or other trouble. He urged caution in its use on the middle turbinate, care being taken to confine its action to the lower dependent portion of the bone, which he never cauterized on its upper surface.

Hemorrhage from a Peritonsillar Abscess.—Dr. W. F. Chappell, of New York, related this case. His patient was a young man aged twenty-seven years, who had had several quinsies, the most recent of which had been opened by an incision through the posterior pillar. Half an ounce of pus was evacuated. Five days later there was a severe bleeding. The urine showed albumin and casts. The bleeding recurred, and the abscess cavity appeared filled with clots. An incision was made through the anterior pillar, and the cavity washed out and packed daily for ten days, at which time the patient was well. Later a rheumatic attack came on without cardiac lesions. The condition of the kidney had continued up to the time of latest observation. When the cavity was opened for washing out, the ascending pharyngeal artery could be seen, but there were no evidences of ulceration. Dr. Chappell had been able to find the records of ten similar cases. All had occurred in patients in whom the quinsy had burst spontaneously. In no case had there been immediate hemorrhage. Of ten cases, eight had been fatal. In the two recoveries the carotid had been tied. The lesson from these figures was to open early.

During the different sessions of the association the following papers were read by title: "Laryngeal Irritation a Cause of Asthmatic Paroxysms," by Dr. W. L. Glasgow, of St. Louis; "Severe Hemorrhage after Operations on the Throat and Nose; Report of Five Cases," by Dr. A. A. Bliss, of Philadelphia; "Angioma Cysticum of the Nose; Histological Analysis and Physiologico-Chemical Research of its Contents," by Dr. H. L. Wagner, of San Francisco; "Dermoid Cysts of the Nose," by Dr. H. S. Birkett, of Montreal.

Officers Elected.—Officers for the coming year were elected as follows: *President*, Dr. H. L. Swain, of New Haven, Conn.; *First Vice-President*, Dr. H. L. Wagner, of San Francisco; *Second Vice-President*, Dr. A. A. Bliss, of Philadelphia; *Secretary and Treasurer*, Dr. James N. Newcomb, of New York; *Librarian*, Dr. J. H. Bryan, of Washington; *Member of the Council*, Dr. Samuel Johnston, of Baltimore.

The next meeting will be held at New Haven in the spring of 1901.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS.

Fourteenth Annual Meeting, Held at Washington, D. C., May 1, 2, and 3, 1900.

Second Day—Wednesday, May 2, 1900.

The Best Method for Obtaining Urine Direct from the Ureters for Diagnostic Purposes (being the subject decided upon by the Council for especial consideration and discussion).—Dr. F. Tilden Brown, of New York, opened this discussion. He said that in the majority of all cases presenting he would offer the statement that the best way to obtain urine direct from the ureters for diagnostic purposes was (1) by one which was equally applicable to both sexes; (2) by one which secured the individual secretion of each kidney beyond any question of its contamination by the secretion of its fellow-gland, or by other extraneous material from the lower part of its urinary tract; (3) by one which effected these requirements with a minimum amount of discomfort to the patient, while involving the least possible risk of immediate or remote harm to the parts involved in the total procedure; (4) and of least moment in so important a matter, by that method which called for the simplest technique. After excluding all cutting operations for collecting separate urines he proceeded to discuss the relative merits and demerits of the Simon-Pawlik-Kelly method, the Harris method, and the ureteral-cystoscope method. The many details of this led him to express a decided preference for the third method, although citing a brief series of exceptional cases in which this method would have to give place to that of Kelly or Harris. Dr. Brown took advantage of this opportunity to make the first public presentation of his double-barrelled ureteral-cystoscope, the advantages of which were summed up as follows: (1) In favorable cases both ureters could be catheterized at approximately the same time. (2) In less favorable cases, after passing one catheter the second channel could be used to draw the distending fluid from the bladder, thus giving the organ repose. (3) In still more difficult cases the second barrel could be used for frequent irrigations until fluid of proper transparency distended the bladder and permitted localization of the ureter, when a catheter, which has been reposing in the other barrel, could be used to engage the ureter; by taking hasty advantage of a momentary clear fluid success may be made of an otherwise failure. (4) In some cases in which but one ureter can be catheterized, this double-barrelled instrument permitted access to one ureter through one canal, and urine coming into the bladder from the opposite kidney could be collected from that source by catheter siphonage through the second barrel.

Dr. W. K. Otis, of New York, did not believe that there was, at the present day, any satisfactory way of differentiating urines in all cases, and probably never would be. In many instances it was impossible to locate the ureteral openings at all, and even when the opening was localized it was often difficult to gain an entrance. He referred to the danger of causing an ascending pyelitis in attempting to catheterize the ureters when this attempt was made through an infected bladder. In the use of Harris' instrument much pain was frequently given to the patient. When the ureter was catheterized through a ureteral cystoscope, when the ureter can be catheterized at all, it seemed to him a most satisfactory method of differentiating urines by catheterizing both ureters; then just what was coming from each kidney could be discovered; that method was the only satisfactory one yet devised. So far as the female was concerned, he thought that Dr. Kelly had solved the problem as thoroughly as it would be solved; but in the male the conditions were different, and he doubted whether any simple instrument would ever become popular, *i.e.*, any instrument with lenses. His reasons for this statement were the difficulty that was experienced from the size of the instrument, the difficulty of manipulation, etc., which were likely to do damage and produce much pain, and, at the same time, it gave a comparatively small field of vision. He had always been in favor of the so-called direct catheterizing cystoscope of what Dr. Brown calls the convex tube. In the instrument he had devised, a metal instrument could be used, and a metallic sound could be passed as well as a catheter for sounding the ureters for calculi. His instrument was identical to the Brennan instrument so far as the opening was concerned. In all these instruments, as the Casper, Nitze, etc., ocular apparatus was sacrificed to reduce the size of the instrument itself. Instead of constructing an instrument carrying so many tubes he had devised a cystoscope with a single tube, as used in the Leiter instrument; the wire was on the outside of the tube, which took up an exceedingly small amount of room; so he got the full-sized field for catheterizing the ureters, and, at the same time, he utilized the full size of the ordinary cystoscopic telescope. He obtained exactly the same field as in the Leiter instrument.

Dr. Malcolm L. Harris, of Chicago, continued the discussion at the invitation of the association. In summing up his remarks he stated that catheterization of the ureters had a field of application which was absolutely distinct, in the sense that no other means at our disposal accomplished the same end, namely, to determine the nature and location of obstruction of the ureter; to locate the ends of a divided ureter or act as a guide in certain intra-pelvic operations; for tapping and draining fluid accumulations in the renal pelvis; for therapeutic purposes such as dislodgment of calculi, irrigation of the renal pelvis, etc. Catheterization of the ureters simply for the purpose of collecting urine for diagnostic purposes had its drawbacks and limitations, among which might be mentioned temporary anuria, due to the presence of the catheter in the ureter; contamination of the urine with blood and epithelial cells from the ureter; danger of infecting a healthy ureter and kidney. This last point he thought to be of such a serious nature that catheterization of a healthy ureter, when the bladder was infected, or the opposite kidney tuberculous, had been condemned. If this injunction was heeded as it should be, it would deny the benefits of this diagnostic aid to a large class of patients. The segregator, likewise, had its limitations. There were certain cases which were not suited for its use. In certain intra-vesical lesions its use must be supplemental to that of the cystoscope. But for the differential diagnosis of certain tumors of the abdomen; for determining which kidney was diseased and the "functional activity" of each and whether the bladder was infected or not; for differentiating between certain bladder and kidney infections, the segregator gave results that were perfectly reliable, as had been repeatedly demonstrated by numerous anatomical findings. Furthermore, in the infected cases it had the advantage over the ureteral catheter of being free from the danger of infecting a healthy kidney.

A Ureter Cystoscope (for Male or Female) Built on a New Model.—Dr. Bransford Lewis, of St. Louis, demonstrated this instrument, which had the definite object in view of catheterizing both the male and female ureters. It consisted of a tube which carried on its upper surface the conducting wires for the electric light, and within, on its lower surface, a small tube for guiding the ureteral catheter to the desired point, *i.e.*, into the ureteral opening. At the ocular extremity was a handle for controlling the direction of the instrument; at the distal end, contained within the curved tip, was the electric lamp, of low tension, affording sufficient light for illumination, but generating hardly any heat; permitting, therefore, the use of the cystoscope within the empty bladder and without the complicating presence and often interference of fluid. The light from the lamp was shed on the adjacent mucous membrane through the glass window sealed in the roof of the tube just below it. The tip of the cystoscope was a hollow cap, attached by a screw, and could be removed for replacing a burnt-out lamp. This latter was easily accomplished in the manner made use of in the Chetwood urethroscope. To facilitate introduction, an obturator was furnished which closed the distal orifice until it was removed, preventing scraping of the membrane against the edge of the opening; but, at the same time, these edges were rounded so that they could be brought in contact with the membrane within the bladder, or the instrument, being withdrawn into the prostatic urethra a certain distance, could be pushed back into the organ without injury to the surface coming in contact with them. A small silk-web ureteral catheter completed the instrument. For several years ureteral catheterization in the female had been *un fait accompli*, and to a high degree of satisfaction to the profession. The Pawlik-Kelly method was in daily use the world over for both diagnostic and therapeutic purposes. Yet, if this method could be improved upon by being made easier or more certain of accomplishment, or if the duration of the search for the ureteral openings could be shortened, or if the pain so often suffered by the patients from the preliminary dilatation of the urethra, or the introduction through it of a cystoscope sufficiently large to afford a good view, could be obviated, then these objects should be accomplished, even though the instruments already in use had proved of such inestimable value. He believed that these features, two in number, of fixed internal heatless illumination and of complete control over the internal end of a flexible ureteral catheter, when applied to a tube of proper form, would secure the advantages mentioned.

Dr. W. T. Belfield, of Chicago, stated that six years ago or longer he presented an instrument such as presented by Dr. Lewis; the latter instrument was a duplicate of his except that it possessed two features of difference: First, the substitution of a low-tension cold lamp for that employed in his; second, the presence of a groove for the conduction of the ureteral catheter. He found a great difficulty to be overcome was the heating of the lamp; at the time his instrument was produced the low-tension light was not known. He hoped soon to be able to produce such an instrument, so perfect in detail that it would do away with the necessity of such discussions.

Dr. W. K. Otis thought the idea of having the little groove for the conduction of the catheter at the bottom of the instrument was an excellent one. He found that one of the principal difficulties he encountered was the size of the instrument. He thought he used as large-sized urethral instruments as any one present; but when it came to using a tube as large as the one presented, and moving it around to find the ureteral orifice, the difficulties encountered must be great; the patient must suffer a great deal of pain, and if the patient was under the influence of an anæsthetic one was liable to damage the tissues. In the male he found that it was not easy to find the ureteral opening.

Dr. L. Bolton Bangs, of New York, thought the great difficulty with this instrument was from the amount of heat produced. He related the experience of Dr. Howard Kelly, whom he invited to New York to demonstrate the use of the cystoscope in the male; there were many cases in which the straight tube could not be introduced; the same might be said of short curved instruments. Three patients were provided for Dr. Kelly, but on two only was the attempt made to pass the catheter. In one he succeeded. He failed in getting the tube in when the attempt was made in the second case. In the third case it was not attempted. He had not used the straight tube except to get a view of the deep urethra and the contiguous portion of the neck of the bladder. His own repeated failures made him decide to go to the dead-house, where he had bladders opened; there he was surprised to find that he was unable to locate the ureters except by inserting carefully the point of a probe. He asked if others present had experienced the same difficulties. He could not see the ureters; he thought the position of them must be guessed at; the swirl caused by the fluid which gushed out prevented him from finding the openings. He referred to the case reported by Dr. Howard Lilienthal, of New York; this patient died of sepsis from infection; traumatism was produced, and the patient became infected and died. He had come to the conclusion that, unless there was some positive reason for doing otherwise, Harris' segregator was to be preferred.

Dr. John P. Bryson, of St. Louis, said that his experience in the use of this instrument had been the same as that of Dr. Bangs; he had never been able to use the straight tube.

Antero-Posterior Subdivision of the Bladder; An Important Anomaly.—Dr. Eugene Fuller, of New York, read this paper.

Radical Treatment for Curvature of the Penis.—This paper was also read by Dr. Fuller.

Officers Elected.—The following were elected for the ensuing year, 1900–1901: *President*, Dr. Samuel Alexander, of New York; *Vice-President*, Dr. W. T. Belfield, of Chicago; *Secretary*, Dr. J. R. Hayden, of New York; *Member of Council*, Dr. W. N. Wishard, of Indianapolis.

Members Elected.—The following new members were elected: Dr. Henry H. Morton, of Brooklyn; Dr. Charles H. Chetwood, of New York; Dr. Alfred C. Wood, of Philadelphia.

The next place of meeting will be Old Point Comfort, April 30, May 1 and 2, 1901.

Third Day—Thursday, May 3d.

The Effects of Ammonio-Formaldehyde.—Dr. Edward L. Keyes, Jr., by the courtesy of the association, presented this paper, which was founded upon clinical observations illustrating the effects of this drug. His conclusions were as follows: (1) Ammonio-formaldehyde (urotropin) seemed to be a specific in the treatment of some cases of acute catarrhal pyelitis, uncomplicated. (2) To prove effective it might have to be administered in large doses until the urine was practically clear of bacteria, after which a smaller dose might suffice. (3) In judging the effects of the drug, the centrifuge and microscope should be employed. (4) The dose must not be sufficient to cause pollikiuria and dysuria by irritation of the neck of the bladder. (5) The possibility of such an irritation could be overlooked, even when small doses were employed. (6) Ammonio-formaldehyde was extremely serviceable as a prophylactic to the various forms of urinary septicæmia and urethral chill. (7) Its routine employment, both before and after operation on the urinary passages, was indicated. (8) The urine containing ammonio-formaldehyde occasionally had an escharotic effect upon wounds, which might constitute a contraindication to its employment.

Dr. George Chismore, of San Francisco, considered this a very valuable agent in controlling bacterial conditions, but thought that one should be careful to use Merck's preparation, which was more woolly in appearance and less clearly crystalline. He thought that the sudden accession of temperature and the exhibition of certain other symptoms in cases in which irrigations had been used were attributable rather to the irrigation than to the urotropin (ammonio-formaldehyde).

Dr. John P. Bryson said that the experiences recorded in the paper agreed so thoroughly with his own that he had but little to add except to indorse what had been said. He had seen cases of tuberculous disease in which urotropin had been used alone result in polyuria; but as soon as carbonate of creosote was given in conjunction, relief was obtained. In some cases the urotropin had to be withdrawn, for it made the granulations pale and flabby. He referred to two cases in which there was a certain form of diplococci, which did not yield at all to large doses of urotropin; these diplococci persisted in the urine in spite of everything done.

Dr. L. Bolton Bangs thought the observations made in the paper were worthy of being placed on record. In order to get the beneficial effects of the drug the urine must be acid at the kidney. Professor Morton, of Stevens University, observed the same, that it was a useful bactericidal weapon if set free in the acid urine.

Dr. W. F. Glenn, of Nashville, referred to one case in which gr. viiss. in twenty-four hours could not be borne on account of the extreme vesical irritation. He had never seen a single nervous chill arise when urotropin had been given one week before the time for operating; large quantities of water should also be administered. He thought the paper a very valuable one, and believed that urotropin would solve the trouble resulting from urinary fever and nerve chills.

Prostatic Deformities due to Loss of Tissue.—Dr. Ramon Guitéras, of New York, read a paper with this title. He related the instance of a Greek who entered the City Hospital; the interesting features presented were the absence of the entire lobe of the left side, and an unnatural lateral curve in the prostatic urethra, due to cicatricial contraction. He also related an instance of the destruction of one lobe of the prostate by a tuberculous abscess. This case was evidently one of tuberculosis of the genitals with an abscess springing from the cord in the inguinal canal, with a tuberculous inflammation of the right seminal vesicle, which had converted the vesicle into an abscess cavity that had drained down the ejaculatory duct out of the hole in the prostate made by another abscess in the ejaculatory duct or in the right lobe of the gland. The next case cited was one of prostatic abscess, which was followed by a septic pneumonia and death. There was another class of patients in whom the prostate had been almost entirely destroyed, and there remained simply remnants of the gland tissue along the ejaculatory ducts, or along the margin of the gland. Two cases were recalled in which the ejaculatory ducts could be distinctly felt extending down to a point where they probably opened into the urethra, and in which no prostatic tissue could be felt, and another in which they extended in the same way, but with some remnant of glandular tissue by their sides. In both these instances the normal outlines of the gland could not be detected. He said there were other instances in which the outlines of the glands could be distinctly felt, and yet the entire centre of the glands was depressed. These deformities of the prostate usually resulted from abscesses that had broken into the urethra, and consisted of collapsed sacs surrounded by a pyogenic membrane, which continued to discharge pus for a considerable time. Old sinuses were often found opening into the prostate in autopsies or on the dissecting-table. Another type of prostatic deformity had been that produced by a considerable amount of exudate about the prostate, with resulting cicatricial contraction which distorted the gland very much by pressure, and also interfered with the action of the vesicles; here, too, the circulation was much interfered with, which caused a great deal of discomfort in the perineum and deep genital regions. The symptoms arising from prostatic deformities were generally those of chronic prostatitis. The treatment of such cases was usually unsatisfactory.

Prostatic Cancer; Three Cases with Specimens.—Dr. E. E. King, of Toronto, thought that the relative infrequency of primary prostatic cancer justified him in bringing this subject before the association. He gave histories of cases and remarked upon them. His cases did not differ from the general rule of cancer of the prostate being found in the young, or in those past the age of fifty years, although just why the ages between fifteen and fifty should be exempt he did not know. Most of the cases noted began about one year before a fatal termination. In the statistics of Tanchow. out of 1,904 cancers in the male, he referred to but 5, or only 1 in 400. Munn, in 1,286 cases of cancer taken from the reports of the Middlesex Hospital up to 1899, tabulated only 28 cases of cancer of the male genitalia. Fenwick (*Edinburgh Journal*, July, 1899) referred to 50 cases of undoubted primary affection of the prostate as coming under his personal observation. He liked the manner in which Fenwick divided the condition, which he believed to be the correct one, viz., (1) the hard, malignant growth, resembling scirrhus of the breast; (2) the soft, malignant growth, which resembled the encephaloid. Fenwick said the second variety was much rarer than the first, which was in opposition to the usually accepted belief; each of his own cases had been of the hard variety. The speaker concluded by stating that the features which impressed him in the cases cited were: (1) The very advanced stage of the disease before being recognized; (2) the cessation of symptoms on rupture of the capsule; (3) the non-involvement of the bladder in either specimen shown; (4) the absence of metastasis in one case, and the metastasis of the kidney alone in the other.

Dr. L. Bolton Bangs was struck with the statement that primary carcinoma of the prostate was extremely rare—he supposed it was relatively rare. The occurrence every now and then of ordinary prostatic hypertrophy with compensatory symptoms in the bladder, etc., pursuing an unusual course led him to suspect that the diagnosis of this condition was not always made.

Dr. Bransford Lewis referred to an early diagnosis of a case of primary cancer of the prostate occurring in the City Hospital in St. Louis. That patient had no symptoms at all previous to ninety days before his death. He did not even have frequent urinations. One day before entering the hospital he climbed to the top of the custom house, which was followed by complete retention of urine. Upon entering the hospital an attempt to draw the urine failed; various means were employed, but to no avail. Perineal urethrotomy was then done, but it was impossible to enter the bladder, even when strong pressure was used. He then did a suprapubic cystotomy, when the real conditions of things was noted. There was a prostatic carcinoma so large that it filled the outlet of the pelvis and was jammed between the anterior and posterior walls, so that nothing could be gotten through. This man was relieved somewhat by continuous drainage, but died soon after. The pathologist pronounced the growth to be an adeno-carcinoma. So far as clinical evidences were concerned, it was short-lived.

Dr. George Chismore thought that cancer of the prostate was much more common than recorded. He had seen a number of cases, and he had been led to look with a great deal of apprehension upon those cases in which, without ostensible causes, catheterization was extremely painful. He had observed two different forms of the disease—one, in which the scirrhus type prevailed, which pursued a very long and tedious course; the other, in which the cancerous condition was unsuspected almost until the last; all were characterized by unusual pain and difficulty in attempts at catheterization. He referred to the case of a man who was accustomed to use the catheter from his forty-seventh to his seventieth year of age, in whom almost all the symptoms of cancer developed within two weeks preceding his death; this man had rapid ulceration, with the formation of a urethro-rectal fistula.

The Subjective Symptomatology of Renal and Ureteral Disease.—Dr. John P. Bryson, of St. Louis, read this paper. Many clinical observations had been made by him, and from these he inferred (1) that an irritation arising in an otherwise healthy urinary tract in the kidney or its pelvis would create subjective symptomatology referable to the organ itself, and, if passing beyond that, radiate toward the centre of the abdomen along the line of the nerves entering the hilus of the kidney along with its blood-vessels, crossing over, when severe, to the opposite side, and, especially when the right kidney was involved, causing vomiting. (2) Similar irritations affecting the middle third of the ureter caused a subjective symptomatology manifesting itself largely in the distribution of the genito-crural nerve. (3) Similar irritations affecting the lower part of the ureter in the neighborhood of the bladder would manifest themselves chiefly by increased frequency of urination without tenesmus, provided the bladder was otherwise free from disease. In all of these conditions there was a certain amount of tenderness on pressure or pain in that portion of the ureter which was being irritated at the time. Time did not permit him to detail some cases in which, especially in tuberculous inflammations more or less localized, the disease originating in the bladder in the neighborhood of the ureteral orifice travelled up that duct on that side, creating a subjective symptomatology in the reverse order to that mentioned. Just how far down an irritation must travel from the renal pelvis, or how far up the bladder, before affecting a genito-crural nerve, it was not possible to state. We might be aided, however, to a certain extent by anatomical considerations. The chief point in practice was to take advantage, in localizing ureteral disease, of the observation that in apparent irritation at the upper part of the ureter, in the kidney and its pelvis, the manifestations were renal; in the middle portion, genito-crural; in the lower portion, vesical. This might serve as a guide for surgical interference in cases of ureteral disease.

Dr. Arthur T. Cabot, of Boston, referred to cases in which stone in the pelvis of the kidney gave rise to symptoms entirely referable to the neck of the bladder. He cited one case in which the symptoms were, for some time, referred to the neck of the bladder; the patient subsequently went to Paris and was treated by Guyon with injection of nitrate of silver, when a stone passed down through the ureter and was discharged into the bladder, which was accompanied with entire relief of symptoms. He was interested in Dr. Bryson's account of the nervous distribution giving rise to such variations in the pain.

Dr. Edward L. Keyes related the case of an old gentleman who came to New York with a stone in his bladder, which was crushed and removed. This patient was in his "catheter life." He had no cystitis or prostatic disease. He went home and lived a number of years, a strong, vigorous man, about sixty-five years of age, and had no pain except a little renal colic. Suddenly, while in the bloom of life, he was attacked with a sharp paroxysm of kidney colic, for which he was treated by the ordinary methods employed in those days; he died from an ordinary anuria. The autopsy showed one kidney atrophied, with hardly any kidney substance left. The expulsive force from his bladder was good. Vesical spasm caused his retention. The wall of his bladder was smooth and not affected, there being no evidences of cystitis. The other kidney was blocked or plugged by a calculus which had caught in the upper end and stayed there. There was persistent inability to pass urine. This, he thought, was a curious case.

Dr. W. K. Otis related the case of a woman forty-six years of age, who was treated for cystitis for years. She suffered much from irritation and frequency in urination for about fifteen years. The cystoscopic examination showed there was no cystitis. Catheterization of the ureters showed that the left ureter gave out pus; the right ureter was shown to be perfectly normal. The left kidney was cut down upon and was found to be riddled with abscesses, and there was a stone that filled the entire pelvis; the kidney was almost completely destroyed.

Dr. John P. Bryson, in closing the discussion, mentioned the instance of a patient who, when there was the sudden desire to urinate, obtained relief by lying down; in this case there was no vesical tenesmus; this latter symptom in connection with bladder lesion was very important. Before he saw her she had been under the influence of chloroform for four days. He stopped the chloroform and watched the symptoms for a while; she had a constant, unceasing desire to urinate, and a pyuria without any vesical tenesmus. He cystoscoped the patient and found a pus plug coming out of the left ureteral orifice. The bladder was fairly normal. The urethra was then dilated; the left finger was introduced into the bladder, the right finger was placed in the left vesico-vaginal fornix, and he then milked out a mass of material which relieved her symptoms entirely; she soon became perfectly well. He thought it was not an uncommon thing for a lesion to exist at the lower end of the ureter along with renal lesion of a very serious character, a calculous nephritis or a nephro-lithiasis.

Acute Abdominal Symptoms Associated with a Congenital Malformation of a Ureter in a Child.—Dr. Charles L. Scudder, of Boston, read a paper on this subject, illustrating it with numerous drawings. The blind end of a supernumerary ureter was cited, which was the ninth reported, the other eight being found reported in Dr. Bangs' book.

Bacteruria Associated with Congenital Dilatation of a Ureter.—Dr. George K. Swinburne, of New York, reported this case. The persistent residual urine was the particular symptom present. The diverticulum was one and a half inches above and to the left of the ureteral orifice.

Dr. Arthur T. Cabot told of a case in which he had done a suprapubic operation and found a stone in a diverticulum located close to the ureteral orifice. The stone was of good size: the patient gradually died of a pyelonephritis. The autopsy showed another pocket, exactly corresponding to the one on the opposite side and also containing a calculus; it had set up a hydronephrosis behind it.

Dr. George Chismore said he had had the opportunity of making a post-mortem upon a patient in whom, for fifteen years, he had been removing stones by litholapaxy; he first did the suprapubic operation and cleaned out the bladder thoroughly. He had not had occasion to operate upon this patient for more than a year, he having moved away and died while under another man's care. He found in the right ureter a collection of seven stones; in the left ureter, within the bladder wall, were found five stones small in size. He also found a thin stone, spoon-shape, behind the tumor which projected into the bladder wall between the ureters. The ureters were much dilated.

Dr. John P. Bryson stated that the difficulties in making a differential diagnosis between calculus or multiple calculi in the bladder and in the lower end of the ureters must be very great. He had had some curious experiences. In one instance the calculus lay near the end of the right ureter and was fastened there; he was forced to dilate the ureter in order to get it out; he there found an old hernia in the muscular coat, the fibres spreading.

Cases Illustrative of Certain Points of Renal Surgery.—Dr. Francis S. Watson, of Boston, read this paper. The cases reported were as follows:

Case I.—Nephrorrhaphy in the fourth month of pregnancy. The operation was undertaken in the hope of avoiding the necessity of inducing premature delivery, which had already been done in two former pregnancies because of the patient's life being endangered by persistent vomiting associated with frequent attacks of renal colic on the right side, which developed in connection with a movable kidney which followed the second pregnancy seven years previous to her present trouble. On the first occasion both vomiting and renal pain ceased after the premature delivery. But after the second time vomiting alone was relieved, the pain persisting, though in a somewhat less degree, until her present pregnancy, when it became very severe and the vomiting also returned. The patient's life was again seriously threatened. She stated that she thought the vomiting was directly induced by the attacks of pain. She strongly urged that every effort be made to allow the pregnancy to go on to term. The question was, how far the mobility of the kidney was responsible for the pain and vomiting, and whether the chance of relief from a nephropexy was sufficient to justify the risk incurred by its performance, in addition to that attending the induction of premature delivery should the latter be necessitated in case of failure of the former, and, moreover, with the knowledge from two former experiences that she would probably be made safe by emptying the uterus alone, and would be relieved of the vomiting at any rate. Nephropexy was decided upon for these reasons: (1) The strong wish of the patient not to sacrifice the child; (2) the great probability that her pain at any rate depended upon the abnormal mobility of the kidney; (3) the chance that vomiting was in large measure also due to it; (4) because her condition seemed sufficiently good to enable her to support the nephropexy. It was accordingly done, and, while greatly mitigating her pain at once, did not relieve the vomiting, the continuance of which became so threatening to her safety that abortion was done, after which both the vomiting and pain wholly ceased and her convalescence was much more satisfactory than after the two preceding pregnancies. It seemed reasonable to assume that the nephropexy should be credited with the success in that respect, although it failed to fulfil the expectations with regard to the matter for which it was primarily undertaken. The question raised in this case that seemed to the writer of interest was as to the wisdom of attempting to avoid sacrificing the life of the fœtus by doing nephropexy under the conditions presented when a decision was called for.

Case II.—Traumatic rupture of the kidney; nephrotomy; suture of the wound to relieve obstruction to outflow of the urine by plugging the ureteral orifice with blood-clots, and to control hemorrhage eight days after the injury. The case was an example of the development of serious symptoms at a relatively remote period from that of the injury, and showing that an immediately favorable progress of the case did not necessarily preclude the occurrence of grave danger subsequently. The patient was a young man twenty-eight years of age, who had received no less than five injuries to the right lumbar or right abdominal regions between the twelfth year and the present time, the last one being a violent blow during a fight in which he was engaged on the night before he was brought to the Boston City Hospital. There were marked shock, pain, and tenderness of the right kidney, and much blood in the urine. There was no sign of external violence. The pain and shock were of short duration. The hæmaturia persisted. The general condition gradually improved. On the seventh day there was sudden violent renal colic, with cessation of hæmaturia, and the appearance of a tumor in the right hypochondrium and lumbar regions, with great prostration. Twenty-four hours later he rallied somewhat and nephrotomy was performed. The kidney had a lacerated wound an inch and a half long at its upper end, which did not penetrate the fibrous capsule, but extended from the surface of the cortex through to the renal pelvis, which was enormously distended by blood clots and urine, the former occluding the orifice of the ureter. The posterior border of the kidney was incised, the blood-clots were evacuated, the edges of the lacerated wound refreshed, and the incision, together with the wound except for a short space to allow drainage, was sutured with catgut. The hemorrhage was entirely controlled by the sutures. The hæmaturia ceased and the patient made a good recovery, but some months later renal pain returned, and nephrectomy was done with satisfactory results by Dr. Paul Thorndike.

Cases III. and IV.—These were cases illustrating the relief of symptoms simulating renal calculus, no calculus being found, by incision through the convex border of the kidney, and confirming the view that such symptoms were, in many instances, due to sudden enlargements of the kidney within an unyielding capsule. In both of these cases the capsule was thickened and adherent to a greater or less degree.

Cases V. and VI.—These were cases of kidneys fixed in abnormal position by firm adhesions; the kidney in one was hydronephrotic; in the other it was structurally normal. Nephrectomy was done in both cases because of the impossibility of freeing the kidneys from adhesions without tearing the renal substance and the pelvis or ureter, and because, in one case, of the extensive hydronephrosis as well. One patient recovered and was entirely restored to health. The other died of a pneumonia on the thirteenth day following operation. The symptoms in both were attacks of renal pain on the right side with progressive frequency and severity.

Case VII.—This was a case serving as an example of the danger of postponing surgical interference in some cases of movable kidney, which, in this instance, resulted in the almost total destruction of the kidney by intermittent hydronephrosis, which finally became pyonephrosis. Renal calculus was associated with this condition. Nephrolithotomy and temporary drainage resulted in a cure; the wound healed at the end of three weeks and the pus disappeared from the urine after six weeks.

Case VIII.—Resection of one-half of the kidney for tuberculous disease was done, which demonstrated the very marked general improvement that might follow even the incomplete removal of a tuberculous area, and the possible benefits from doing a resection in cases in which the patient's condition did not seem to warrant a nephrectomy.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

Seventeenth Annual Meeting, Held at the Arlington Hotel, Washington, D. C., May 1, 2, and 3, 1900.

Second Day—Wednesday, May 2d.

The Construction and Management of Small Cottage Sanatoria for Consumptives.—Dr. Arnold C. Klebs, of Chicago, read a paper on this subject, in which he said that with the opening of the Massachusetts State Hospital for Consumptives a new era had dawned for the treatment of these patients. The advantages which would accrue from the multiplication of similar institutions for the home treatment of tuberculosis could not be overestimated. Every one agreed upon the great educational influence which the sanatorium régime had on the individual, who later became a missionary in the cause of hygiene, by example and by teaching spreading broadcast the principles to which he owed his recovery. Dr. Klebs' paper was largely devoted to a discussion of the proper construction of small cottage sanatoria, and he exhibited the plans for such an institution which he had devised. The plans embraced three cottages, with a capacity limited to twenty-five patients. The cottages were joined by two galleries, so arranged as to admit a plentiful supply of sunlight and air, and the importance of these factors was borne in mind in the construction of the cottages.

Dr. Henry P. Loomis, of New York, said that while the cottage plan of sanatoria was the ideal one, it was also the most expensive, and could not always be carried out on that account.

Dr. C. F. McGahan, of Aiken, S. C., said that after a visit to all the principal sanatoria abroad he was most impressed by that of Walters, at Nordrach, the capacity of which was limited to forty patients. Walters claimed that one man could not attend to more than this number. He visited his patients twice daily and carried out a very thorough system of management.

Dr. E. O. Otis, of Boston, said that the excellent results achieved in the Massachusetts sanatorium at Rutland during the past year had opened the eyes of the people to the fact that tuberculosis could be cured right in their own State, and they had become so much interested in the subject that the construction of a second similar institution was under consideration. The weekly expense of each patient at Rutland was $8.40.

Dr. Carroll E. Edson, of Denver, said that while large sanatoria were expensive, the general plan of treatment pursued in such institutions could be carried out on a small scale in any properly constructed, well-ventilated house. We might not be able to erect a sanatorium like those at Rutland or Liberty, but we could start one, perhaps, in our own back-yard.

Dr. J. Edward Stubbert, of Liberty, said the question of expense was always a very important one in the construction of sanatoria. While the cottage plan was the costliest, it was no doubt the best. Most of these patients did not like to be too close to each other, and were annoyed by the coughing, etc. Dr. Stubbert said that during the past winter the patients at Liberty took up amateur theatricals as a means of amusement, with very gratifying results.

Dr. Edward R. Baldwin said that at Saranac Lake the expense of each patient was between $7 and $8 per week. It should be taken into consideration, however, that Dr. Trudeau received no compensation for his services in supervising the institution, and a salaried man occupying that position would probably increase the cost of each patient to about $8.50 per week. At Saranac the number of cottages had been gradually increased until one hundred patients could be accommodated. A larger number than this Dr. Trudeau considered unwieldy.

Dr. R. C. Newton said that in the lack of sanatorium treatment, or instead of it, bands of incipient cases of tuberculosis might be collected and sent out into the woods and country on tramping trips under an intelligent leader.

Dr. Klebs, in closing, said that the plans he had shown were for an inexpensive sanatorium made up of three properly constructed cottages.

Some Personal Observations on the Effects of Intra-Pleural Injections of Nitrogen Gas in Tuberculosis.—Dr. Henry P. Loomis read a paper on this subject, and gave the following as his conclusions after about eighteen months' test of this treatment for pulmonary tuberculosis: (1) That it would have a permanent place in the treatment of pulmonary tuberculosis. (2) He had never seen any bad results or even unpleasant effects following the injections. (3) He had seen no patients cured by it. In two cases there was an apparent arrest of the disease, and in a number of others there was a disappearance of such constitutional symptoms as cough, expectoration, and fever. (4) The local improvement was not so apparent as the constitutional. (5) A marked gain in weight was found in every case injected. (6) It had never failed to stop pulmonary hemorrhages, even in desperate cases.

Dr. Taylor said he had employed the injections of nitrogen gas in about half a dozen selected cases of pulmonary tuberculosis, with entirely negative results. In two of the cases there was a slight temporary improvement.

Dr. R. H. Babcock, of Chicago, said he had seen a number of cases in which the use of the gas had been followed by a decided improvement in the symptoms. It seemed to give the patients a start in the right direction.

Dr. Charles Denison, of Denver, said that if the sole object of the treatment was to place the affected lung at rest, he thought that could be attained by the simple and equally efficient method of strapping the chest, as described by him in a paper about a year ago.

Dr. Stubbert said he did not believe the injections of nitrogen gas would do good unless absolute compression of the lung was secured. It was useless in cases in which there were adhesions which prevented compression. The operation could best be done under *x*-ray illumination. The speaker said he had seen it successfully used to check hæmoptysis.

Dr. Charles L. Minor, of Asheville, N. C., said he had seen several cases in which the tuberculous process was apparently retarded by the injections of gas.

Stomach Conditions in Early Tuberculosis.—This paper was read by Dr. Boardman Reed, of Philadelphia. The points emphasized might be thus summarized: (1) In early tuberculosis the secretion of hydrochloric acid in the stomach was very frequently excessive, the peptic glands being in a condition of irritability which caused stimulant remedies of the creosote class to disagree and act injuriously. (2) Oils tended to depress the secretory function of the stomach, and in consequence cod-liver oil was likely to help the cases which the creosote class of drugs hurt; but, on the other hand, it hurt the cases in which the gastric secretion was inactive, the very ones in which creosote and its congeners often did good. (3) Therefore it ought to be the rule to ascertain the condition of the secretory function of the stomach before pushing either class of remedies. (4) When analyses of the gastric contents could not be made, it was safer to combine creosote with cod-liver oil, so as to let one neutralize the other in their influence upon the stomach. (5) The motor function was very generally depressed in tuberculosis and must be restored before a cure could be brought about. Drugs availed little in this direction, but diet, exercise, especially in the open air, faradism, and abdominal massage—except when hyperchlorhydria complicated—were all valuable means of effecting the result.

Dr. Howard S. Anders, of Philadelphia, said he was thoroughly in accord with the statement made by Dr. Reed, that in the vast majority of cases of early tuberculosis there was hyperchlorhydria. The percentage of hydrochloric acid present was very variable. The motor function of the stomach he had never found much impaired in these cases.

Subsequent Histories of Patients Apparently Cured under Administration of Anti-Tubercle Serum, as an Auxiliary to Climatic Influences.—This paper was read by Dr. J. Edward Stubbert, of Liberty. At a meeting in May, 1898, he had read a paper before the association entitled "Some Statistics upon Sero-Therapy." The following was the summary of the cases then reported: Number of cases treated, eighty-two; expectoration decreased in eighty-two per cent.; appetite improved in eighty-one per cent.; weight gained in seventy-eight per cent.; physical signs improved in seventy-eight per cent.; temperature decreased in forty-nine per cent.; bacilli disappeared in thirteen per cent.; bacilli decreased in thirty-five per cent ; cough decreased in seventy-nine per cent.; apparent immunity established in twenty-one per cent.; general improvement in seventy-eight per cent. In pursuance of investigation and study upon this subject he now reported a subsequent history of thirty-nine per cent. of the above cases apparently resulting in cure, as well as the present condition of fourteen, the histories of which were not included in the former paper. These cases were divided into three sections: first, those patients who had been discharged for three years; second, those who had been discharged for two years; third, those who had been discharged for one year or less, but in those instances when they had been discharged for less than one year they had been one winter in their old surroundings. All of those patients returned had spent a greater or less length of time in their former environment and work: the speaker had been able to trace definitely the histories of eleven per cent. of those discharged three years, seventeen per cent. of those discharged two years, and $17\frac{3}{7}$ per cent. of those who had been discharged for one winter, and all of those had remained in the same condition as when they were discharged, viz., apparently cured. Those patients remaining, whose histories had not been definitely traced, were all known to the writer by general repute to be in good condition. Thus practically it might be stated that in one hundred per cent. of all cases discharged in the last three years that had received this form of treatment, the patients had remained apparently cured. All of these cases but one were incipient cases; one was a moderately advanced case. The speaker also reported two arrested cases in which the bacilli were present at the time of the discharge, but the diseased area was circumscribed and there was no special activity present. One of these patients since returning home had lost the bacilli and was apparently well, while the second one continued at hard work, and held her weight, but continued to expectorate about once in ten days or two weeks. He also reported one case of pulmonary tuberculosis complicated by tuberculous kerato-iritis, in which the ocular as well as the pulmonary symptoms had cleared up very markedly under serum and climatic treatment.

Dr. Klebs referred to the unreliability of statistics in general, and thought that Dr. Stubbert had given too much credit to the anti-tubercle serum and too little to the excellent régime which was carried out in the treatment of these patients at Liberty.

The Phlebitis of Advanced Phthisis, with Report of Cases of Phthisis following Abscess of the Hand.—Dr. R. G. Curtin, of Philadelphia, read this paper.

Dr. S. Babcock said he had seen three cases of phlebitis in tuberculosis.

Dr. Thomas D. Coleman, of Augusta, Ga., also referred to a case which had recently come under his observation.

Dr. Anders spoke of the obscure origin of these venous conditions, of which he had seen two examples secondary to chronic phthisis. One might regard them as cases of thrombo-phlebitis, or phlebitis from within. In the last two cases reported by Dr. Curtin, in which a phlebitis resulted from an injury to the hand, which was immediately followed by abscess, there might have been an inflammation of the vein, extending from without inward, with subsequent thrombosis and softening and the detachment of emboli.

Dr. Norman Bridge, of Los Angeles, Cal., reported the case of a young man with pulmonary tuberculosis who developed a phlebitis of both lower extremities; after giving rise to rather severe symptoms, the swelling in both limbs disappeared, and the patient made a good recovery. Dr. Bridge said he thought it was impossible to say that this complication was, strictly speaking, tuberculous. This, so far as he knew, had never been proven.

Dr. Babcock said he thought the phlebitis in these cases was due to infection, either mixed or otherwise.

Splenic-Myelogenous Leukæmia with Pulmonary Tuberculosis: Report of a Case.—This paper was by Drs. Henry L. Elster and William A. Groat, of Syracuse. They reported a case of splenic-myelogenous leukæmia with pulmonary tuberculosis. The writers reviewed the literature, and gave a full bibliography showing that the association of pulmonary tuberculosis with any form of leukæmia was exceedingly rare. There were a few cases on record of lymphatic leukæmia complicated with tuberculosis. A thorough study of the cases which were supposed to have been of the splenic-myelogenous variety showed that there were only two, and one of these might be considered to be of the splenic-lymphatic myelogenous variety with tuberculosis. The case reported was probably the first of splenic-myelogenous leukæmia with pulmonary tuberculosis in which the diagnosis had been confirmed by a differential count of the leucocytes and the demonstration of tubercle bacilli in the sputum. The patient, who was referred to Dr. Elster for diagnosis, was a baker, forty years old; his family history showed a strong tuberculous taint. His present illness began a number of months before the advent of continuous symptoms, when the patient complained of great fulness in the abdomen and progressive increase in its size. He became depressed, and his general condition was also below par. In the spring of 1899 all of his symptoms increased, and he grew gradually weaker. His color changed and became characteristic of leukæmia. In November, 1899, he commenced to cough, and had all of the symptoms of progressive pulmonary tuberculosis. Tubercle bacilli were found in the sputum; the sputum was also blood-streaked. The patient lost weight regularly; the temperature was usually slightly above normal, averaging from 100° to 102° F.; the pulse was uniformly accelerated. Physical examination failed to show involvement of the lymphatics. The spleen almost filled the abdomen; the liver was also enlarged; the lungs showed positive physical signs of infiltrating tubercle, disorganization, and cavity formation. The blood examination was characteristic of splenic-myelogenous leukæmia. The red corpuscles varied from 3,320,000 to 2,922,000. The differential counts showed an enormous percentage of myelocytes. The average of these was twenty-six per cent. At one time the writers found thirty-eight per cent. There was a marked relative reduction in the number of lymphocytes, which varied in the counts from 4.1 per cent. to 7.5 per cent. The eosinophiles were increased. Many of these were myelocytes and dwarf cells. There were large numbers of normoblasts, or nucleated red corpuscles. The highest count of leucocytes was 320,000; lowest, 121,500. They found a gradual and steady decrease in the total number of leucocytes, but an increase in the percentage of polymorphonuclear neutrophiles, a decrease in the number of myelocytes, and an increase in the number of lymphocytes as the tuberculous process advanced. The blood at all times retained the characteristics of splenic-myelogenous leukæmia. The paper contained besides a full table giving the results of many blood counts, diagrams which showed the physical signs, and water-colors reproducing the picture of the blood as it was found on microscopical examination. The writers dilated on the interesting changes found in the blood of leukæmia with added tuberculosis, and also considered the literature of this subject as well as the effect generally of added infection on leukæmic blood. The urine showed a marked increase in the excretion of uric acid. The changes found in the lung in leukæmia were considered in connection with a study of the literature of the subject. The case reported demonstrated very clearly the effect which the added tuberculous infection had upon the blood, reducing materially the number of leucocytes. The physical signs with associated laryngeal tuberculosis, the enlargement of the liver and spleen, the presence of tubercle bacilli in the sputum, and the changes in the cellular elements of the blood, with the convincing differential counts, made the diagnosis of splenic-myelogenous leukæmia with pulmonary tuberculosis positive.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, April 16, 1900.

Frederick Holme Wiggin, M.D., President.

The Prevention of Intracranial and Intravenous Complications in Suppurative Diseases of the Ears.—Dr. J. H. Woodward read a paper with this title. He said that in spite of free drainage through the drum membrane the disease process might spread into the cranial cavity. To prevent this the conditions giving rise to it must be removed. In the majority of cases the objective symptoms would be a reliable guide. There were six important indications for the mastoid operation, viz., (1) bulging of Shrapnell's membrane, or the upper posterior quadrant of the membrana tympani, and bulging of the inner extremity of the membrane; (2) persistent tenderness over the mastoid process; (3) swelling of the soft parts over the mastoid process; (4) granulations and fistulæ in the external auditory canal; (5) persistent and relapsing fistulæ behind the auricle; (6) persistent, and especially offensive, otorrhœa. Retention of pus in the ear could not be regarded too seriously, and whenever incision of the drum membrane failed to secure efficient drainage it was better to open the mastoid antrum at once than run the risks incident to delay. Persistent mastoid tenderness or swelling of the soft parts should be looked upon as an indication for operation. Fistulæ which alternately closed and opened were especially liable to be followed by sinus thrombosis.

Dr. Francis J. Quinlan said that all suppuration of the middle ear should be regarded with grave misgivings. When there was a perforation in Shrapnell's membrane there was almost always carious bone present. No life insurance company of this city today would accept any one having a chronic suppuration of the middle ear above the short process. Any condition attended by pain over the antrum, pain over the tip or over the middle plate of the mastoid should be a reason for doing a mastoid operation. With a little care and attention the antrum could not only be entered but thrown open to inspection. It was most important that all of the cells should be laid open. A practitioner of ordinary intelligence should be prepared to open this cavity and clean it out.

What are the Ultimate Results in Treating Cancer of the Uterus? What is the Best Plan of Treatment?—Prof. Howard A. Kelly, of the Johns Hopkins University, Baltimore, read this paper. He said that from the standpoint of the frequency of this disease cancer of the uterus was of the first importance, because Welch had shown that out of 31,482 cases of primary cancer, 29.5 per cent., or approximately one-third, were instances of cancer of the uterus. In every case of cancer of the uterus the entire organ should be extirpated—an old dictum, but one which he believed required reiteration in this country even at the present time. There was a temptation, particularly in the earlier stages of the disease, to do an amputation of the cervix or to remove only the body of the uterus. Speaking on a basis of one hundred and seventy-six cases of his own, studied most minutely, he found the exceptions regarding the limitation of the disease so numerous that they might, for practical purposes, be reckoned as the rule. In many cases of cancer of the cervix he had found the disease also in the body, and in one case it had skipped the body and had developed in the tubes. With the uterus one should remove the Fallopian tubes in all cases of cancer of the body. The next great danger was in the vaginal vault. Cervical cancer often extended down the vagina under the mucosa without, at first, producing any alteration of color. The disease should be given a wide berth, therefore, at the vaginal vault, cutting at least from 2 to 2.5 cm. away from it. In many cases of cancer of the uterus attended by pain it would be found that the pain was not due to the cancer *per se*, but to an occlusion of the cervical canal by the growth, and the consequent imprisonment of the secretions. In such cases, by boring through the carcinomatous mass and establishing free drainage of the uterine cavity, the pain would be completely relieved. The disease often involved the bladder before it had extended very far in any other direction. In such a case the whole base of the bladder could be readily cut out and left attached to the cervix. Almost all cases of involvement of the bowel were associated with considerable involvement laterally also. The mode of extension of the disease laterally was a subject upon which surgeons differed widely, yet the method of treatment must hinge on this point. He had removed many glands which macroscopically appeared to be diseased, yet microscopical examination had failed to find, in all but a few instances, any evidence of cancerous involvement of these glands. The operator should concentrate his whole efforts on giving the cervix a wide berth, and if he did this he need give himself no concern about the tissues beyond. In all but five per cent. of cases the disease extended laterally by continuity, and not by "jumps." On the question of the risk of inoculating the fresh tissues with cancer during operation, the speaker said that implantations of the disease in the vagina below the site of operation were rare accidents. The experiments made on animals showed that it was difficult to inoculate cancer unless aseptically done, and hence it did not seem probable that implantation would occur when drainage was used.

Advisability of Operation.—An opinion which had gained some ground in the profession was, that the radical operation was hardly to be recommended because the disease almost always recurred quickly. In refutation of this assertion, Dr. Kelly said that out of sixty-one cases of squamous carcinoma of the cervix, twenty per cent. of the patients were living, and out of twelve cases sixteen per cent. of the patients were well. Of thirty cases of adeno-carcinoma of the body, sixty-three per cent. of the patients remained well. The fact that seventeen out of thirty-four patients had remained well for periods varying from three to six years seemed to him a sufficient argument in favor of operating in this class of cases.

Mode of Operating.—The old plan of "skinning out" the uterus was the method most apt to be followed by recurrence, and should, therefore, be abandoned. It was true that it was possible to distinguish the ureters in an abdominal operation without the introduction of bougies into them, yet it could not be denied that without such an artificial guide the operation was made somewhat more tedious and dangerous. The disease must be given a wide berth by ligating far out in the parametrium. Any operative procedure based on these principles would give vastly better results than those hitherto achieved. He had followed three modes of attack in his endeavors to carry out these principles. One of these operations consisted in tying off the ovarian vessels, round ligament, and uterine artery on both sides, and then cutting in through the vagina and taking out the uterus through the vagina. Dr. X. O. Werder, of Pittsburg, had greatly modified the operation. The peritoneum was opened both anteriorly and posteriorly, and then a wide dissection of the vagina was done low down. After the uterus had been separated, the detached peritoneum was sewed over the top of the uterus so that the uterus was practically extruded from the peritoneal cavity. After closure of the abdominal wound the vagina was inverted and the parts were removed.

His Own Method.—Dr. Kelly then described his own method, which consisted in (1) the removal of all the tissues down to the point where the infiltration was deepest, and (2) the concentration of all the energy of the operator on the most complete removal of this last segment. A thorough curettage was first done, and then the vagina was divided on all sides one inch below the diseased area. The vesico-uterine peritoneal fold was widely opened, as was also the posterior cul-de-sac. The uterus was then brought out through the anterior opening. The peritoneum posteriorly was well protected by gauze packing. The uterus was next bisected from fundus to cervix with scalpel and scissors; this was attended with very little hemorrhage. The uterus was next caught by the cervix with two pair of forceps, and was split again and removed. The next step was to begin the enucleation on the side which was the less diseased. Up to this point the operation was very simple. These preliminary steps secured the maximum of room and mobility. This operation was, of course, done through the vagina. It was a question in his mind whether the ligature or the cautery was better. Much credit was due to Dr.

John Byrne for his persistent advocacy of the use of the actual cautery in advanced cases of carcinoma of the uterus.

Dr. Henry C. Coe said that the old method of skinning out the uterus had certainly given him most unsatisfactory results. In the majority of cases there had been a recurrence within two years. He had had occasion to read a paper on this subject a few weeks ago, in which he had taken the ground that the operation of the future would probably be a radical abdominal hysterectomy. Serious as the operation was, this seemed to be the most scientific method of dealing with the disease by any cutting operation. It enabled one not only to deal with the diseased organ itself, but with the glands and any suspicious tissue. In his experience the great difficulty had been to decide at the operation what tissue was inflammatory and what tissue was involved in the malignant process. He had always been a stanch upholder of Dr. Byrne's method of treating malignant disease of the uterus by means of the cautery. Such a method seemed to him very rational, and the ultimate results in the hands of Dr. Byrne had certainly been very brilliant. He did not feel sure that cancer of the uterus always extended into the broad ligaments by continuity. One saw at times cases in which there was a small nodule of malignant adenoma of the body of the uterus, yet in spite of a radical removal by abdominal hysterectomy there would be early recurrence in the scar. Such a case was difficult to explain. He could recall one very severe case which he had considered most unfavorable at the time of the operation, yet this patient had lived five years without any recurrence.

Dr. Egbert H. Grandin spoke of his personal results in the treatment of cancer of the uterus. He had analyzed the histories of nearly three thousand women seen consecutively. The first point was that cancer of the uterus, in his experience, had been relatively uncommon. There had been forty-eight cases of cancer of the uterus. Thirty of these had presented an advanced type of the disease, *i.e.*, the base of the bladder, the rectum, and the broad ligaments had been implicated. In such cases he had not been bold enough to attempt any major operation. These women had all suffered for a long time from hemorrhages, and had not reported for examination at an early enough period to make a radical operation of much value. He had tested the various routine methods, such as curettage, cautery, and caustic applications. He was not quite sure but that in these advanced cases of carcinoma the less done the better. Eighteen cases had been suitable for operation. Total hysterectomy had been the operation of choice in the cases in which the disease had involved the body of the uterus. Seven of these twelve cases had been traced, and there had been no recurrence. In one case the operation dated back six years, and in the others from six months to four years and a half. In six cases in which the portio vaginalis had been involved the operation selected had been vaginal hysterectomy, either by clamp or ligature. He had traced four of these cases, and there had been recurrence in all but one, that one being a recent operation. The recurrence had taken place in the vagina at periods varying from eighteen months to two years. From his experience he was inclined to believe that cancer of the uterus was susceptible of cure if seen early enough and promptly treated by a radical operation. Vaginal hysterectomy, whether by clamp or ligature, he thought should be rejected in cases of cancer of the uterus, for the reason that it was not possible to do as thorough a resection of the broad ligaments by this route as from above. In any event it was desirable to remove at the same time as much of the vagina as possible, as this was the site of recurrence. In any case of cancer of the uterus, whether of the body or of the portio vaginalis, a partial operation should not be thought of. Probably in the future a combination of methods, such as the knife and the cautery, would best enable us to certify against recurrence.

Dr. W. R. Pryor said that he did not think the vaginal operation met properly any of the requirements laid down by the reader of the paper of the evening. He did not look favorably upon Dr. Kelly's method of performing morcellement by the vaginal route in cases of cancer of the cervix. The surgeon should do the most radical operation possible, provided it did not carry with it too high a rate of mortality. Vaginal hysterectomy for cancer was, in his opinion, a palliative operation merely, and in this connection it should not be forgotten that the mortality from it was between five and ten per cent. Vaginal hysterectomy was suitable only for a few selected cases. His own preference certainly was for the operation through the abdomen, which necessitated no preliminary procedure for marking out the anatomical relations, such as Dr. Kelly's clever one of introducing bougies into ureters. As every drop of blood was precious to these patients, the internal iliac arteries should be ligated. This ligation could be done with perfect safety.

Dr. Phineas H. Ingalls, of Hartford, Conn., said that the majority of cases seen by him had first come under the observation of practitioners who believed that irregular hemorrhages occurring in women between the ages of thirty-five and fifty years were merely an indication of the approach of the menopause; hence the disease was far advanced before coming under his care. He would like to know in how many of the cases treated by Dr. Kelly, in which recurrence had not taken place for five or six years, palpation of the broad ligament before operation had indicated freedom from disease. In his experience, operations performed for cancer of the body had done far better than those done for cancer of the cervix. He had been impressed with the fact that a partial operation, as, for example, by the cautery, had rather aggravated the disease and hastened the fatal termination more than if the patients had been let alone.

Dr. Hermann J. Boldt said that cancer of the uterus must be looked upon as a local disease in the initial stages; hence, if the diagnosis was made and the proper treatment instituted at this time, a cure should result. In his opinion, there was no other method equal to the cautery for the treatment of that spot which seemed to be most intimately connected with the organism. He had personally had but little experience with the method, but the results obtained by Byrne and Mackenrodt, and others, left no doubt on this point. He had treated one hundred and eleven cases of cancer of the uterus, with a direct mortality of 5.4 per cent. and a mortality from recurrence of 34.2 per cent. Those patients living with recurrence constituted 2.7 per cent., those living and free from recurrence 24.3 per cent. No report had been obtained in 30.6 per cent. After the first year's experience he had never performed the "shelling out" operation. The danger of injuring the ureters was very great.

Dr. George Tucker Harrison subscribed most heartily to all that Dr. Kelly had said, for he had preached the true gospel of this disease. It was a demonstrated fact that cancer of the uterus was a local disease, and it was certainly susceptible of cure. He did not consider that statistics of cancer of the uterus were available until a period of five years had elapsed. Taking this as the standard, at least fifteen or twenty per cent. of the patients had been cured, yet the remaining eighty per cent., or some of these, should have been cured, and would have been if the diagnosis had been made early enough and appropriate treatment instituted. He had been disappointed with his own results by the vaginal route.

Dr. Joseph E. Janvrin said that about four years ago he had read before this association a paper in which he had reported sixteen cases of cancer of the uterus beginning, so far as could be judged, in the cervix. He had operated upon these cases by vaginal hysterectomy—simply skinning out the uterus. Of the sixteen cases, twelve at that time dated back three years or more, and one for twelve years. At that date four patients had been living and in perfect health. The remaining four cases dated back at that time, one four months, two five months, and one twenty-two months. Two of these patients he knew were living and well at the present time; two had died within a year after the operation. This gave a percentage of 37.5 per cent. These cases had been selected as exemplifying the results when the disease began in the cervix and was, in the majority of cases, confined to this part. In every instance the diseased condition of the cervix had been well marked. He had not tabulated his other cases operated upon prior to four years ago, but from recollection the ultimate results had been fully up to the percentage just given. Out of the thirty cases he was sure over one-third had no recurrence of the disease. In four of the sixteen cases the disease extended down upon the mucous membrane of the vagina, yet three of these had resulted in a cure. His experience had been that when the disease began on the cervix it was more apt to invade, probably by attrition, the vaginal mucous membrane rather than to extend down under the mucous membrane. He thought that vaginal hysterectomy should be confined to cases in which the disease was limited to the cervix, or to the cervix and mucous membrane only of the upper part of the vagina, or those in which the disease having involved these points had also begun to develop upon the mucous lining of the uterus itself. To this class might be added cases of adenoma and carcinoma uteri in their early stages. In all cases in which there was a suspicion of extension of the disease beyond these limits, whether into the parametrium, the folds of the broad ligament, or the ovaries, the combined abdomino-vaginal operation or the radical operation by the abdomen itself was by all means the most appropriate if we resort to any radical operation whatever. As a rule, he had not performed either abdominal or vaginal hysterectomy in advanced cases. He had long been of the opinion that the cases which were operable could be successfully treated by the abdominal route.

Dr. J. Riddle Goffe said that only in recent years had accurate and reliable statistics been presented concerning cancer, and the profession and the public had been startled by the rapid increase of cancer in England. Some had refused to accept these statistics, maintaining that the increase was apparent and not real. Others, speaking with much authority, insisted that the disease was not only rapidly increasing, but that it was developing more and more frequently among younger subjects. The figures that had been presented were sadly disappointing, and made him hesitate to attempt anything. His own experience led him to think that the vaginal operation was the only justifiable one in cancer of the uterus, because of the danger of inoculating fresh tissues with cancer in other methods of operating. In his opinion, there seemed to be two serious objections to the operation presented here this evening by Dr. Kelly. The first objection was to the method of inverting the uterus, for the turning of a carcinomatous cervix upward into the peritoneal cavity seemed to be an excellent way to encourage inoculation of the peritoneal cavity. Again, he was not in favor of quadrisecting the uterus, for the less it was interfered with the less likelihood of spreading the disease. He would favor taking out the whole vagina, if necessary, for the dissection was very easily performed. The diseased tissue should be shut up in a little sac of vagina.

Dr. E. E. Tull said that he had a record of twenty cases of cancer of the uterus upon which he had operated in hospital practice since 1890. Four patients were living, and two of them had been operated on in 1890. The operation had been by the vaginal route, and in all of them the diagnosis had been made positive by a microscopical examination. From observation and experience it seemed to him that the vaginal operation was far from being an easy one. He would operate upon a fairly advanced case first by the application of the cautery, and then, entering the abdomen, would remove the disease as thoroughly as possible.

Dr. H. N. Vineberg said that although he had probably seen about twelve thousand cases of diseases of women in dispensary practice, the number of cases of cancer of the uterus had been exceedingly small, probably not more than twelve cases. The majority of these women had borne many children, and had suffered extensive laceration of the cervix, a point of interest because of the view held by some that such lacerations were a prominent cause of cancer. The cervix was situated in the midst of much connective tissue rich in lymphatics. These lymphatics acted as a barrier to the dissemination of the disease upward. Only in those cases in which the disease was limited to the body had his results been at all encouraging. He would venture to suggest a modification of Dr. Kelly's method, viz., the making of a longitudinal incision in the anterior vaginal wall. Through this the uterus could be anteverted, and there would then be no need of entering the peritoneal cavity posteriorly.

Dr. Ralph Waldo said that when the disease had lasted more than six months it was probable that the tissues had been so much invaded that recurrence would take place., His personal preference was for operating from below, and using ligatures.

Dr. John Byrne, of Brooklyn, said that in 1892 he had undertaken an analysis of the published statistics on cancer of the uterus up to date. The trouble had been in the past that many in the profession had been disposed to minimize the danger of hysterectomy, pointing to the exceptionally good statistics of a few specially skilful operators. In two hundred and thirty-five cases treated by a number of the leading operators in Germany, France, and elsewhere, he had found sixty-three, or twenty-seven per cent., in which relapses were noted, while nothing was said about the fate of one hundred and seventy-two cases. Such important gaps in the records made the task of collecting honest and trustworthy statistics most disheartening. Olshausen had reported in 1892 one hundred and sixty-one cases of hysterectomy for cancer, with only forty-two patients living at the end of two years. Of the one hundred and fifty-five who had survived the operation, only nineteen had been free from recurrence. Such statistics as these were worthy of the most thoughtful consideration. Of late years his own work had consisted in the free use of the cautery, and a thorough roasting of the cavity. Exceptionally was the actual cauterization carried to the fundus. In circumscribed cancer of the cervix the use of the cautery and a thorough roasting of the cavity were free from danger, and afforded the very best chances for a cure. He had many cases on his books in which the patients had lived eight or ten years, or even longer, free from recurrence. The effect of the electro-cautery knife on the surrounding structures probably explained the absence of fever and pain after the operation, the almost complete immunity of the scar tissue from involvement in the event of recurrence, and the comparative rarity of recurrence. The improved electric apparatus of the present day left no excuse for further apathy on this important subject.

Dr. Kelly made a few closing remarks.

THE MEDICAL ASSOCIATION OF THE GREATER CITY OF NEW YORK.

Stated Meeting, April 9, 1900.

Robert F. Weir, M.D., Chairman.

Difficulties of Intubation.—Dr. Rogers presented a young girl who illustrated some of the difficulties of intubation. She was intubated for diphtheria in December, 1896; tracheotomy was done in February, 1897; in May she was re-intubated. She was then in Willard Parker Hospital for a year, during which time her stenosis remained unchanged. In 1897 she was transferred to Gouverneur Hospital. A small tube was then introduced, but the patient coughed it up and was on the point of being asphyxiated, when a tracheotomy was done with a penknife. In January, 1898, there was no improvement, and a laryngotomy was done. Nothing was found but a mass of thickened tissue. A suture was introduced through the thyroid cartilage to keep the swollen tissues away from the median line. Infection of the wound followed, and in April she was discharged, being considered a hopeless case. There were much excoriation and dermatitis about the tracheotomy tube, and a great deal of dense tissue around the larynx. A No. 4 or 5 tube was introduced, and in October of the same year a larger tube was placed in. In November, 1898, the tube was taken out, and she had remained cured ever since. The interesting point was that from December, 1896, to October, 1898, she was unable to breathe through her larynx; then, by wearing a big tube in the larynx, she became cured. She was unable to phonate until this year. She now breathed with some dyspnœa at night.

Dr. Rogers also presented the case of a boy who, in March, coughed out the tube and nearly strangled, a tracheotomy being performed to prevent asphyxia. The attempt was made to replace the intubation tube, but it was again coughed up. In October he was admitted to Gouverneur Hospital, and it was found that even a uterine probe could not be passed. The attempt was made at dilatation with urethral sounds. A No. 4 or 5 tube was then introduced and worn for nine days; then, a No. 5 or 7 tube was placed in and left for five weeks, when he was considered cured.

Dr. Rogers presented the third case of a girl who was intubated at the Willard Parker Hospital in May, 1896, for diphtheria; in July the tube was coughed up, and she stopped breathing, making it necessary to perform a tracheotomy; in October a laryngotomy was performed. The swollen tissue was excised; there was no cicatricial tissue, only œdematous tissue; there was no granulation tissue. The child was no better; she could not breathe without the tube. Laryngotomy was again performed in October, 1897. Until last July, a period covering nearly three years, intermittent dilatation was done, but the patient did not breathe through the larynx. In July the tracheotomy tube was removed and a large-sized intubation tube—11 to 13 tube—was placed in and worn for five weeks, when it was taken out. A cure followed. He closed by stating that every one of these patients did well by the insertion of as large a tube as could be crowded into the larynx, to be left there for six weeks, or even longer.

Pylorectomy; Gastro-Enterostomy.—Dr. Robert F. Weir presented this case. The patient, a woman forty years of age, gave a history of gastric disturbance but not of severe type. Eight or ten months ago she noticed a swelling in the upper part of her stomach; it increased in size, with some distress in digestion, with vomiting, but there was no hæmatemesis. The tumor was as large as an orange and fairly movable. An exploratory incision was made to determine if any adhesions existed or if there was any glandular involvement. The diagnosis of carcinoma of the stomach was made, there being a growth of considerable extent in the cavity of the stomach. Along the greater curvature of the stomach, running for a distance of four or five inches, a mass could be felt in the walls of this organ, both anteriorly and posteriorly. A pylorectomy was decided upon and done, seven inches being removed. This area was clamped. The stomach wound was closed by means of sutures which passed through the entire thickness of the mucous membrane, and two extra layers of sutures turned the stomach in three-quarters of an inch. A gastroenterostomy was then done by means of a Murphy's button—the duodenum being connected to the posterior wall of the stomach. Recovery was uneventful; there were no bad symptoms. The stomach was washed out from the beginning, and fluids were administered within the second or third day. She now ate almost any kind of good food.

Pathology, Diagnosis, and Treatment of Diphtheria.—The feature of the evening was a discussion on this subject.

Dr. J. Blake White opened the discussion. He treated of the throat conditions resembling diphtheria. There were three distinct exudations: (1) Grayish, aphthous patches seen in states of debility and in a deranged state of digestion; (2) a local non-contagious condition about the glottis, which was accompanied by stridulous breathing, and described under the term "croup"; (3) the specific, contagious, infectious disease, which was accompanied by lymph exudation, by great prostration, and other symptoms, and often paralytic complications—diphtheria. In making a differential diagnosis bacteriological evidence of the disease was of great importance, but should always be considered in connection with the clinical history. He cited the instance of a little girl in whom the clinical diagnosis was diphtheria; the cultures obtained said there was no diphtheria. She was treated for diphtheria, and a subsequent bacteriological examination showed the presence of the Klebs-Loeffler bacilli. The indications for treatment in diphtheria were naturally those that were present in any condition of toxæmia, *i.e.*, to sustain, then aid the efforts of nature in the struggle to eliminate the principles under which the patient suffered. Nature fought the disease, and often a blind man with a club came along; if he struck the disease, he killed it; if he struck nature the patient was a sufferer. The speaker, in referring to the rational methods of treatment, said that among the vast host of remedies advocated there was no one that was entitled to superior confidence. The immunizing effect of antitoxin was compared to that following the inoculations of smallpox, but he claimed that they were in no way identical. In France the antitoxin treatment was discredited; also in Moscow. The *British Medical Journal* stated that in Paris, with the use of the antitoxin treatment, there was an increase of diphtheria. The relative value of intubation was compared with tracheotomy. Intubation should be practised early to give greater chance of life. If the obstruction extended below the furthest reach of the O'Dwyer tube the patient should be looked upon with superadded anxiety. In conclusion he remarked that the rational treatment consisted in the study of each symptom and the idiosyncrasy of each case.

The Heart and Circulation in Diphtheria.—Dr. Henry Dwight Chapin continued the discussion, confining his remarks to the various phenomena seen in connection with the heart in diphtheria. This organ naturally attracted much attention in the treatment of this disease. The heavy mortality from diphtheria in severe types was accompanied by failure of the heart, and death ensued from this cause. Rapid failure of the heart was especially seen in the septic type of diphtheria. Here, the throat was covered with a false membrane, including the tonsils, the uvula, the palate, and in addition there was marked involvement of the glands about the neck. The nose was almost invariably blocked up. This type was exceedingly depressing to the heart. At the Willard Parker Hospital it was found that the septic type of the disease acted as a powerful depressor of the heart; of course, here were present the mixed infection, the Klebs-Loeffler bacilli, the streptococci, and other germs, which combined their toxins with the original toxins. In these instances when the heart began to fail it rarely recovered itself; the pulsation was rapid and feeble, and the patient developed the type of great prostration, with pallor and finally stupor and death. The speaker referred to the grave significance of vomiting; if vomiting ensued with a weak pulse death usually followed; this vomiting might precede or follow failure of the heart. This was not the vomiting that accompanied over-feeding of the patient. Another phenomenon referred to was the distinct slowing of the pulse, which was regarded as of grave significance; this slowing of the pulse might come on before or after great rapidity. The following cases were cited to show this retardation of the pulse:

Case I.—E. F——, eight years of age, died on the fifth day. The day before death the pulse was 42 and remained slow; it previously had been 115 to 120.

Case II.—L. M.——, about four years old; on the fourth day the pulse ranged from 128 to 66; next day, 120 to 138. Death followed in three days.

Case III.—G. S——, about six years of age, was in stupor with a pulse of 60; it was regular. The following day it was 38 and irregular. Death occurred in three days with a pulse of 104.

Case IV.—B. C——, aged five years, had a very rapid heart, which gradually slowed and in a few days was 28. The patient lived two days thus.

Case V.—A. H——, aged thirteen years, had a pulse of 90; in two days it was 40, remaining so for three days, when it became 60 to 70. The patient recovered.

When the pulse dropped in this way recovery was rare. The care of these cases consisted in insisting upon the recumbent position. Dr. Chapin stated that there seemed to be a direct ratio between the amount and character of the local inflammation and exudation and the severity of the constitutional symptoms, especially the heart. If there was not much membrane, and no swollen lymphatic glands were present, no matter if the pulse was rapid and irregular, the case was not so serious, especially if there were no symptoms of prostration. He believed in the study of the heart in diphtheria, which was the only disease in which we must interpret the physical signs by the rational signs. He had had a mild case of diphtheria, with a rapid and irregular pulse; the patient improved by getting up and running about the ward. Whenever we found that the character of the pulse was poor, with evidences of prostration, pallor, vomiting, and stupor, the condition of the heart must give grave solicitude; but when there were the same physical signs without prostration, the significance was not so grave. The treatment consisted of whiskey, strychnine, and nitroglycerin. In cases of slow pulse strychnine in large doses apparently had no effect whatever; it was given hypodermatically. Nothing seemed to steady the heart in these grave cases. One therapeutic agent used at the Willard Parker Hospital was morphine in certain cases. In non-narcotic doses it was a powerful heart stimulant. Children were hard to keep quiet; heart failure sometimes followed when a child simply sat up in bed; the children should be kept quiet, and it could be done with morphine administered hypodermatically. This was most efficient. A child of one or two years of age could stand gr. $\frac{1}{16}$ to $\frac{1}{14}$ of morphine hypodermatically.

The Treatment of Diphtheria as Carried Out in the Willard Parker Hospital.—Dr. John Winters Brannan continued the discussion, confining his remarks to the above subject. The treatment there did not differ from that employed in other hospitals or in private practice except in matters of detail. Unless there was some opposition antitoxin was given in all cases; 1,500 to 3,000 or 4,000 units of the strongest serum obtainable was administered, the dose being regulated by the severity of the case. If no improvement followed within twenty-four hours the injection was repeated, and, in some cases, even given a third time. No cases were admitted to the wards until the clinical diagnosis had been verified by bacteriological examination. The naso-pharynx was cleansed by means of a fountain syringe; that, he believed, was the key-note to success. The child was placed on a table and swathed in sheets; outside of this was placed a rubber blanket. With the patient upon one side the nozzle of the syringe was introduced into one nostril, then into the other, then into the mouth and naso-pharynx, and all the parts were thoroughly flushed with decinormal saline solution. The fountain syringe was elevated three or four feet above the table. If the fauces were encroached upon, water at a temperature of 120° to 130° F. was used. Irrigation was practised every one, two, or three hours; if any nasal hemorrhage occurred it might have to be abandoned for a time. This irrigation prevented further absorption by removing the false membrane, and by clearing away the discharge; no attempts were made to do this by the aid of chemical agents. The speaker laid particular stress upon the preparation of the patient before the treatment was begun; the patient should be immobilized first. The further treatment was chiefly systematic. All patient were placed upon stimulating diet and kept in bed until convalescent. Ninety feet of floor space was allowed for each bed. The temperature of the room was kept at about 68° or 70° F. Tracheotomy was rarely necessary, being performed but ten or twelve times in a year. In some cases gavage was used, the tube being introduced through the nostril. For the cardiac weakness whiskey and strychnine were given, the latter being given with a free hand, a young child sometimes receiving gr. $\frac{1}{10}$ in twenty-four hours; he had never seen the slightest toxic effect from it. Broncho-pneumonia and other complications received the usual treatment. Paralytic sequelæ were seldom seen; they were treated by tonics, massage, and faradism. Recently the use of the suprarenal gland had been begun; it was spread directly upon the part; it had also been given internally in powder in five-grain doses every two hours. No marked effect had been noticed from its use in the treatment of diphtheria.

Cocaine in operations upon the lower extremities may be used as a partial anæsthetic by injecting 1–2 cgm. into the lumbar subarachnoid space. Quincke, Sichard, Bier, Seldowitsch, and Tuffier have employed the method. Tuffier has operated with success in ankylosis of the knee, pelvic suppuration, and vaginal hysterectomy.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 14, 1900.

EUGENE HODENPYL, M.D., PRESIDENT.

Thrombosis of the Pulmonary Artery; Sudden Death.—DR. J. H. LARKIN presented specimens from a man thirty-five years of age, who had given a history of syphilis and of repeated attacks of gonorrhœa. The man had entered St. Francis' Hospital about two weeks ago complaining of difficult and painful urination. Examination showed a stricture at a depth of four inches, and another in the membranous urethra. There was also some enlargement of the prostate. The next day perineal section had been done. The patient had done well for four days, and then on attempting to irrigate the bladder with hot saline solution the man suddenly became cyanotic, complained of intense pain in the chest and of dyspnœa, and in a moment was dead. At the autopsy, having in mind the clinical diagnosis, the lungs and heart were exposed *in situ*. On opening the pulmonary artery a thrombus of large size had been found. The portion extending into the right ventricle was rounded, showing that this part had slipped down into the ventricle after having formed higher up.

Fat Embolism of the Pulmonary Artery; Sudden Death.—Dr. Larkin exhibited specimens and photographs of this case. The patient, a man aged thirty-six years, had fallen from his bicycle and injured the right hip. Examination had shown fracture of the greater trochanter of the femur and impaction of the neck. For the first few days temporary wooden splints had been used, and then a plaster spica bandage had been applied. A day or two after the man had suddenly experienced severe pain in the chest, and this had been associated with nausea and feeble heart action. He had recovered from this attack of syncope, and had done well until about one week later, when there had been another attack similar to the first one except that it had terminated fatally. The autopsy had been performed by Dr. Norris and himself. The viscera had appeared normal. Having in mind fat embolism, portions of the viscera were taken, and stained with osmic acid. In all the branches of the pulmonary artery, both the smaller capillaries and the medium-sized vessels, were found accumulations ot fat globules and thrombi. It was noted at the time that the lungs were not so œdematous as had been observed in other cases of fat embolism. The microscopical appearances seemed to leave little doubt regarding the correctness of the diagnosis of fat embolism. The fractured femur was also exhibited. At the time of the autopsy the bone had been found riddled with hemorrhages.

DR. NORRIS said that fat embolism of the pulmonary artery was very common after fractures. One observer had found, in a large series of autopsies, that there had been some fat embolism in ten per cent. of the cases. The first attack had been quite mild in the case reported, and the man had soon recovered from it. The fact that this had come on twenty-four hours after changing the dressing made it probable that the moving of the parts had been the immediate cause of the embolism. It was difficult to explain the second attack. Respiration ceased two or three minutes before the heart stopped beating, which would point rather to an affection of the blood-vessels supplying the respiratory centre.

Cystic Degeneration of the Kidneys with Cysts of the Liver.—DR. L. A. CONNER presented specimens from a woman who had died at the New York Hospital last December. She was admitted on December 26, 1899. She was forty-four years of age. Her family and earlier personal history was unimportant. She had felt "tired" for several months. For the past six weeks she had been very weak. There was some dyspnœa on exertion. The urine had a bad odor. There were no œdema, no lumbar pain, and no hæmaturia. On admission, her temperature was 97.8° F.; respiration, 32; pulse, 106. Physical examination revealed a tumor mass in the region of the left kidney and little else besides feeble heart action. The urine had a specific gravity of 1.011; it was acid, turbid, and contained 1 gm. of albumin to the litre, much pus, few red cells, and no tubercle bacilli. The patient grew steadily weaker, became stuporous, and died three days later.

At the autopsy, the heart showed moderate hypertrophy of the left ventricle—its weight was 320 gm. The heart muscle was rather soft and light colored. The valves were competent. The coronary arteries showed a somewhat anomalous distribution. The left kidney measured 19 × 8 × 6 cm., and weighed 686 gm.; the right kidney measured 15.5 × 9.5 × 7.5 cm., and weighed 472 gm. The kidneys preserved in general their usual shape, but owing to the many projecting cysts their surfaces presented somewhat the appearance of a bunch of grapes. On section both organs were seen to be composed chiefly of a multitude of cysts, which varied in diameter from 1 mm. to 2.5 cm. They were most abundant in the peripheral parts. The usual topography of the kidneys was entirely lost, and in only a few places could anything resembling kidney tissue be recognized. Several of the large cyst cavities in each kidney contained thick grumous pus. In the remaining cysts material of two fairly distinct types was seen: (1) A number of large cysts contained thick, brown, gelatinous material, which became very firm by preservation in formalin. (2) Most of the smaller cysts and some of the large ones contained a thin, whitish, transparent, gelatinous fluid, which seemed to be little changed by the formalin. The pelves of the kidneys were small, and seemed compressed by the cystic kidney tissue. The ureters and renal vessels appeared normal. The bladder contained purulent urine, with mucous membrane. The liver was somewhat irregular in outline. The right lobe was prolonged downward, and was somewhat constricted at one point. It weighed 1,770 gm. Scattered over the surface of the liver everywhere and projecting slightly above the surface were seen many small cysts from 2 to 10 mm. in diameter. On section of the organ these cysts were seen scattered throughout, being separated by normal-looking liver tissue. The cysts as compared to the liver tissue made up a comparatively small part of the volume of the organ. A part of the anterior margin of the right lobe was lighter in color, tougher, and evidently contained much more fibrous tissue than did the rest of the liver. In this part the cysts were especially numerous. The left ovary was 5 cm. in diameter, and consisted chiefly of a number of good-sized clear cysts. Microscopical examination of the kidneys showed the cysts to be lined by a single layer of cuboidal epithelial cells, and to bear a very close relation to the uriniferous tubules, and sometimes to the Malpighian bodies. Between the cysts in many places areas of much-damaged renal tissue could be seen. In the liver, in the same way, the cysts could be seen in process of development from the small gall ducts.

Dr. Conner said that Ritchie,[1] of Edinburgh, after a thorough study of the subject, had drawn the following very reasonable conclusions: (1) That in cystic kidney there was an irritative lesion leading to proliferation of epithelium and also to connective-tissue changes. There was evidence of it in simple cysts, in those which occurred in contracting kidneys, but to a much greater degree in the large polycystic kidney. (2) That in the large polycystic kidney, as in cystic disease of the mamma, the disease arose in consequence of irritation propagated through the nervous system; (4) that this disease of the kidney had no direct relation to congenital cystic kidney, which was due to an error in development; (5) that the cysts were formed from the pre-existing tubules and Malpighian bodies of the kidney, and that they were not a new formation arising out of persistent embryonic rudiments; (6) that this cystic disease was related to and should be studied along with the adenomata; (7) that cystic kidney was similar in character and in origin to cystic liver. Continuing, the speaker said that a number of other writers had concluded that this condition had nothing to do with congenital cystic kidney, and that it should be classed along with the adenomata. It had been suggested that they should be called multilocular adeno-cystomata. Ritchie had tabulated eighty-eight cases, in twenty-one of which it had been associated with cystic liver, in two with cystic ovary, in one with cystic uterus, and in one with cystic thyroid. In all but two cases both kidneys had been involved. Hypertrophy of the heart had been noted in twenty-nine out of thirty-nine cases. The average age was forty-five years, the youngest patient being twenty-three and the oldest eighty-eight years. As to sex, there were slightly more males than females. In three cases the symptoms had existed for over fifteen years; in seventeen for over one year. Thirty out of seventy-eight had given some renal symptoms, such as pain, hæmaturia, and œdema. Of the seventy-two cases, thirty-eight patients died with symptoms of uræmic coma, and eight of cerebral hemorrhage. The microscope had shown in the kidney islands of greatly damaged renal tissue between the cysts, and the cysts themselves bore close relation to the uriniferous tubules and sometimes to the Malpighian bodies. In the liver, the close relation to the small gall ducts was evident.

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[1] Reports of Laboratory of the Royal College of Physicians, Edinburgh, vol. iv., 1894.

Dr. E. Hodenpyl said he was very much astonished at the citations made by the last speaker, for it seemed to him that it had been quite generally accepted that such kidneys as these were of congenital origin. He had seen the condition a number of times in the newly born, and the specimen just presented reminded him forcibly of a similar one that he had shown to this society a year or two ago. He saw no reason for calling these cysts tumors. From the fact that children were born with these it seemed reasonable to look upon them as congenital.

Dr. James Ewing said he had been surprised at the statements quoted from Ritchie, and he would like to know more regarding the grounds upon which these cysts were declared to be tumors. He would like to know what was the character of the lining of these cysts. The kidneys just presented seemed to exhibit much more of the renal tissue than in the cases he had seen in the newly born.

Dr. Conner replied that cases of congenital cystic kidney resulted fatally after a comparatively short time, and, so far as he knew, the condition had not been traced from early infancy into adult life. Ritchie and others had found many evidences of tumor formation, and had given their reasoning in detail. The cysts in this case had been lined with cuboidal epithelium.

A Case of Perforated Ulcer of the Duodenum.—Dr. A. J. Lartigau presented a specimen of perforated duodenal ulcer. The specimen was from a man sixty-four years of age, who had entered the Roosevelt Hospital on January 17th complaining of pain in the right iliac fossa. One week previously he had been taken ill with pain in the region of the umbilicus. On admission, the diagnosis had been made of general peritonitis, probably from perforation of the appendix. When the peritoneal cavity was opened a large quantity of thin fetid pus had escaped, and the intestine and appendix in that region had been found normal. Further search had revealed the presence of a perforation of the bowel, and of adhesions to the liver. The operation had not been pursued further, and the man had died eight days afterward. The autopsy had been made five hours after death, and the anatomical diagnosis had been purulent peritonitis, chronic diffuse nephritis, and miliary tuberculosis of the lungs, spleen, and ileum. The duodenum was adherent to the under surface of the right lobe of the liver. The duodenal ulcer was unusually large, measuring 3 by 2 cm. As a rule, the pancreas was the protecting barrier, but in this instance the liver had formed the protecting wall. The microscopical appearance of the ulcer was similar to that of the ordinary round ulcer of the stomach.

Dr. J. H. Larkin presented a specimen of perforated duodenal ulcer taken from a man twenty-eight years old, who had been ill three days before coming to hospital. His condition at that time had been very bad, but an operation had been immediately undertaken. An extensive peritonitis had been found, and the peritoneal cavity contained much fetid pus. The appendix was normal. The perforation had been found at the site of a small ulcer in the posterior wall of the duodenum.

Dr. Lartigau remarked that while these ulcers were usually circular, the one he had presented was oval. Most of the duodenal ulcers closely hugged the pylorus, as in both these specimens.

Microscopical Demonstration of "Vaccine Bodies."—Dr. A. W. Williams gave this demonstration. She said that the principal point of interest in regard to the so-called "vaccine bodies" was that their nature had not yet been determined. Most observers, among them L. and E. Pfeiffer, Guarnieri, von Wasielewski, von Sicherer, and Kourloff, considered them microorganisms, placing them among the rhizopoda in the group Sarcodina of the protozoa, and basing their belief upon the facts that in the fresh tissue they showed amœboid movements, that some possessed a more refractive central spot (nucleus) and showed evidences of division by fission, that they had been found in no other disease, and that they could be accounted for in no other way. On the other hand, Ferroni and Massari, Salmon, Hückel, and others said that these appearances were due to products of a degeneration, either intra-cellular, proceeding, as some said, from the nucleus of the epithelial cells, others from the epithelial cell body—the centrosome perhaps; or extra-cellular, from the leucocytes, the epithelial cells then taking up the degenerated particles. Such degeneration, they stated, was probably specific, and might be produced by an unknown microorganism. The specimens under the microscope were a section from a rabbit's cornea, hardened forty-eight hours after inoculation with vaccine virus, and one from an isolated vaccine vesicle on the skin of a calf six days after inoculation. The section from the cornea was hardened in bichloride of mercury and stained by Heidenhain's method. The portion under the microscope showed the edge of the area of inoculation. Immediately about the point of inoculation the epithelial cells had fallen off, leaving only the lower layers of epithelium. The vaccine bodies lying, one or two generally, sometimes more, in the body of the epithelial cell, were stained a more or less homogeneous brown-black; the bodies of the epithelial cells were a light yellow, and their nuclei were an irregular faint gray. The specimen of calf-skin was hardened in absolute alcohol and stained with hæmatoxylin (Delafield's) and eosin. In the field under the microscope was a sebaceous gland in which the bodies showed more plainly on account of the large size of the epithelial cells. The vaccine bodies were here stained a more or less homogeneous purple, the nuclei of the epithelial cells a darker irregular purple, and their bodies a light pink. The nuclei of the leucocytes which were present in moderate numbers about the gland, and occasionally within it between the epithelial cells, were stained also a dark purple.

A Case of Trichinosis.—Dr. Harlow Brooks reported this case from the fourth medical division of Bellevue Hospital, in the service of Dr. Lambert. After eating sausage a man had begun to complain of malaise and muscular soreness. Microscopical examination of several sections from his muscles had showed a myositis, but no trichinæ. Subsequently a large piece of muscle had been excised under cocaine anæsthesia from the junction of the belly of the biceps muscle with its tendon. From this specimen one trichina had been found about to become encapsulated. The fæces had been carefully examined, but no trichinæ were found. There had been 18,000 leucocytes and ten per cent. of eosinophiles at the time of his admission to hospital on February 2d. On February 12th he had had forty-four per cent. of eosinophiles and a proportionate leucocytosis. The percentage of eosinophiles had steadily increased up to a maximum of eighty-three per cent., and then had slowly declined. At the present time the percentage of eosinophiles was fifteen per cent. It had seemed to him that these eosinophiles differed somewhat from the cells ordinarily called by this name. They were possibly a transition form.

Dr. Lartigau said that he had recently had occasion to examine specimens of blood from various cases of a small epidemic of trichinosis investigated by Dr. George Blumer, of Albany, N. Y. The percentage of eosinophiles in none of these cases had been so high as that just reported. As recovery had taken place the eosinophilia had declined; at the end of two months, Dr. Blumer found these cells still increased in number although much diminished. In many but not all cases, a decrease in the small mononuclears was observed. It was worthy of note that some of the severest cases did not necessarily correspond with the degree of eosinophilia, some of the mild cases showing a greater increase than the clinically more severe cases.

Dr. Ewing said that the case reported by Dr. Brooks gave the highest percentage of eosinophiles on record. In this connection he would refer to the possible aid to diagnosis afforded by the increase in the percentage of eosinophiles. A marked increase in these cells might furnish grounds for suspecting trichinosis, but nothing more than this except when it was associated with an exudative myositis. When this combination was present, one was justified in making a diagnosis of trichinosis. He had carefully examined the eosinophile granules in this case, and had found that many of them were smaller than the usual type, but reacted alike with staining-agents. He had been unable to find any evidence that they were transition forms between eosinophiles and neutrophile granules. If there was a transition here, it was probably between the eosinophile and basophile granules. The case was exceedingly interesting because of the influence which a parasite like the trichina seemed to have upon the eosinophile cells.

Dr. Lartigau remarked that notwithstanding the fact that the eosinophilia might be attributed to a number of different causes, he regarded a marked increase in the eosinophiles as extremely suggestive of trichinosis. He knew of several unpublished sporadic cases in which the diagnosis had been made wholly by the differential blood count, and subsequently verified by the finding of the trichinæ.

A Case of Chylous Urine and Filaria Sanguinis Hominis.—Dr. M. Nicoll, Jr., reported this case, and presented the patient, a young man aged nineteen years, a native of Santa Cruz. Six months ago, without previous symptoms, he had begun to pass creamy urine. After passing this daily for two months, he had noted that the urine was pinkish, and then that there was a momentary retention, relieved by the passage of a small clot of blood. For the past four months he had had in the left groin varicose glands, which gave rise to an appearance resembling a hernia. The urine was now pink and creamy, and contained fat cells. He had been unable to detect the filaria in the urine, though they were probably present. Dr. Nicoll also exhibited under the microscope the embryonal filaria—the variety found in the blood.

A Case of Solitary Tubercle of the Heart.—Dr. E. Dunham reported this case, which occurred in a person aged twenty-one years, in the service of Dr. John W. Brannan at Bellevue Hospital. There was a solitary tubercle about the size of a pea on the inner surface of the wall of the left auricle, just beneath the endocardium. There were a miliary tuberculosis in the lungs, several large tubercles in the brain, and a solitary tubercle in one of the kidneys. It was rather difficult to explain the occurrence of the solitary tubercle immediately underneath the endocardium in the auricle. A number of sections had been made and examined, and in every one it had been possible to demonstrate from one to six tubercle bacilli, all within giant cells.

Dr. Hodenpyl remarked that there were on record a number of similar cases of solitary tubercle of the heart.

A Case of Aberrant Suprarenal Body with Pachymeningitis Hæmorrhagica Interna.—Dr. F. C. Wood reported this case; also a case of aneurism of the aorta with unusual lesions of the lung, and a case of tuberculosis with multiple sarcomatosis.

Notes on the Preparation of Hæmatoxylin Staining-Solutions, and on the Technique of Staining.—Dr. George C. Freeborn read a paper on this subject, based on personal observation and study in the laboratory.

Dr. Brooks asked if Dr. Freeborn found that the acid in the acid eosin injured the clearness of the hæmatoxylin stain.

Dr. Freeborn replied that if the precipitated eosin was washed until the wash-water became tinged, one could be sure that all of the acid had been removed. He had never known it to interfere with the hæmatoxylin stain at all.

Dr. Brooks asked if the sections could be left for a long time in the eosin oil without their over-staining.

Dr. Freeborn replied that he had left them in as long as ten days, and had not been able to observe any detriment from so doing.

Dr. Ewing said that for the last six months he had tried all the purified eosins he could find in the market, yet he had not been able to make a good blood preparation with any of them. In order to get a good selective stain for blood he was sure it was necessary to improve on the ordinary eosins now on the market.

Dr. Freeborn said that the eosin employed by him had been procured from Grubler, and was known as "water-soluble eosin." The acid was added until a precipitate no longer formed. He had not tried the effect of using an excess of the acid.

Persistent Vomiting.—Iced towels to the epigastrium, changed every minute.—Mitchell.

Otorrhœa.—Injections of a two-per-cent. solution of formalin.—Cipriani.

Progress of Medical Science.

Journal of the American Medical Ass'n, May 12, 1900.

Notification and State Supervision of the Tuberculous.—Joseph Matteson says that while he shares in the general recognition of the value of instruction of the people in the danger of the dissemination of tuberculosis by the sputum of the consumptive, and in the method of disposal or disinfection by which this danger may be minimized, he believes that in spite of the agitation for State preventive measures there exists in the mass of the medical profession a strong if quiet opposition to any radical steps in State interference with the tuberculous, and that it is based on (1) an underlying belief that there is a variance between the infectiousness of tuberculosis predicated on scientific experiment and deduction, and the actual, every-day facts of common observation; (2) on the instinctive recoil of reason and humanity at the difficulties and hardships of the progressive measures which are the logical sequences of the first step; (3) on the evidence we have that tuberculosis in man is to be decreased by increasing vital resistance, discouraging marriages of tuberculous persons, and improving general and individual sanitary environment and living.

The Use of Adrenal Substance in the Treatment of Asthma.—Solomon Solis-Cohen reports a case of distressing asthma which failed to yield to all treatment until adrenal substance was used. Burroughs & Wellcome's tablets, gr. v. each, were prescribed once, then twice, then three times, daily, and finally the patient for a time took gr. xc. daily. A striking improvement shortly became manifest. The constant dyspnœa first appeared, then the paroxysmal nocturnal attacks became less frequent and less severe. Recovery was not rapid but was continuous. The author believes that in cases which are really spasmodic, that is, due to contraction of the bronchial muscles, the remedy is without good effect and is perhaps capable of bad influence. But it is of use when the paroxysm is but one other manifestation of a congenital fault of structure or of metabolism, affecting the vasomotor system, and thus permitting the cardio-vascular balance, and especially the tonicity of the blood-vessels to be readily overturned by exciting causes which would have but slight effect on other individuals.

The Tenements and Tuberculosis.—S. A. Knopf believes that the conditions most conducive to the propagation of tuberculosis, and especially of pulmonary consumption, are those that prevail in the old-fashioned tenement-houses as they still exist by the thousand in this and other large cities. Not only is there a greater number of consumptives in these tenements than in the same area elsewhere, but the proportion is actually greater per number of inhabitants. The author urges the building of model tenements, in which with plenty of light and air, perfect ventilation in all rooms, complete sanitary arrangements, and the absence of filth, dirt, and sickening odors, consumptives will have a chance of being cured, and the further spread of the disease will be checked. Invalids should also be instructed as to the precautions to be taken in regard to disinfection of the sputum.

Instrument for Use in Phototherapy.—J. W. Kime has devised and is using, in the treatment of cases by means of concentrated light, a reflector which produces a light equal in intensity to twenty times that of direct sunlight and covering an area of twenty-eight square inches. Concentrated light is useful in the treatment of diseases of parasitic origin, strong light being very destructive to bacteria. In tuberculosis of the lungs in its earlier stages, it has some germicidal influence on the bacilli; moreover, the blood, every drop of which passes a number of times through the area bathed in the powerful light during each treatment, is without doubt beneficially influenced by the chemical action of the light upon it. In the treatment of chronic joint affection, it has over the apparatus in which high temperatures alone play a part, the additional advantage of the beneficial action of the powerful light.

The Influence of High Altitude on Albuminuria.—Edward C. Hill says that in his experience true renal albuminuria is comparatively rare in Colorado, this state of affairs being probably chiefly due to atmospheric dryness and rarity, both of which favor the eliminative action of the lungs and skin, and thus relieve the kidneys in a corresponding degree. Acute nephritis, though not common, is exceptionally severe. Amyloid disease is less frequent under predisposing circumstances than text-books would lead us to infer. Chronic parenchymatous nephritis appears to terminate fatally in about the same time as at lower altitudes. The chronic interstitial type of the disease is influenced favorably by the tonic, invigorating qualities of the climate. Renal tuberculosis is comparatively common. Serious eclampsia is less common than at lower levels.

Hair and its Anomalies.—Henry Alfred Robbins writes of the importance attributed to long and flowing locks in ancient times, of hirsuties, of sudden whitening of the hair under the influence of shock, terror, or grief, and of the opposite condition of white hair suddenly turning black. In regard to alopecia, he mentions the many varying theories held in regard to its causation. The latest opinions appear to be that it is due to the action of micro-organisms. R. Sabouraud by his experiments has given convincing proof that the microbacillus is the constant microbian expression of seborrhœic infection, causing baldness.

Traumatic Perforation of the Membrana Tympani.—By Francis R. Packard.

Etiological Studies on Neuroses of Peripheral Origin.—By H. Gradle.

New York Medical Journal, May 12, 1900.

The Technique of Lumbar Puncture.—In discussing the special point as to the preferable site for puncture, L. A. Connor states that the needle should find ready access to the sub-arachnoid space, that the tapping should be made at the point least likely to admit of damage to the nervous structures of the canal, and that the fluid should be as rich in sediment as possible. As regards the first requirement, it may be said that this is sufficiently well met by entrance through any of the lumbar spaces or through the lumbo-sacral space. Possible injury to the cord can be excluded by entering at some point below the third lumbar vertebra. In adults it is perfectly safe to puncture between the second and third vertebræ, but in small children there is some chance that the cord may be touched. The last requirement, that of obtaining fluid richest in sediment, is best fulfilled by tapping in the lumbo-sacral space. If the puncture is made for purposes of diagnosis, then it seems best to enter the lumbo-sacral space and to have the patient, if a child, in the sitting position. With adults, and especially with those who are delirious or comatose, or who are greatly prostrated, the difficulties of operating in the erect position are so great as to render it impracticable. Puncture in the upright position should then, in general, be confined to small children.

General Remarks on the Pathology and Treatment of Stricture of the Urethra.—C. G. Cumston gives in the two articles the second of which appears in the present issue, a general review of the subject, though nothing especially new is presented. To render the genito-urinary apparatus antiseptic, he advises reliance first upon urotropin, then tincture of eucalyptus and salol in large doses. For local use, he prefers iodoform, citrate of silver, and cyanide of mercury. The orifice of the urethra must be carefully disinfected before instrumentation, and for this purpose he advises soap and water freely, then alcohol, and afterward an antiseptic solution.

The Treatment of Hay Fever by Suprarenal Gland.—B. Douglas commends both the local and internal use of this remedy. A six-per-cent. solution may be sprayed into the nose every two hours until the symptoms are controlled. Internally, gr. v. of the saccharated extract are given every two hours until some giddiness or palpitation is observed, or until the vasomotor paralysis in the nose is brought under control. Then the dose should be diminished, though the remedy should be continued until the hay-fever season is safely passed. Douglas regards the remedy as almost a specific for the disease.

Another Case of Typhoid Infection without Intestinal Lesions, with Possible Widal Reaction.—W. Ophüls reports the case of a man of twenty-four years, who died in spite of all remedial measures employed. Widal reaction was positive, but no changes visible to the naked eye were found in the intestine, and Peyer's patches were distinctly normal. Reference is made to other similar cases already on record, and a bibliography of this special topic of typhoid literature closes the paper.

The Kyphotone or Modified Plaster Jacket Stool for the Correction of Humpback.—By R. T. Taylor.

Philadelphia Medical Journal, May 12, 1900.

Remarks to the General Practitioner Regarding the Pessary.—Frank C. Hammond says that before a pessary is inserted into the vagina one must be certain that a displacement exists. This fact being ascertained, the indications and contraindications for the employment of a pessary may be stated to be as follows: (1) All inflammation must be allayed. If there be a metritis, parametritis, perimetritis, vaginitis, salpingitis, or ovaritis, the presence of a pessary would be so painful as to contraindicate its employment. Inflammation may be overcome by local tamponade, and the consistent use of the hot douche. (2) All adhesions must be "broken up" to permit the fundus to be replaced to its normal position. (3) If a tumor is the cause of the displacement the downward force will be greater than any pessary can counteract, hence the neoplasm must be removed. (4) By laceration, subinvolution, or other cause, the pelvic floor may be so relaxed that it will fail to give a pessary the necessary support. This is a very important point, as too often patients wearing a pessary are seen with the pelvic floor so badly lacerated that it fails to support the instrument, hence they receive no benefits from its employment. The pessary, when so strongly condemned, often has been used in those cases which distinctly contraindicate its employment.

Relation of Diseases of the Nose and Throat to Life Expectancy.—E. Fletcher Ingals says that very few life insurance companies require their physicians to ask any questions regarding affections of the nose and throat, and he thinks that less than three out of a hundred persons examined for life insurance are subjected to any examination of the air passages. He says that usually examinations of the nose and throat would not aid the life-insurance examiner, but in a limited number of applicants a thorough examination of these parts would enable him to reject persons otherwise acceptable, who within one or two years will develop diseases that very greatly shorten their expectancy. Such examinations should therefore, he holds, be made whenever the hereditary or personal history, the general appearance, or a quick pulse leads the examiner to suspect the beginning of pulmonary or cardiac disease.

Alarming Hemorrhage Controlled by Hæmostatic Forceps Left on the Vessel.—Wounds of the Femoral Vein Controlled by Means of Hæmostatic Forceps.—Gangrenous Omental Hernia with Practically No Constitutional Symptoms.—Amputation of all the Toes of Both Feet for Dry Gangrene.—Removal of 280 Grains of White Wax from the Male Urinary Bladder.—By Orville Horwitz.

Pruritus Ani, with Especial Reference to its Local Treatment.—By Lewis H. Adler, Jr.

Mütter Lectures of the College of Physicians of Philadelphia.—By John B. Roberts.

Intestinal Indigestion and its Consequences.—By William Henry Porter.

Scarlatina Miliaris.—By J. P. Crozer Griffith.

The Lancet, May 5, 1900.

Remarks on Vasectomy Relative to Enlarged Prostate and Bladder Atony.—R. Harrison concludes: (1) That vasectomy has been shown to be specially effectual in the earlier stages of prostatic hypertrophy in producing shrinkage of the gland and the restoration of the natural process of micturition; (2) that in cases in which there is evidence to show that the prostate has in the course of degeneration assumed the form and structure of a fibrous growth the conditions are such, provided the symptoms of obstruction warrant the adoption of other measures than catheterism, as to render some form of prostatectomy preferable to either vasectomy or castration; (3) that when as a consequence of sudden or protracted prostatic obstruction secondary changes have taken place in the bladder itself, in the form of sacs, pouches, or trabeculation, the possibility of restoring its natural function by any means is extremely unlikely. Under such circumstances the induction of shrinkage of the enlarged gland will do good in affording a readier access for the catheter and in removing spasm, pain, or hemorrhage connected with this or other similar process.

The Causes and Treatment of Movable Kidney.—C. M. Moullin calls attention to the fact that the kidneys are normally movable organs. He confines his remarks to those cases in which the kidney fails to re-ascend on tranquil expiration when the patient is standing upright and has driven the kidney as low down as he can by forced inspiration. Causes of nephroptosis include tearing or stretching of the bands of connective tissue which run through the fat surrounding the kidney, and the relative displacement of neighboring organs which, packed in around the kidneys, keep them in proper position. They are situated in a relatively unprotected position in the abdomen, and any sudden pressure, violent movement, or lowering of intra-abdominal pressure can displace them. The choice in treatment lies between wearing an abdominal belt and nephrorrhaphy.

Three Cases of Surgical Interest.—The cases reported by T. F. Gardner are as follows: (1) Amputation for scirrhus of the breast in a woman over eighty-two years of age. The lump was first noticed two years previously. The patient did well, and there had been no recurrence in nearly two years. (2) Ruptured pyosalpinx complicated by fibroid tumor of the uterus, abdominal section, hysterectomy; recovery. (3) Trephining for threatened cerebral abscess; symptoms of meningitis; arrest and recovery.

The Effect of Alcohol on the Human Brain.—V. Horsley traces the effect of alcohol upon the finer nerve elements, and does not believe in the view so often advanced that small doses of alcohol such as people take at meals in the form of wines, etc., are harmless. He believes that from a scientific standpoint total abstinence must be the only course in view of the teaching of both truth and common sense.

Colonial Practitioners and the Public.—Presidential address at the annual meeting of the New Zealand branch of the British Medical Association, by W. Thomas.

Then and Now; or the Influence of Modern Surgery upon Medical Practice.—Hunterian oration by F. J. Smith.

Epidemiology of the Plague.—By F. Pearse.

British Medical Journal, May 5, 1900.

Secondary Suture of the Brachial Plexus. — William Thornburn reports upon a case of complete rupture of the brachial plexus, in which for the first time suture was effected a long time after the injury. Seven months after an accident by machinery a girl aged sixteen years presented paralysis of the arm, which was much wasted, and there was absolute anæsthesia. An hysterical monoplegia was the only condition which could confuse. In operating a long incision was made in the posterior triangle of the neck parallel to and just in front of the trapezius; the clavicle was divided and the cervical vessels were held back with retractors. An irregular cicatricial mass represented the plexus, which was dissected out as a tense cord two inches long and three-quarters of an inch thick. After suturing the ends wound healing took place by first intention. Feeble though recognizable motion of all muscles returned with muscular sense and localization.

Treatment of Lupus by the X-Rays.—R. E. Scholefield presents, with special plate showing lupus of the nose in various stages of the cure, an account of how the rays were applied. The results were such as to make the author wonder whether the rays from the tube might not have the same effect as the photo-chemical rays of the solar spectrum employed by Finsen. He suggests that if dermal tuberculosis may thus be cured by concentrated sun- or *x*-rays, why not pulmonary?

The So-Called "Stave of Thumb," or Bennett's Fracture.—G. T. Beatson refers to Bennett's statement that when fracture occurs in the metacarpal bone of the right thumb, this is not "just above the middle," but at the base of the bone. He relates a case seen sixteen days after the accident, when crepitus was still thought to be detected. All supposed sprains of the right thumb should be subjected to *x*-ray investigation, as the fracture is liable to be overlooked.

Fracture of the Carpal Scaphoid. Sir William Stokes says that without the *x*-ray no surgeon can form a true estimate of many osseous lesions. He gives, with special plate illustration, an instance of the comparatively rare lesion of carpal scaphoid fracture sustained in falling twenty-one feet through an elevator shaft. In Dublin only two cases have been noted. The diagnosis could not have been made without the aid of the Roentgen rays.

A Case of Fracture Dislocation of the Spine.—Ashley W. Mackintosh reports a case in which there was complete destruction of the cord in the upper lumbar region. A synopsis of the case is given, with drawings illustrating the lesions and areas of total anæsthesia.

An Example of the Use of the X-Rays in the Examination of Enlarged Metatarso-Phalangeal Joints.—By G. H. Rodman.

The Therapeutic Value of the X-Rays in Medicine.—By Edouard Schiff.

Deutsche medicinische Wochenschrift, April 26, 1900.

The Pathology of Bronchial Asthma.—A. Fraenkel discusses the view held by Curschmann, that most instances of bronchial asthma have underlying the condition a particular form of catarrhal affection known as "bronchiolitis exudativa," and which Curschmann believes is a disease *sui generis*. He also goes into the question of the presence of Curschmann's spirals in asthmatic catarrh. Two fatal cases have proven correct his former belief that the anatomical findings in the lumen of the bronchi are not always the same. There exists, however, a bond of union between them all in the abundant epithelial desquamation.

Clinical Observations upon Excretion of Ammonia by the Urine.—L. Michaelis says that the previously recognized causative factors in the increase of ammonia in the urine under certain pathological conditions can be placed in four categories, which he goes on to describe. He then enumerates a number of clinical conditions in which he has found a relatively large ammonia loss in the urine.

A Contribution to Physical Therapy.—By Professor Goldscheider.

On the Technique of Abdominal and Pleural Puncture.—By H. Hellendall.

On the Treatment of Obesity (Concluded).—By W. Ebstein.

Berliner klinische Wochenschrift, April 23, 1900.

The Treatment of Nævus and Associated Congenital Vascular Formations.—E. Holländer warmly advocates the method of hot-air cauterization. Instead of the frequent and painful cautery punctures, the operation can be done at one sitting. There is no hemorrhage, so that the blood in the diseased area is not abstracted from the body. The cicatrix is a good one, and from its slight extent is hardly perceptible. Finally the method is applicable to all surfaces, even those in cavities. It is contraindicated especially at subcutaneous sites in which a total capillary substitution has occurred, and when extirpation offers a more speedy result. The technique of the procedure is described.

The Nutrition and Diseases of Nurslings.—A. Baginsky gives a general review of the vast progress made during the present century in our conceptions of the matter of infant feeding, and discusses the relative nutritive values of mother's and cow's milk. He shows the relation of improved feeding to general hygiene, and believes that it is possible largely to eradicate, by care in this respect, many of the affections of the mouth, skin, ear, etc., which arise from neglect in feeding and in hygienic management.

Weather, Duration of Sunshine, and Infectious Diseases.—J. Ruhemann gives some meteorological statistics for Berlin, showing that during the period of most sunshine the amount of contagious disease is the least.

The Plague in the Light of Latest Researches.—By P. Frosch.

French Journals.

Researches upon the Semeiological Value of the Toe Reflexes.—H. Verger and J. Abadie discuss the Babinski phenomenon in its varied relations and also the antagonistic reflex of Schäfer. They study the toe reflex in the normal state and in pathological conditions, and conclude that the sign is of delicate execution and open to many sources of error; it is frequently seen in lesions of the pyramidal tracts, but is too variable to constitute a symptom of the first order. It cannot be compared to the epileptoid trepidation of the foot or patella. The antagonistic reflex of Schäfer has no semeiological value as a sign of cerebral lesion. Schäfer's manœuvre produces an effect of its own independent of cutaneous excitation. This effect consists in flexure of the toes in the normal as well as in the pathological state. In cases of reflex hyperexcitability the effects of excitation of the skin are felt before those from pinching the tendon, and Schäfer's manœuvre can cause only extension of the toes; but there is no question of antagonistic reflex.—*Le Progrès Médical*, April 28, 1900.

Early Diagnosis of Madness in the Biting Dog.—V. Babes refers to his previous writings upon accumulated embryonal cells in the region of the central canal and the possibility of making a rapid diagnosis of rabies by examination of the bulb of a biting dog. Out of a large number of examinations of bulbs from dogs dead from all causes, sent to the author by the veterinary school, he has always been able to pick out those whose death was due to rabies. Out of four hundred and eighty-seven cases he has never declared a dog mad which was not shown to be so. He discusses Van Gehuchten's views and method, and calls upon antirabic institutes to test the two methods of rapid diagnosis and compare them.—*La Presse Medicale*, April 25, 1900.

Pulmonary Gangrene after Gastro-Entero-Anastomosis for Cancer.—J. J. Peyrot and G. Milian report the case of a woman aged fifty-seven years operated on by Souligoux according to his own method for gastro-entero-anostomosis. On the tenth day, after moderate fever, slight signs of lung implication, pleurisy with slight effusion, fetid breath, etc., there were sudden tearing pain in the right chest, dyspnœa, cyanosis, and rapidly following death. At the autopsy gangrene was found, supposed to be due to septic embolism from the gastric ulceration. This is looked upon as one of the causes of the high death rate after stomach operations.—*La Presse Médicale*, April 25, 1900.

Migratory Abscess becoming Autonomic.—H. Morestin speaks of certain abscesses in Pott's disease which become isolated from the primary lesion, or shut off in such a way as to be readily cured. The prognosis in this case is very different from the majority in which connection with the bony necrosis still persists. Two typical examples are cited. One variety of abscess may continue to increase, the other to grow smaller with atrophying walls and hardening contents.—*Gazette des Hôpitaux*, April 19, 1900.

Treatment and Prophylaxis of Gonorrhœa.—Claudio Fermi thinks we should possess some short, efficacious, painless treatment capable of warding off complications. He recommends a bulb syringe filled with 100 or 200 c.c. of permanganate solution 1 : 200, nitrate of silver 1 : 500, protargol 1 : 500, or ichthyol 1 : 200, to be carried in a metallic box and the solution to be squirted into the canal and sucked out again at frequent intervals during the day.—*Gazette des Hôpitaux*, May 1, 1900.

Tetanus.—Ch. Dopter gives a clinical and therapeutic study with symptomatology, prophylaxis, orrhotherapeutic and other forms of treatment. Only the cases observed from the beginning are suitable for intracerebral orrhotherapy. Splanchnic tetanus is excluded by reason of its fatal outcome and subacute motor tetanus, which carries off its victim in two or three days.—*Gazette des Hôpitaux*, April 28, 1900.

Annals of Surgery, May, 1900.

Report of a Case of Recovery after Ligation of the First Part of the Right Subclavian Artery for Aneurism of the Third Portion.—A. E. Halsted reports this case, occurring in a man aged sixty-three years. He believes that it is the second case of recovery on record. He regards the following points as worthy of consideration: (1) The aneurism involved the entire third portion of the subclavian and encroached slightly upon the second portion, so that the only rational method of treatment was ligation of the first part. (2) The subclavian vein was found above the artery throughout its whole course. Owing to this position of the vein, it was torn while efforts were made to retract it downward so as to reach the artery external to the internal jugular. As a result of this accident, a considerable amount of time was consumed before the hemorrhage could be controlled by lateral ligation of the vein; and (3) the anomalous origin of the right subclavian and the unusual depth of this vessel were for a time very confusing. He would strongly recommend preliminary resection of the clavicle and a portion of the sternum in all cases. In his opinion, it makes very little difference whether the portion of the clavicle which is resected is restored or not. In the case just reported the patient had an almost perfect clavicle at the end of six weeks, although the inner third, together with the upper end of the sternum, had been removed. The ligatures employed in this case were of formaldehyde catgut. The suggestion of Souchon, of applying two or three non-contiguous absorbable ligatures, should be followed in all cases. The ordinary surgeon's knot is all that is required. The ligatures should be drawn sufficiently tight to occlude the vessel, which can be determined by the cessation of pulsation in the aneurism, and not tight enough to rupture the arterial wall.

Complete External Dislocation at the Elbow.—R. Winslow regards this case as belonging to th "sub-epicondylar" variety, in which the elbow is flexed to nearly or quite a right angle and the forearm pronated; the radius is placed somewhat anterior to the ulna, and the great sigmoid cavity is placed just below the external epicondyle. Reduction in this case under anæsthesia could not be accomplished, so twenty days after the injury causing the dislocation a crucial incision was made on the back of the joint and the parts were thoroughly exposed, the muscles separated from the external condyle and from the olecranon process, and a further attempt was made at reduction, which failed entirely until the triceps muscle was cut quite across, when the bones were made to resume their natural relations. The triceps was sutured and the extensive wound closed except a small opening left for drainage on account of the free oozing which occurred. The triceps tendon was found displaced to the outer side, and attached normally to the olecranon process; the other muscles were also more or less out of their normal relations, but not torn. The ulnar nerve was found stretched, and was carefully held out of the way with a hook, but it was not injured; subsequently the little finger and the inner side of the ring-finger remained anæsthetic for some time. Of course, all the ligaments of the joint were entirely ruptured. The radius retained its normal relation to the ulna, and the functions of pronation and supination were unimpaired. Four weeks later the limb was in a useful position with a considerable range of motion, but some œdema of the parts.

Post-Diphtheritic Stenosis of the Larynx (Retained Intubation Instrument and Retained Tracheal Cannulæ.—The late J. O'Dwyer stated as the most common causes of obstruction under the conditions implied in the title, an œdematous, chronically inflamed condition of the subglottic region, less commonly cicatricial tissue, and exceptionally granulations from erosion by the tube. He also mentioned the possibility of a post-diphtheritic paralysis of the laryngeal abductor muscles, but regarded this as extremely improbable. In the present paper J. Rogers, Jr., states that the commonest cause of post-diphtheritic stenosis necessitating long-continued intubation is a hypertrophy of the subglottic tissues accompanied by a chronic inflammation. The intubation is in no way the cause of this, as it occurs irrespective of the operation. Less often there is an ulceration, with subsequently the formation of a greater or less amount of cicatricial tissue and contraction. This likewise is not the result of the intubation except in rare and practically unavoidable instances. But it certainly may follow a tracheotomy, and in a larynx already chronically stenosed, it makes the condition worse but not necessarily more difficult to cure. Exuberant granulations within the larynx apparently do not occur with intubation, no matter how prolonged. The remedy for these conditions is the use of a tube as large as can be crowded into the larynx.

Two Cases of Œsophageal Diverticulum, with Remarks.—M. B. Richardson describes the cases, on both of which he successfully operated. The number of cases now on record is fifty-six. When excision of the pouch is impracticable or impossible, recourse should be had to gastrostomy to prevent starvation and to prolong life. These pouches are to be regarded as protrusions of the mucosa through the muscular coat. The primal cause is undoubtedly pressure together with the presence of scar tissue or tissue weakened by unknown causes. A constriction of the œsophagus is not necessary for their formation, for in all the cases hitherto reported no stricture has been found.

A Contribution to the Surgery of the Stomach, Including Wounds, Gastrostomy, Gastro-Enterostomy, and Gastrectomy.—By H. B. Delatour.

Dislocation of the Shoulder Complicated by Fracture through the Anatomical Neck of the Humerus.—By C. B. Brigham.

Report of a Case of Superficial Bilateral Gangrene with Asymmetrical Lesions.—By G. F. Wilson.

Report of a Case of Actinomycosis Hominis of the Lungs.—By J. B. Bullitt.

The Edinburgh Medical Journal, May, 1900.

Some Practical Observations on the Early Diagnosis of Cancer of the Stomach.—Carstairs Douglas gives detailed directions as to the diagnosis of this condition. Palpation is the most reliable method of clinical examination, the great point in the method termed "dipping" being to take the abdominal walls by surprise and bring the finger tips against any subjacent hard structure before the muscles have time to contract. Chemical examination of the stomach contents should be made in doubtful cases; in the large majority of cases of cancer of the stomach, free hydrochloric acid is absent a couple of hours after a test meal, while in many cases it is found that lactic acid has taken its place. When there is grave suspicion of malignancy but a positive diagnosis is not possible, a surgeon should make an exploratory incision. Even if no tumor is present, in some inexplicable way the simple making of an incision produces "some change of government," and the patient finds that his symptoms are relieved.

On the Mechanism of the Intestinal Movements, and on Reversal of the Intestine.—I. L. Bunch says that there are three forms of intestinal movement: first, regular pendulum movements, which take place at the rate of about twelve a minute and travel along the wall of the intestine at from 2 to 5 cm. per second; second, the peristaltic wave, which travels only from above down and is independent of connection with the central nervous system; the third form is best seen in animals recently killed. It travels rapidly, about ninety times as fast as the peristaltic wave, both in an upward and a downward direction, but it is seen only when the intestine is in a very excitable condition. This form of wave explains the antiperistalsis which is present in certain varieties of intestinal lesion. The author studies the mechanism of these various movements and reports various experiments upon animals.

Observation on the Excretion of Nitrogen in Rheumatoid Arthritis.—William Bain reports a case of marked rheumatoid arthritis, in which an analysis of the urine made for seven days gave the following averages: Total quantity of urine, 1,235 c.c.; urea, 18.856 gm.; uric acid, 0.266 gm.; phosphoric anhydride, 0.986 gm.; alloxur bases, 0.033 gm.; ammonia, 0.397 gm.; lactic acid, absent. There was therefore a diminution in the excretion of uric acid and phosphoric anhydride. It is stated that in healthy individuals the excretion of uric acid varies from 0.3 gm. to 1.2 gm. Although the author has examined the urine of a moderately large number of healthy people he has never met with an excretion below 0.4 gm. The normal relationship between the uric acid and alloxur bases was not disturbed.

Optic Neuritis in Children.—Leslie Buchanan says that during the few past years he has seen several cases in which a child, showing no evidence of present bad health, suffers from atrophy of the optic nerves; or again, in which a child with but slight signs of disease has moderately acute optic neuritis. It was noticed that almost all such cases showed more or less marked enlargement of the cervical glands. Unless another distinct cause can be found, if either atrophy or inflammation of both optic nerves be seen in a child or young person, the presence in the neck of enlarged glands, even of very moderate size, is an indication that there may have been, or may be, a meningitis or a tuberculous growth in the brain.

Points of Practical Interest in Surgical Gynæcology; I. Some Points in Gynæcological Asepsis.—By H. Macnaughton Jones.

A Case of Transverse Myelitis, Showing an Abnormality of the Spinal Cord.—By Walker K. Hunter.

The Clinical Varieties of Visual Aphasia.—By W Elder.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

REPRESENTATIVE COUNCILLORS AND THE MIDWIVES BILL—DR. HORTON-SMITH ON TYPHOID—RESISTANCE OF BACTERIA TO COLD—SIR WILLIAM MAC CORMAC AND MR. TREVES—MAJOR BABTIE, V.C.

LONDON, April 27, 1900.

THE somewhat lively discussion about the midwives bill continues to occupy our attention. The relation of the corporations, societies, medical council, and our representatives on it is exciting acrimonious remarks. Last week I told you how Dr. Glover had found himself at variance with a rather active committee who had challenged him to appeal to the constituents, but of course he refuses to consider himself a delegate. Prof. Victor Horsley has now been cornered by the same committee. It is common enough to hear these men spoken of as busybodies or as lacking followers. That is no rare fate for reformers—or for obstructives either. In this matter it is impossible to doubt that a large number of practitioners consider their interests have been betrayed, and it is far from improbable that an election at this time would displace both these representatives. I should regret this, for both are earnest men, anxious to serve the profession, but are removed from the anxieties and arduous life of the masses, and apparently neither of them can in thought put himself in the position of a struggling general practitioner. Both, too, have friends among the managers of the Obstetrical Society and hesitate to brand them as dealers in sham diplomas.

The matter was before the parliamentary bills committee of the British Medical Association, when it was decided to send a deputation to Sir John Gorst, who has charge of the bill, to urge amendments. The association, if its members were consulted, would repudiate the bill, but the council and its committee have admitted the principle and will not find it easy to avoid the consequences of their error in assuming that they represent the body of members who decline to follow them.

"There is not the smallest difficulty in distinguishing the typhoid bacillus from what may be called the classical bacillus coli communis." So said Dr. Horton-Smith in the first of his Goulstonian lectures on the 20th ult. But I should qualify this statement, and indeed the lecturer proceeded to say that we must recognize the fact that the term bacillus coli refers not to a single microbe, but to a whole group, some of which very closely resemble the typhoid bacillus. Then he went on to describe the various tests by which the differentiation can be established. Some of these are long and tedious, and at any time additional microbes may be discovered—possibly still more closely resembling the typhoid. Therefore I repeat I would qualify the Goulstonian lecturer's statement, and with special emphasis I would add that it can be so easy only to the skilled bacteriologist in a properly equipped laboratory. It may be granted, as the lecturer holds, that in all cases the bacilli pass into the blood, for they are very widely distributed to the viscera. But they are not found in great numbers in the blood during life. Perhaps the blood is a bad medium for their growth and soon acquires the power of rapidly destroying them, so that only those which reach a viscus escape. If the blood for any reason failed to acquire this power, the bacilli would develop in it and be found in large numbers after death. The failure would indeed lead to a fatal termination. As the bacilli gain entrance to the blood and circulate to the organs and are to be found in the excretions, typhoid is no longer to be looked upon as a local intestinal disease. Dr. Horton-Smith is inclined to regard it rather as a modified form of septicæmia, inasmuch as in all cases the bacilli pass into the blood, thence to the various organs, producing symptoms of poisoning. But the septicæmia is modified, as there is almost always a definite, local, primary disease from which secondary dissemination of the bacilli takes place. Looked at in this way we see why the severity of a case has no relation to the extent of the intestinal lesion. There may perhaps be some objections to this view, but at least, I think, it seems about time to discard the term enteric, for though usually the starting-point of the disease is a lesion of the intestines, the microbes speedily pass into the blood. Moreover, in some cases they gain access to the blood without any obvious intestinal lesion. The infectiousness of the fæces has been long enough recognized and is often regarded as the sole source of danger. But it now appears that the urine may be equally dangerous, and expectoration, if present in a case, is to be suspected. There is not much evidence about the sweat, but it would seem that any secretion might convey the microbe. The great point, however, is the extreme danger of urinary infection. Three years ago Dr. Horton-Smith was able to report that sometimes the microbe could be found in the urine. Now he can definitely state that it is present in one out of every four cases. As a rule it is late in the disease that it appears, perhaps after convalescence has set in. The danger, therefore, is increased at the very time it is too often thought to have passed by. Not uncommonly the microbes are present in such extraordinary numbers that 1 c.c. may contain 500,000,000. They are much more easily detected than in the fæces, as they are almost always in pure culture. They may set up cystitis, but this is not necessarily so, and there may be no clinical symptoms. It seems that the urine in these cases is a favorable medium for their growth. In other cases it is not. Thus, while in one a few stray bacilli in the bladder speedily produce enormous numbers, in other cases they perish. The bacilli can be rapidly cleared out of the urine by a few doses of urotropin, mostly within twenty-four hours, but it is well to continue the drug for a week. It would seem then desirable to give the drug in all cases in order to prevent infection through the urine—much more difficult to avoid than in the fæces.

Writing so much about bacteria reminds me that Dr. A. Macfadyen and Mr. S. Rowland lately communicated to the Royal Society some experiments on the influence of the temperature of liquid air on these organisms. The microbes experimented on include the typhoid, diphtheria, anthrax, and several others. The intense cold had no effect on their vitality. After being exposed to about −190 C. for a week no impairment of their vitality could be detected. Cultures grew as well as before. It is wonderful that such organisms were not injured by the mechanical strain that must have ensued, to say nothing of the temperature.

Sir W. MacCormac and Mr. Treves are both back in London. A dinner is to be given them to-morrow. Sir William has been interviewed by a Reuter's agent and talked about the wounds of the different rifles, the x-rays, the great value of hospital trains, and the slight loss in killed compared with battles of the past. On these points he could speak, but on the effectiveness of artillery fire I doubt if military men will accept his authority. As to the adjective admirable applied to the provisions of the government, few of his countrymen will think it appropriate to the War Office, even if he throws in his own engagement to help.

Major W. Babtie, R.A.M.C., is awarded the Victoria Cross for his gallant conduct at Colenso, of which you must know the particulars.

Rhythmical Tongue Traction in a Case of Asphyxia of Bulbar Origin.—J. V. Laborde quotes a case reported by G. Schneider. A patient suffering from typhoid fever suddenly showed alarming symptoms of bulbar origin. The face was cyanosed; the conjunctivæ were injected, and the pupils enlarged to the maximum and immobile. There was intense trismus; the respiration was hoarse, the neck swollen, the jugulars were dilated and pulsating. Loss of consciousness was almost complete. Rhythmical tractions of the tongue restored normal conditions. As soon as the patient became conscious he seized the forceps and drew his tongue forward with desperate energy, and continued to make rhythmical tractions for two hours, until the occasional crises of asphyxia entirely disappeared. This he did by instinct and absolutely refused to give up the forceps until respiration was entirely free.—*Bulletin de l'Académie de Médecine*, March 20, 1900.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 12, 1900:

	Cases.	Deaths.
Tuberculosis	241	179
Typhoid fever	21	13
Scarlet fever	166	12
Measles	559	14
Diphtheria	288	44
Laryngeal diphtheria (croup)	9	7
Cerebro-spinal meningitis	0	1
Chicken-pox	11	0

Locating the Antagonism.—Dr. Virtue writes to *The Plexus* as advice to physicians choosing a location, that they "shall call on every reputable physician in the locality as an act of courtesy, and in this way to find out who will antagonize them in the new field." In other words, "Will you kindly allow us to come in?"

Michael Angelo's Physique and Health.—Michael Angelo is described as having been of middle height and broad across the shoulders. He was not fat and his features were marked, his forehead being square. His nose had been broken in early life by a blow from a fellow-student, which had caused permanent disfigurement. In some of his portraits this is represented; others give him a good nose of Roman type. He had been weakly in youth and probably dyspeptic, for through life he was very careful in his diet. He was accustomed to say: "However rich I may have been, I have always lived as a poor man." In spite of this care, however, he suffered late in life from gravel and stone. It is on record that he had much trouble with cramp in his legs. His father had attained the age of ninety-two years, end he himself was only a year short of ninety when he died, having retained his faculties to the last.—Hutchinson's *Archives of Surgery*.

Alcohol and Hard Work.—In the current number of a small serial, entitled *The Medical Temperance Review*, is a short paper on the above subject by Dr. Sims Woodhead. The writer points out that the greatest amount of work can be done only by completely abstaining from alcohol, or, in other words, that alcohol hinders us from accomplishing the maximum amount of work of which our bodies and minds are capable. Now there may be another way of regarding this which perhaps might be urged by our moderate drinkers. We were not created to be beasts of burden as regards our bodies, nor yet to exercise our brains until our nerves became shattered. So that the administration of a little alcohol to those who believe we should be working every moment of our lives might be of the greatest service in restraining an output of energy which must undoubtedly be pathological. Numbers of youths at our universities break down at a critical period of their lives from sheer overwork, which they are not sufficiently discouraged to attempt by their responsible teachers. In the same number is a short statement on this subject by the late Sir Andrew Clark, who, curiously enough, was himself a moderate drinker. He instances an experiment by Dr. Parkes, of Netley, who set two gangs of men to work; one gang was liberally supplied with beer, the other gang being deprived of all alcohol. By the end of the day the beer gang was left hopelessly behind. Now, the only inference we can draw from this experiment is that men in a state of intoxication or semi-intoxication are incapable of hard work. No one denies that to place gallons of beer beside workingmen is on a par with placing, say, a quart of Fowler's solution beside a choreic patient. What we desire is to have the effect of alcohol tested with the same scrupulous regard to dosage and conditions as in the case of toxin, antitoxin, digitalis, or any other similar agent.

Isolation for Consumptives.—When we demand isolation for cases of tuberculosis, we are, I think, fanatics; that is, we are driving hard one set of arguments with a blind eye to contingent and conflicting considerations derived from the other circumstances which we ignore or to which we are insensible. This is to be "logical," as the French call it. Would it have been for the public good to have isolated Henry Bennet or Andrew Clark in the midst of a beneficial career, or now on early suspicions to carry off young people to desert islands, or to banish a bread-winner on the rather remote chance of consequences which we are learning successfully to neutralize?—DR. CHALMERS, in *London Practitioner.*

Disappearance of Beri-Beri from the Japanese Navy.—Dr. Tatsusabaro Yabe, head of the medical department of the Japanese navy, relates in the *Archives de Médecine Navale* how kakke or beri-beri has to all intents and purposes disappeared from his branch of the service. Before 1884 the proportion of men affected during the summer was rarely below twenty-five per cent., and sometimes it reached forty per cent. M. Kanebiro Takaki then suggested an improvement in the food (which was composed mainly of rice) by the addition of pearl barley, with the result that from 1885 to 1895 there were only three fatal cases of beri-beri, all of which occurred during the war with China, when the supply of rice failed.

Typhoid Fever in South Africa.—The terrible ravages of typhoid among both troops and civilians in South Africa is a matter for very serious consideration by the government in the Soudan, and in Cuba the same state of matters existed. Typhoid seems to be the great scourge of our modern armies. The great desideratum is not to allow it to get a chance so far as is humanly possible. Once a case or two occurs, it seems impracticable to arrest its spread where such crowds are huddled together. Boiling and filtering, the only remedies for infected water, are neglected, it is to be feared to an unwarrantable extent. According to a correspondent in the *British Medical Journal*, the type of fever differs from that found in England. Rash is usually absent; the temperature is more of the continuous type, while diarrhœa is generally in abeyance until about the third week, and is then of a mild character. Notwithstanding, the necropsy shows the typical lesions. The fever is often extremely prolonged and may assume an intermittent character.—*Medical Magazine.*

Smoking among the Young.—The medical officer for the city of Perth, Scotland, in his annual report refers to the prevalence of smoking among the young of his neighborhood, and calls attention to the harmfulness of the habit in the following words: "Excessive smoking, while not so common a cause of serious disease as excessive drinking, is still a sufficiently powerful factor to cause disturbances in the various systems of the body. While adults may enjoy the benefits of the moderate use of tobacco without harm, smoking to the slightest extent is productive only of injury to young people by checking their physical and mental growth. Societies taking an interest in the welfare of children have given recommendations to parents how good would result if deterrent measurse were employed, and some people suggest that the fault lies at the door of the adult members by providing children with the bad example. The thought of curing the evil habit among children by asking men to refrain from smoking requires no comment. Deterrent measures have, I fear, little effect, and while I give credit that the vast majority of parents are opposed to their children's smoking, and use what means they can to prevent it, yet the evil is done when out of their sight. Legislatures have in some other countries adopted means to stay the evil, but in Britain nothing of this nature has as yet been attempted. Municipal authorities have no legal powers, but there is one way in which I believe the practice of cigarette smoking among the youth could be greatly decreased, and it is a very simple one—viz., a recommendation to all those having a license to sell tobacco to restrict the sale of cigarettes unless in such quantities as to put them beyond the reach of children. Thus, if only sold in packets, for threepence (six cents) as a minimum, it is my belief we would have a means of seeing less cigarette smoking, because it is not in the nature of children to spend such a sum on any article."

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended May 12, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Alabama, Mobile	April 26th to May 5th	4	
District of Columbia, Washington	April 26th to May 5th	1	1
Florida, Jacksonville	April 26th to May 5th	1	
Indiana, Evansville	April 26th to May 5th	5	
Indianapolis	April 26th to May 5th	6	
Iowa, Des Moines	April 1st to 30th	16	
Ottumwa	April 14th to 21st	2	
Kansas, Wichita	April 26th to May 5th	4	
Kentucky, Covington	April 26th to May 5th	6	
Lexington	April 26th to May 5th	1	
Louisiana, New Orleans	April 26th to May 5th	50	18
Maryland, Baltimore	April 26th to May 5th	5	
Massachusetts, Chicopee	April 26th to May 5th	1	
Michigan, Grand Rapids	April 26th to May 5th	3	
Nebraska, Omaha	April 21st to 28th	2	
New York, New York	April 26th to May 5th	2	
Ohio, Cleveland	April 26th to May 5th	7	1
Tennessee, Nashville	April 26th to May 5th	2	
Utah, Ogden	April 1st to 30th	2	
Salt Lake City	April 26th to May 5th	5	
Philippines, Manila	March 3d to 24th	9	1
SMALLPOX—FOREIGN.			
Austria, Prague	April 7th to 21st	9	
Belgium, Ghent	April 14th to 21st	..	1
Brazil, Rio de Janeiro	March 23d to 30th	6	12
Canada, New Brunswick, Grand Falls, and St Leonards	April 28th	Present.	
Canada, Province of Ontario	April 18th to May 1st	3	
Quebec, Bonaventure County	May 4th	26	
England, Liverpool	April 14th to 21st	18	3
London	April 14th to 21st	4	
Southampton	April 14th to 21st	2	
France, Lyons	April 1st to 14th	..	3
Gibraltar	April 15th to 22d	2	1
Greece, Athens	April 14th to 21st	2	1
India, Bombay	April 3d to 10th	..	111
Calcutta	March 10th to 17th	..	28
Kurrachee	April 1st to 8th	20	14
Italy, Milan	April 21st to 28th	1	
Mexico, Vera Cruz	April 21st to 28th	..	4
Russia, Moscow	April 1st to 7th	7	
Odessa	April 7th to 21st	24	8
Warsaw	April 1st to 4th	..	5
Scotland, Glasgow	April 14th to 21st	6	1
Spain, Corunna	April 14th to 21st	..	1
Straits Settlements, Singapore	March 10th to 17th	..	3
Venezuela, Maracaibo	April 7th to 14th	1	
YELLOW FEVER.			
Brazil, Rio de Janeiro	March 23d to 30th	37	23
Santos	February 18th to April 8th	..	125
Mexico, Vera Cruz	April 21st to 28th	..	1
CHOLERA.			
India, Bombay	April 3d to 10th	..	15
Calcutta	March 10th to 17th	..	77
PLAGUE—INSULAR POSSESSIONS UNITED STATES.			
Philippines, Manila	March 3d to 24th	15	12
PLAGUE—FOREIGN.			
Arabia, Aden	February 21st to April 14th	119	81
Egypt, Port Said	May 4th	Outbreak reported.	
India, Bombay	April 3d to 10th	..	698
Calcutta	March 10th to 17th	..	744
Kurrachee	April 1st to 8th	471	333

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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CONCERNING THE PLAGUE.

FROM almost every part of the world the news is being constantly sent that plague has broken out or is on the increase. In the East generally, and especially along the shores of the Red Sea, the disease is spreading with alarming rapidity. In Egypt there has been a recrudescence. In Manila its inroads are assuming alarming proportions. It is raging in New Caledonia. In Buenos Ayres there has been an epidemic since the middle of March. In India the deaths from plague average about five thousand a week, and it is computed that since the first outbreak five years ago the enormous total of two hundred and fifty thousand persons have perished by its agency. The pest has made its appearance on shipboard off Cape Town. There have been one or two cases in San Francisco, and lastly, according to latest accounts, it seems to have gained a foothold in Australia. In Sydney, within the past three months, there is said to have been nearly two hundred cases, with a mortality of more than fifty, while Melbourne, Brisbane, Perth, and Auckland are experiencing visitations of the disease. The persistency of its stay in Sydney, and its continued dissemination throughout Australia, are the most sinister features in connection with the plague so far as civilized countries are concerned.

There is no doubt that individuals of the white race are less prone to contract plague than are Asiatics, but that they enjoy an immunity has now been altogether disproved. Nor unfortunately, with the experience of Australia before our eyes, does it appear that good sanitation is an absolutely sure safeguard against a plague invasion. When several cases occurred in Oporto, the filthy condition of that city was regarded as the cause, and the assertion was confidently made that in the more or less cleanly towns of Europe outside the Iberian peninsula it would be impossible for the plague to last or spread. This comforting belief has received a decidedly rough shock, for the sanitary condition of Sydney is quite equal to that of the average European town and infinitely better than that of Oporto. Yet from the latter city the plague was apparently quickly driven out, while in the former and more healthy place it is every day increasing. The truth is, so little is known about the plague that it is an act of unwisdom to dogmatize concerning it in the slightest degree.

The fact that rats are an important, if not the most important, factor in disseminating the plague is gradually being appreciated. Another point to which notice has been drawn of late is the peculiar difficulty of correctly diagnosing the disease. Professor Simpson, referring to this phase of the subject in *The Lancet*, April 14th, says: "The difficulty of diagnosis of plague arises from the several types and forms which it assumes, and unless the medical man is on the alert for plague and is fully conversant with the types the disease may easily at its commencement escape attention. . . . A disease which may be mistaken for yellow fever, gastro-enteritis, typhus fever, diphtheria, influenza, syphilis, malaria, and parotitis is one in which diagnosis from clinical symptoms is by no means easy." The glandular or bubonic, the most frequent form of the disease, is comparatively easy to diagnose, its characteristic feature being, as its name denotes, the appearance of a bubo occurring in most cases in the region of the thigh or groin, often under the arm, or in children on the neck. In a few instances, however, the buboes appear on different parts of the body.

The department of health of Berlin has recently issued a circular of instructions in regard to the plague, dealing especially with its clinical symptoms, which has been reprinted in Public Health Reports, April 20th. This circular places the number of forms under which the plague presents itself as three—glandular, skin, or lung plague. In regard to skin plague it says: "Plague pustules and plague carbuncles are not frequent as compared with plague buboes. They begin with a spot about the size of a flea-bite or a pea on some part of the skin. From this very painful spot there develops a blister filled with cloudy matter. It then either retains the character of a pustule or the surrounding tissue becomes hard and thick, later developing into a deep carbuncle and then into a burning swelling. Inflamed lymph vessels may convey the infection to the nearest layer of glands, in which then a bubo may grow. A bubo may also make its appearance in the neighborhood of a carbuncle." Pneumonic plague is the most difficult of diagnosis. In some epidemics it is the most common form and generally closely resembles an ordinary violent catarrhal or croupous pneumonia, while on occasions it is extremely similar to other inflammations of the lungs. The Berlin circular says: "In all forms of plague the early appearance of heart weakness is noted, together with irritation of the stomach and abdomen, extreme sensitiveness to pressure in the region of the epigastrium and the cæcum, violent nausea, and later also the expulsion of black fecal matter. A slight degree of swelling of the abdomen is the rule; soft swelling of the spleen and traces of nucleo-albumin and serum-albumin in the urine, bloody vomit or blood in urine are less frequent. A diphtheric affection of the tonsils is often found in the early stages."

It is needless to say that not only has no specific been as yet discovered in the treatment of the plague, but that ordinary curative measures have but little effect on its course. The therapeutic value of anti-plague serum has been by no means decisively proven.

British physicians who have investigated Yersin's cases place but little faith in his statistics claiming favorable results. The following is the report of the British plague commission treating of Haffkine's antiplague inoculation:

"1. Inoculation sensibly diminishes the incidence of plague attacks on the inoculated population, but the protection which is afforded against attacks is not absolute. On the one hand plague has attacked persons who have undergone inoculation as many as four times in the course of two years previous to their attack. On the other hand, as many as eight per cent. of the inoculated population may suffer from plague. Many varying influences have been at work in determining the rate of attack in different places, and it is impossible to give a numerical expression for the measure of protection against attack which inoculation confers.

"2. Inoculation diminishes the death rate among the inoculated population. This is due not only to the fact that the rate of attack is diminished, but also to the fact that the fatality of the attacks is diminished. Here again no numerical expression for the amount by which the death rate is diminished can be given.

"3. Inoculation does not appear to confer any great degree of protection within the first few days after the inoculation has been performed. This fact, we may note in passing, has an important bearing on the risk of infection which would be incurred by recently inoculated persons if they were left behind in surroundings so plague-infected as to render their evacuation by the uninoculated desirable.

"4. Inoculation confers a protection which certainly lasts some considerable number of weeks. It is possible that the protection lasts for a number of months. The maximum duration of protection can only be determined by further observation.

"5. The varying strength of the vaccine employed has apparently had a great effect upon the results which have been obtained from inoculation. There appears to be a definite quantum of vaccinating material which gives the maximum amount of protection, and provided that this quantum can be injected in one dose, and provided also that the protection turns out to be a lasting one, re-inoculation might with advantage be dispensed with. The best results from inoculation will only be obtained after an accurate measure of standardization has been devised."

This somewhat non-committing report, although certainly a not enthusiastic eulogy of Haffkine's serum, nevertheless points to the fact that under certain conditions its use is valuable. Now that plague is prevalent in the Philippines and in other parts of Asia with which this country is in constant communication, it is essential that every precaution should be taken to keep out the disease. Rigid quarantine and a wholesale destruction of rats are measures of the first importance, while second only to these is the need that physicians, and especially port health officers and members of the boards of health, should be able to diagnose accurately cases of plague. Professor Simpson makes the following recommendation to the government of England, which should be equally applicable to that of the United States, viz., that under the auspices of the government there should be instituted a course of instruction on plague, to be attended in batches by the medical officers of the country.

THE HOSPITAL TREATMENT OF PULMONARY TUBERCULOSIS.

Other things being equal, it may be admitted that certainly not less good results should be obtained in the treatment of pulmonary tuberculosis at home than in institutions. If, however, nursing, care, food, sanitary conditions, and the like are open at all to suspicion at home, the chances for the patient are much better in a well-equipped hospital. How successful may be the results under the latter condition is illustrated by Schaper (*Berliner klinische Wochenschrift*, 1900, No. 12, p. 253), who presents in tabular form the statistics of the Charité Hospital in Berlin for ten years, from 1889 to 1899. In the year 1889-90 recovery or improvement took place in 45.7 per cent. and death in 54.2 per cent. of the cases of pulmonary tuberculosis, and in the year 1898-99 recovery or improvement in 54.8 per cent. and death in 34.3 per cent. of the cases. These satisfactory results are attributed, among other things, to early diagnosis, to better care, the more effective medication, and the relation between the hospital and the sanatorium. In the Institute for Infectious Diseases, which was opened in 1892-93, recovery or improvement took place in sixty-one per cent. and death in twenty-three per cent. of the cases of tuberculosis received during the first year, and recovery or improvement in sixty-one per cent. and death in twenty-nine per cent. in 1898-99. The conclusion to be drawn from these experiences is that with further improvement in hygienic conditions still better results may be possible and should be secured. In addition, special institutions will have to be organized for the care and treatment of incurable cases of tuberculosis.

News of the Week.

The Spitting Nuisance.—At a recent meeting of the board of health, the section of the sanitary code relating to spitting in public places was made more stringent than before, the prohibition being extended to cover the station platforms and stairs of the elevated railroads, as well as the floors of cars, ferryboats, and public buildings. Notices of this prohibition must be kept posted wherever the prohibition applies; and janitors of buildings, conductors of cars, and employees of ferry-boats and on station platforms are directed to call the attention of all violators of the ordinance to those notices. A rule has also been established that in every cigar manufactory and printing-establishment where ten or more persons are employed, receptacles for spitting, in the proportion of one receptacle for every two persons, must be provided, and all such receptacles must be cleaned and disinfected at least once during each working-day. All these rules are excellent, and the only objection any one can have to them is that not the slightest attempt is ever made to enforce them. Inoffensive citizens shrink from calling down curses upon their heads by insisting upon the arrest or ejection from a public vehicle of a spitter, and the conductors are themselves too much attached to the habit of expectoration to reprehend it in others. *The Times* of this city says very justly that "either the spitting provision of the code is foolishness and should be repealed, or it is as much the duty of the health department staff to enforce it as to seize diluted milk or immature veal." And it suggests that the "physicians, sanitary engineers, inspectors, and detailed policemen of the sanitary squad, constituting the administrative staff of the health department, set the example not only of respecting the law, but of enforcing it in the cases of those who do not. As salaried employees of the city, whose especial business it is to do whatever will promote or protect the public health, it is quite within their duties to aid in enforcing the provisions of the sanitary code."

Navy Department, Bureau of Medicine and Surgery, Washington, D. C., May 12, 1900.—Changes in the medical corps of the United States navy for the week ending May 12, 1900. May 7th.—Surgeon G. P. Lumsdon ordered to the *Kentucky* May 15, 1900. Assistant Surgeon G. F. Freeman detached from the Naval Hospital, Washington, D. C., May 10th, and ordered to the *Essex*. Assistant Surgeon C. H. DeLancy detached from the *Essex* when relieved, and ordered to the Naval Hospital, Washington, D. C. May 10th.—Passed Assistant Surgeon S. G. Evans ordered to the *Kentucky* May 15, 1900. Passed Assistant Surgeon W. C. Braisted detached from the *Detroit* when put out of commission, and ordered home and to be ready for orders to sea.

The Medical Course at the University of Havana.—A committee, consisting of Drs. Casuso, Menocal, Nuñez, and Vildózola, which was appointed some time ago by General Wood to revise the course of medical studies at the University of Havana, has recently made its report. According to this report, published in the *Archivos de la Policlinica* of April 29th, it is recommended that the old system of instruction be abandoned and that the course pursued in English and American colleges be followed. The course is to cover four years, and candidates for admission must be at least eighteen years old, and must possess the degree of Bachelor in Letters and Science of the Cuban colleges, or a foreign equivalent recognized in Cuba. Much opposition developed to the report because it recommended the Anglo-Saxon system. The supporters of the Latin system protested, but when it was shown that the French faculties had made a reorganization on the same basis they accepted the change. The candidate for the degree of M.D., after having completed the course and been admitted to examination, must present a thesis which will be submitted to a jury of five who will determine whether or not it is "admissible." If the decision is favorable, the candidate will be obliged to sustain the thesis in public. The course begins in September each year, and clinical study is an essential to graduation.

Philadelphia Hospital.—Dr. H. B. Allyn, formerly registrar, and Dr. D. Riesman, formerly assistant pathologist, have been elected physicians to the Philadelphia Hospital, in succession to Drs. Samuel Wolfe and F. A. Packard, resigned.

Philadelphia County Medical Society.—At a stated meeting held May 9th, Dr. William S. Thayer, of Baltimore, presented a communication entitled "Recent Additions to our Knowledge concerning the Life-History of the Malarial Parasites."

Dr. Jameson, of Transvaal fame, who has been very ill, presumably with typhoid fever, is reported to have entirely recovered. He is said to be going into politics, and is mentioned as a candidate for one of the seats in the Cape parliament, representing Kimberley, in succession to Dr. Frederic Rutherford Harris.

Medical and Chirurgical Faculty of Maryland.—The next annual meeting of this society will be held the last Tuesday, Wednesday, and Thursday in April, 1901. The following are the officers for the ensuing year: *President*, Dr. Samuel Theobald; *Vice-Presidents*, Drs. Samuel T. Earle, Jr., and J. B. R. Purnell; *Secretary*, Dr. J. Williams Lord; *Treasurer*, Dr. Thomas A. Ashby.

Again the Fasting-Cure.—A disciple in Philadelphia of a medical man who recommends starvation for the treatment of various diseases, having himself recovered from digestive disturbances under such treatment, has been recommending a similar course to others. To the fact that the method is not infallible the death of one of the patients has brought a rude awakening. In this instance, however, death was not attributed to the system, but to "a cancer or severely ulcerated condition of the patient's stomach." The patient had fasted for fifteen days, and is said to have shown marked improvement. We fear the results in this case are like those occasionally reported by surgeons in which death ensues, although the operation is successful.

Philadelphia Pediatric Society.—At a stated meeting held May 8th, Dr. D. J. Milton Miller read a paper entitled "Brief Notes of a Case of Acute Leukæmia in a Child Eight Months Old." A thorough examination of the blood could not be made, but the number of leucocytes was greatly increased, while the number of red corpuscles was diminished and the spleen was enlarged. Dr. S. C. Peter reported a case of facial diplegia due to middle-ear disease. The patient was a girl fourteen years old, in whom in connection with bilateral otitis media complicating scarlet fever, first the facial nerve on one side and then that on the other side was paralyzed. Dr. Alfred Hand, Jr., reported a case of intussusception in a four-months-old infant relieved by injection. Some days after reduction had been effected symptoms of recurrence made their appearance, but these subsided spontaneously. It was thought that the use of paregoric exercised a useful therapeutic influence.

The New York State Medical Association.—The sixteenth annual meeting of the Fifth District Branch will be held in Wurzler's building, 315 Washington Street (near City Hall Square), Brooklyn, on Tuesday, May 22, 1900, under the presidency of Dr. J. C. Bierwirth, of Brooklyn. The secretary of the branch is Dr. E. H. Squibb, of Brooklyn. The president's address will be on "The Necessity and Benefits of More Completely Organizing the Medical Profession." The afternoon session will be devoted to a discussion on "Diabetes Mellitus," to be participated in by Drs. Heinrich Stern, Egbert le Fevre, Henry Dwight Chapin, Charles P. Gildersleeve, L. A. W. Alleman, Samuel Sherwell, and Jonathan Wright.

The Plague.—Honolulu is once more a free port, as the quarantine was lifted on April 30th. The official declaration that the plague is at an end is confirmed in the lay mind by the fact that rats are returning to Honolulu, as it is a popular belief that the animals never return to plague-infected places.—From India it is reported that the epidemic in all the infected places is showing a general decline, but in Hong Kong it is now increasing. Fifteen thousand Mohammedan weavers met in Benares on Sunday last and signed a protest addressed to the Indian government against the plague rules, declaring that these were contrary to the laws of Mohammed.—The plague is also reported to have reappeared at Alexandria and several other places in Egypt.

Famine and Cholera in India.—A recent despatch from Lord Curzon to the Secretary of State for India in London states that the famine conditions have materially improved in Madras and Mysore in consequence of the recent rains. In the remainder of the affected tracts the distress is increasing in intensity, owing to the want of fodder and water and the increasing heat. The number of persons now in receipt of relief is 5,617,000.—Regarding cholera, the Bombay correspondent of The London *Times* says that the disease continues to rage in the famine camps. There were four hundred deaths in three days at Mandivee. So numerous are the cases at Godra that it is impossible to collect the bodies, and they lie for days in the sun. The people have fled and cannot be induced to return. A similar state of things prevails at Broach.

The St. John's Guild.—Mrs. Augustus B. Juilliard, who last year presented the second floating hospital to St. John's Guild, has laid the foundation for a permanent fund by a gift to the guild of $50,000, the interest of which is to be used toward defraying the expenses of operating the floating hospital, the *Helen C. Juilliard*. Mrs. Frederick Elliott Lewis will build a cottage hospital on the Seaside Hospital grounds at New Dorp, S. I., in memory of her little son, Frederick Chandler Lewis. The building, which will be known as the "Lewis Memorial Cottage of St. John's Guild," is to be detached from the other buildings of the group and will be for the care and treatment of very sick infants. It will contain two wards for eight babies each, a diet kitchen, laboratory, bath, and irrigating-rooms. The hospital will be completed in time for use this season.

Practitioners' Society of New York.—The following officers were elected for the ensuing year: *President*, Dr. A. Alexander Smith; *Secretary*, Dr. Walter B. James.

The Medical Society of the State of North Carolina will hold its forty-seventh annual meeting at Tarboro on May 22d, 23d, and 24th, under the presidency of Dr. George W. Long, of Graham. The secretary is Dr. George W. Pressby, of Charlotte.

Dr. Georges Apostoli, of Paris, who was for many years an ardent advocate of the treatment of uterine fibroids by means of electrolysis, died recently at the age of fifty-three years. He was a voluminous writer on electro-therapeutics and was editor of a journal devoted to this subject.

The Stickler Memorial Library.—Ground was broken on Saturday last for the Stickler Memorial Library, which Mr. and Mrs. Joseph W. Stickler, of Orange, N. J., are to erect in memory of their son, the late Dr. J. W. Stickler, who died suddenly in New York about a year ago.

The Yale Medical School.—The Yale University authorities are negotiating for the purchase of a site for a new medical school adjacent to the New Haven Hospital. The land will cost about $75,000. The building now used as a medical school is not large enough nor suitable in other ways for the work of the medical department of Yale, nor is it convenient to the hospital.

The American Medical Editors' Association will meet in annual session at Atlantic City on June 4, 1900, the day preceding the meeting of the American Medical Association. The president of the association is Dr. I. N. Love, of St. Louis, and the secretary Dr. Dillon Brown, of New York. It is reported that the annual sermon by Dr. George M. Gould will be omitted this year in deference to the wishes of the president of the association.

The Dental Society of the State of New York held its annual meeting at Albany last week. The following officers were elected for the coming year: *President*, Dr. John J. Hart, of New York; *Vice-President*, Dr. R. H. Holheinz, of Rochester; *Recording Secretary*, Dr. W. L. White, of Phelps; *Treasurer*, Dr. G. W. Stainton, of Buffalo; *Corresponding Secretary*, Dr. Henry D. Hatch, of New York. Drs. William Jarvie, of Brooklyn, and F. C. Walker, of New York, were recommended to the board of regents as dental examiners from the second district, and Drs. S. B. Palmer, of Syracuse, and A. Detter, of Utica, from the fifth district.

Artificial Immunity against Tuberculosis.—Dr. Tatsusaburo Yabé of the Japanese navy states, in the introduction of an article on "Immunity against Tuberculosis," published in the *Sei-I-Kwai Medical Journal* of March 31, 1900, that he has discovered a means of effecting this desirable result. In the course of his studies in the Pasteur Institute of Paris, he has proved, he says, that Koch's tuberculin is a false toxin possessing no immunizing properties whatever. He has himself discovered in tubercle bacilli a substance possessing bactericidal properties and another which confers antitoxic immunity. By means of progressively increasing doses of one of these substances or of a mixture of the two injected into healthy guinea-pigs he was able to obtain immunity in them against injections of pure cultures of tubercle bacilli; and the same injections in the case of tuberculous guinea-pigs effected a cure, the bacilli disappearing before the tubercles. He asserts, therefore, that it is possible both to confer immunity against the disease in case of the well and to obtain a cure in those already tuberculous.

St. Luke's Hospital.—The Rev. George F. Clover, for many years assistant pastor and superintendent at St. Luke's Hospital, has been appointed full superintendent in place of the Rev. Dr. George S. Baker, whose resignation was recently accepted by the board of managers.

The Michigan State Medical Society.—The thirty-fifth annual meeting of this society will be held at the Grand Hotel, Mackinac Island, July 11th and 12th. The annual meeting of the Upper Peninsula Medical Society will immediately precede that of the State society, and a joint session of the two will be held to commemorate the achievements of Dr. Beaumont, whose celebrated investigations in gastric digestion, conducted upon Alexis Saint Martin at Mackinac in 1825, the former society will memorialize by an address and the erection of a tablet. The address on medicine will be delivered by Dr. Albert E. Carrier; that on surgery by Dr. Oliver A. LaCrone; and that on gynæcology by Dr. Eugene Boise. The subjects for set discussion will be: in the medical section, "Diseases of the Stomach" and "Tuberculosis"; in the surgical section, "Appendicitis," "Hysterectomy," and "Eclampsia." The president of the society is Dr. Austin W. Alvord, of Battle Creek, and the secretary Dr. Collins H. Johnston, of Grand Rapids.

Camden (N. J.) District Medical Society.—At the annual meeting held May 9th, the following officers were elected for the ensuing year: *President*, Dr. J. T. Leavitt; *Vice-President*, Dr. W. R. Powell; *Secretary*, Dr. P. M. Mecray; *Treasurer*, Dr. E. R. Ramsdell; *Historian*, Dr. H. H. Sherk; *Reporter*, Dr. J. G. Doron; *Standing Committee*, Drs. J. S. Baer, J. E. Hurff, J. W. Marcy, W. A. Jennings, and W. A. Wescott; *Censors*, Drs. Alexander Marcy and Blake; *Trustee*, Dr. O. B. Gross.

Pathological Society of Philadelphia.—At a stated meeting held May 10th, Drs. W. C. Posey and E. A. Shumway exhibited specimens from a case of alveolar sarcoma of the choroid. Drs. A. O. J. Kelly and S. Flexner presented a specimen probably of carcinoma of the ileum close to the ileo-cæcal valve without metastasis or evident glandular involvement. Abdominal symptoms had not been marked during life, but constipation, which had been present, was followed by symptoms of intestinal obstruction, with marked retroperistalsis. An operation was undertaken, but without a successful result.

Army Surgeons and Bicycles.—All the members of the German army medical service are required by a recent regulation to learn to ride the bicycle.

Morphinism among Physicians.—The editor of *The Quarterly Journal of Inebriety* returns to this question in a brief note in a recent issue of that journal, quoting the travelling agent of a large drug house, as follows: "Within ten years my orders from physicians for morphine have rapidly increased. I have a number of regular customers who order from two to five thousand one-fourth-grain and one-half-grain tablets of morphine for hypodermic use every month. Some of these physicians buy for their patients, others clearly use morphine themselves. Many of these doctors have a large practice, and are not known to be morphine-takers. Other physicians buy very largely of deodorized tincture of opium and opium pills. In a small village of five thousand, where seven doctors practise, one physician bought over five gallons of tincture of opium every year. In another town where the practice was limited, large quantities of opium pills and preparations of codeine were sold to two physicians. Other narcotics, such as chloral hydrate, hyoscyamine, and cannabis indica, are called for in large quantities beyond the natural demand of practice."

Obituary Notes.—Dr. Jacob Rickabaugh, the oldest practising physician in Chester County, died in Tredyffrin Township, Pa., on May 6th, at the age of eighty-five years. He was graduated from Jefferson Medical College in 1842, and until within a week of his death was actively engaged in the practice of his profession. He was also largely engaged in agriculture, being one of the most extensive land-owners in eastern Chester County. He also took an active interest in political affairs.

Contribution to the Study of Dentigerous Cysts of the Superior Maxilla and their Relations with the Maxillary Sinus.—P. Jacques and G. Michel make the following classification: (1) Cysts of external origin which develop about the roots of the incisors, canines, and sometimes the premolars. These have a great tendency to develop toward the canine fossa, separating the two tables of the maxilla. As a rule, it is the external table which yields, as it is the thinner; thus the anterior wall of the antrum is bulged outward. Finally it gives to the finger the characteristic crackling feel. (2) Cysts of sinus origin. As a rule, these simply pouch inward the wall of the sinus without actually breaking through, so that there is no communication between the cavity of the cyst and that of the antrum. Sometimes, however, such a communication does actually exist. In the former of the two conditions extraction of the tooth involved will provide proper drainage, but in the latter it is necessary to perform the classical operation for opening and draining the antrum.—*Revue Hebdomadaire de Laryngologie, etc.*, March 24, 1900.

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Original Articles.

REMARKS ON SOME OF THE CONDITIONS SIMULATING APPENDICITIS AND PERI-APPENDICULAR INFLAMMATION.[1]

By E. G. JANEWAY, M.D.,

NEW YORK.

So much has been written and spoken of appendicitis in its surgical and medical aspects that interest in this small portion of our anatomy has never flagged for any considerable period. It has seemed to me that no better place than a meeting of this society, in which there are members who have had a very large experience with this disease, can be found before which to present for consideration the subject of conditions which simulate appendicitis and peri-appendicular inflammation. The conditions which I shall mention in this paper are those which have either been presented to me for consideration and advice in consultation and hospital practice, or about which I have had information from physicians. I prefer to make this paper, as far as I am concerned, one which has been drawn from observation in my field of work, and hope that it will be supplemented by the observations of those who have had a very large experience in these conditions.

A doubt whether, or the belief that, appendicitis existed has arisen in the case of neuralgia affecting the lower abdominal nerves on the right side in a number of cases. As a rule, a close scrutiny has enabled the observer to come to a right conclusion. Yet I have knowledge of two cases in which an operation was performed, the appendix found normal, and not removed. In one of these there had been several antecedent attacks. It is probable that to-day the appendix would have been removed at the time, and not allowed to remain as a source of future apprehension. The cases in this category relate to those neuralgias whose origin was rather obscure, or, better, so obscure that it could not be referred to an abnormal condition of any special organ. There are, however, those other neuralgic pains reflected over the lower right abdomen when there is disease of an inflammatory nature above, more especially pneumonia and pleurisy of the right lung. I have been consulted several times in cases of this nature, in some of which the idea of operation for a supposed appendicitis had been entertained. Moreover, as at times, if a physician is called late, a pleurisy may have supervened on an appendicitis whose inflammatory process has taken an upward direction, a right decision as to the true origin and nature of the disease processes may be the occasion of considerable study. Ordinarily a careful survey of the history and study of the existing conditions leads to a correct diagnosis.

Another source of difficulty in the diagnosis is afforded by conditions of the right kidney. Those which have come under my own observation have been renal colic, when somewhat protracted, and especially if associated with fever. Still greater trouble has been occasioned by those cases in which a retention of urine constituting hydronephrosis was developed, as thus a swelling in the right side and some tension of the abdominal muscles have occurred. Of course, the members of this society are all aware of the coexistence of fever in certain cases of renal colic, but owing to the teaching of certain text-books not a few physicians are uninformed of this possibility. Moreover, we all know that in certain cases of appendicitis, owing to the character and direction of the pain, the opposite error of considering appendicitis renal colic has been made. Yet so firmly have I known the dread of appendicitis to influence intelligent medical opinion, that in cases in which the patient was thin, and without difficulty manipulated, and thus the assurance was obtained that no exudate or swelling existed in or about the appendix, an exploratory operation has been proposed to make assurance doubly sure. The condition of the urine at the time or later has clinched the diagnosis.

Intermittent hydronephrosis independent of calculus has also come under my observation as a source of possible diagnostic error. Moreover, hydronephrosis with a displaced right kidney existed in one case about which I was consulted. Movable kidney has to my knowledge at times been mistaken for a peri-appendicular inflammation.

Cholecystitis has, in several cases of which I have had knowledge, been operated upon with the belief that the condition was one of peri-appendicular inflammation. An operation was necessary for relief of this condition. The only evil likely to be entailed is that with healing, owing to the low site of the incision, considerable dragging pain may be experienced. For this I was consulted in one case.

Conditions in the intestinal tract at times also have occasioned the belief that appendicitis existed or that a peritonitis was occasioned by perforation of the appendix. In this latter category are the perforations of ulcers, duodenal, etc., which have been comparatively latent in their course. Gastro-intestinal catarrh with colic coming from some irritant, either undigested food or toxic agent in the food, has also been mistaken for appendicitis. Tuberculous ulcers, with tuberculous peritonitis over and about the cæcum may give rise to very great difficulty in decision, and have been the occasion for exploratory incision for diagnosis. So also cancer of the cæcum may occasion a condition which may simulate peri-appendicular inflammation. The strangest illustration of this was the case of a man, whom I had been requested to see in order to determine whether an indurated mass was of this or another nature. The hour was fixed for consultation at three o'clock on a certain day. I was summoned several hours earlier, because the patient had suddenly gone into collapse. When I arrived there was no difficulty in determining that perforation had occurred and that there was free gas in the peritoneal cavity. The patient's condition forbade operation. The history of an illness lasting months made the diagnosis of carcinoma very probable. An autopsy showed colloid carcinoma of the cæcum, in which there was a deep ulcer which had perforated. Fecal impaction may at times also simulate peri-appendicular inflammation, though in my experience the opposite error may be made of considering the exudate impaction and the obstruction due to the accompanying local peritonitis as dependent upon some other cause. There is, however, a class of cases not very frequent in which there exists an ulceration or narrowing, non-malignant, of the hepatic flexure of the colon, which is apt to be attended from time to time by accumulation of fæces in the cæcum and ascending colon, and also, as the patients are thin, by movable right kidney. As these patients have occasional fever also, these combined events may give rise to considerable trouble in diagnosis to one who has not had previous experience with the individual patient.

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[1] Read at a meeting of the Practitioners' Society, held April 6, 1900.

In a paper read before the Medical Association of the State of New York attention was drawn to the fact that the pain and tenderness occurring in certain cases of typhoid fever either during the primary attack, or in a relapse, had led physicians, to my knowledge, either to propose or to perform the operation for removal of the appendix. This has happened in the early stage of the disease, when the fever under the circumstances has been believed to denote the gravity of the supposed appendix inflammation. That the appendix may at times be affected in typhoid fever is also known. A careful survey of the case, including the history of the method of incipiency of the attack and a study of the condition of the spleen, of the bowels, of presence or absence of roseola, of the blood for Widal's reaction, and a count of the leucocytes will, together with a careful physical study of the right iliac region, as a rule, enable the physician to make a correct diagnosis.

The general aches and pains connected with follicular tonsillitis had led to the removal of the appendix in a case which I saw afterward for a complication. The pains in this case were to a considerable degree complained of in the right iliac region. As an offset for this I might state that it has happened on two occasions that I have been consulted regarding peritonitis from perforation of the vermiform appendix when the disease had been ushered in with follicular tonsillitis.

Abscess of the ovary has been mistaken for inflammation of the appendix. The neighborhood of these parts readily explains the possibility of a mistaken conception as to the cause of a local peritonitis. So also difficulty may arise in deciding whether a given inflammation in a woman is due to appendicitis or to salpingitis. Retained menstrual fluid gave rise in one case to a sapræmia causing chill, fever, and some pain on the right side of the abdomen, which came under my observation to decide between a possible typhoid or appendicitis. The case was that of a young woman sixteen years of age, who had been unwell two weeks before, but had felt poorly since that time. There was some sense of soreness deep in the right side of the abdomen, more in the pelvis than over the usual appendix site; there was no exudate nor distinct swelling to be appreciated at the ordinary site of the appendix nor back of the cæcum; the leucocyte count was not increased. On the next day a free discharge of an offensive serous fluid from the vagina was followed by a disappearance of all the symptoms.

At times retro-peritoneal abscesses will simulate appendicitis or rather the abscess connected with it.

At times patients become hypochondriacal as regards the appendix, and under these circumstances going to a physician may receive the advice to have the appendix removed at once, as happened in a case which came under my observation this week.

These cases sufficiently illustrate the need of careful thought lest we fall into the error of considering every case with pain and tenderness in the right iliac fossa as appendicitis.

A CONTRIBUTION TO THE TREATMENT OF RUPTURE OF THE PARTURIENT WOMB—WITH A CRITICAL REVIEW OF THE VAGINAL OPERATION.[1]

By A. V. WENDEL, M.D.,
NEWARK, N. J.,
SURGEON TO THE ALEXIAN HOSPITAL.

In accordance with the rule of this society requiring an annual thesis upon one of the surgical emergencies, some recent experiences have induced the writer to select rupture of the parturient womb for this evening's discussion. Rupture of the uterus is justly regarded as one of the most formidable and fatal accidents to which the pregnant woman is liable. In this country, and particularly in our own section, we meet with it most frequently in the poorer classes who are generally attended by midwives. This very fact causes the writer to bring an obstetric emergency before this, a surgical society, because the midwife sends either for the family physician or the nearest practitioner. The practice of operative midwifery is therefore commonly performed by the general practitioner, and since rupture of the uterus constitutes a surgical complication of the first magnitude, the outcome of which depends in no small measure upon the judgment and technical knowledge commanded by him who attempts to relieve the woman, a discussion of the practical points involved and of the appropriate measures to be adopted must be my apology.

Rupture of the uterus is considered by the text-books a rare accident, but, as Freund says, one may not encounter a case in a decade while another may meet two cases in the same day, as happened to him. There can be no question, however, that rupture of the uterus is far more frequent than is generally supposed; a larger number of those occurring in private practice, if fatal from hemorrrhage, are reported as post-partum hemorrhages, and others merely as septic peritonitis when death results from infection. This statement, as Fritsch naïvely remarks, may easily be proven by inquiring carefully into the histories of fatal obstetric cases. Whether the average given by Anufrieff of eighteen ruptures to four thousand labors, or Bandl's of one in twelve hundred, or Garrigues' of one in five thousand deliveries, is correct shall be left to your own fancy. The writer has examined the annual statistical reports of New Jersey for the past three years, without obtaining any information concerning this matter.

The accoucheur is aware of the causal importance of contracted pelvis, fœtal malposition, and maldevelopment and cicatricial obstruction of the maternal soft parts, but cases are being constantly reported in which women have borne a number of children in as many normal labors, yet suddenly and without warning rupture of the uterus occurred either during and not seldom even before the occurrence of the next labor.

The predisposition to rupture manifested in such a manner has been explained by the giving way of scars formed after the separation of sloughs from the corpus or cervix uteri following previous accouchements; atrophic spots in the uterine wall leading either to circumscribed thinning or sacculation; general uterine atrophy; placenta prævia, and chronic interstitial metritis. Indeed, nowhere in nature do we find the defensive dispositions better exhibited than by the frequent abortions resulting from chronic metritis, for if these pregnancies went to term ruptures would no doubt be very much more frequent, owing to the diseased state and consequent diminished elasticity and cohesion of the myometrium.

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[1] Read before the New Jersey Surgical Society, December 5. 1899.

It must be remembered, however, that, as Sänger says, these conditions merely lessen the resistance to rupture; mechanical factors are absolutely necessary to cause rupture, and in the majority of instances they are the sole factors. During normal labor the lower segment and cervical portion of the uterus are sufficiently dilated to permit fœtal extrusion, but if there should be obstruction of any kind to the progression of the child, the upper segment continues to retract until the fœtus is born into the distended and excessively thinned lower segment and neck of the womb. Unless the woman is delivered by art from her perilous position, rupture of the uterus will certainly occur. Considering that sixty per cent. of women (often the flower of child-bearing women) and ninety-two per cent. of the children are lost even under the best treatment, we should ever have the possibility of its occurrence in mind and be prepared to act with decision when signs of threatened rupture occur.

The recognition of the predisposition to and causes of rupture can be compassed only by methodical anamnesis, pelvimetric and physical examination during pregnancy and during labor. Rupture will also become rarer the more strictly the law is enforced which requires the midwife to summon a physician as soon as she notices difficulty or danger to the patient during the progress of labor. There can also be no doubt that the mortality after uterine rupture will be lowered the more asepsis in obstetric practice becomes generalized, because sepsis still constitutes the most formidable obstacle to reduction of the mortality rate, and Kroner's statistics show that an infected patient has but little prospect of recovering even if submitted to operation. Nevertheless no case should be considered hopeless, however desperate it may appear, since cases are reported which appeared hopeless, yet prompt intervention gave brilliant results.

"The worst cases are allowed to die; if more cases were operated upon more lives would be saved, but the whole death rate after operation would be raised."[1]

There still remain unsettled so very many questions in the pathology and treatment of ruptured uterus, that every case, whether fatal or not, should be reported with the minutest care, because every case presents so much that is interesting that the time is amply repaid if it is examined in all its details and compared with that which is known in order to increase our knowledge of its nature and draw more correct conclusions as to treatment. With this object in view the writer begs to report his own experiences, which are limited to the three following cases:

Case I.—Primipara; pelvic contraction with massive bony development; complete rupture of the uterus; Porro operation; recovery.

Pelvic diameters: bisiliac 23 cm., bispinous 21 cm., bitrochanteric 25 cm., Baudeloque 15.2 cm., oblique conjugate 9.5 cm., true conjugate 7.5 cm.

Mrs. S——, aged thirty-one years, weight one hundred and fifty pounds, robust German peasant. Her last menstruation occurred January 9, 1897. Pregnancy passed without unusual incidents. Labor began October 22, 1897, at 5 A.M.; the membranes broke at 6 A.M. She was examined by her attending physician some hours later and he noted that the head had not engaged, also that the partially dilated cervix was somewhat swollen. Drs. Ost and Bailey saw the case at 9 A.M. on the 23d. They found that the pains were not so powerful as previously; the contraction ring was near the navel; the abdominal walls were sensitive to pressure; the fœtal dorsum was in front and to the right; the cervix was swollen but completely dilated, the presenting part above the brim. The child was living.

Drs. Ost and Bailey realized the grave danger of impending rupture; perforation and extraction by the cranioclast was decided upon, and immediately begun under deep anæsthesia. Notwithstanding the removal of the entire vault by the craniotomy forceps, they were unable to deliver the base on account of its massiveness and large size. Laparotomy now appeared to them the proper method of delivery. The writer saw the case with these gentlemen at 10 A.M. At this time the patient's general condition was good; pulse, 108; no fever. The uterus was noticeably movable, but its contour was not decidedly altered. There was some emphysematous crackling detected over the hypogastric region extending laterally into both iliac regions. The contraction ring was obliquely upward from right to left just below the umbilicus. The catheter brought away 60 c.c. of clear urine. There was slight but continuous bleeding from the uterus. There was no injury of the vagina or portio vaginalis. The greater portion of the calvarium had been removed; the head was very movable. On passing the hand into the uterus a large irregular rent could be felt in the lower segment, severing in a transverse manner nearly three-fifths of the cervix from the body. The hand was not passed beyond the uterus. There was no apparent prolapse of omentum or intestine. Since laparotomy would be the operation of necessity, no attempt was made to determine whether the peritoneal cavity had been opened or not, for fear of carrying infection into the parametrium. The wound in the uterine wall gaped nearly 5 cm. on the left side. Twenty minutes later the abdomen was opened in the middle line. The uterine serosa presented many emphysematous blebs over its entire aspect; extensive suggillation of the pelvic subserosum could be seen, which crepitated on pressure. About 300 c.c. of blood lay posterior to the uterus, but no active hemorrhage was apparent. By passing the hand down into Douglas' pouch a rent could be felt in the posterior wall of the uterus involving about 4 cm. of its investment.

The blood was quickly removed from the belly; sterilized towels were packed behind the uterus to protect the intestines; the uterus was incised in the middle line and the fœtus extracted. The placenta, which was adherent to the rear and upper wall, was not removed. The vesico-uterine plica was next incised, the bladder separated by blunt dissection, and two fixation needles pushed through the uterus a little below the level of the lower angle of the tear; an elastic ligature was applied and the uterus amputated from its remaining attachments. Fixation of the stump in the lower angle of the wound, drying of the peritoneum, and closure of the belly completed the operation. Recovery was uneventful. The decerebrated fœtus measured 48 cm., and weighed 4,760 gm. No measurements of the head could be made. The photograph of the uterus was taken after the specimen had been eleven months in alcohol, which caused much shrinkage, the result being that the upper limit of the tear appears in thicker tissue than was really the case. Inspection of Fig. 1 shows the tear beginning at *c*, extending downward about 4 cm., corresponding to the peritoneal tear; then the uterine lesion continues irregularly from *c* to *b* to *a*, that is, to a point a little anterior to the insertion of the base of the broad ligament; this portion of the tear was entirely subperitoneal.

Remarks: Beyond doubt this was a typical spontaneous rupture according to the teachings of Bandl. The weakening of the uterine contractions prior to any operative attempts shows that rupture had probably already begun; the rule being for the contraction to become more and more violent until the uterine fibres give way, although Fritsch[1] claims that the differentiation of rupture threatened from the beginning is by no means easy, because as soon as the innermost layers of muscular fibres have separated rupture has already become actual, and any additional increase of intra-uterine tension, such as the passage of the hand into the uterus, the insertion of forceps blades, or pressure on the uterine fundus, will result in the more or less complete and extensive breach of the uterine wall, the degree of laceration depending on the amount of uterine energy. The diagnosis of this case was relatively easy, and the question whether the peritoneum had been opened or not could probably have been determined by simply passing the hand through the tear. But should this be done as a routine measure? For the following reasons I would reply with an emphatic negative: When there has been instrumentation, there is also infection of the genital tract corresponding to the extent of the field traversed during the manipulations. You can easily prove this statement for yourselves by the culture tube and microscope, if you entertain any doubt concerning the accuracy of this statement. We also know that pathogenic organisms may actually lie at the edge of a wound, and notwithstanding primary union will occur if the infectious material is not carried into the wound by overzealous handling. You have all seen proof of this while attending the cut fingers of the dirty-handed factory boy. To pass the hand into the belly in suspicious cases is to risk carrying infection into tissues infiltrated with blood and therefore peculiarly susceptible to progressive infections, and the question of preventing the spread of infection is now the most difficult one. Ludwig[1] asserts that the peritoneum will not infrequently adapt itself to the examining fingers so gently as to deceive one and give the impression that the peritoneum has been perforated when in reality it has not. Another objection to this method of examination is the probability of the admission of air to the pelvic connective tissue. If this complication has not resulted from the circumstances attending the rupture, we ought not to induce such a state. Indeed ante-uterine emphysema or an emphysematous crackling of the abdominal walls should be sought for, not only because it favors the invasion and spread of pathogenic micro-organisms, but also because its presence is an almost pathognomonic sign of uterine rupture; the only exception being its occurrence from decomposition of the fœtus in utero. The presence of subperitoneal emphysema is also an indication for early and radical operation, as will be seen from the following notes taken from a paper of Dischler's[2]: McClintock's case was fatal several hours after delivery; Winckel's first case, forty-six hours post partum; both patients probably died from the entrance of air into the venous system. Paulli's case was fatal eight and one-half hours post partum; Jolly's, eleven and three-quarter hours after delivery; Winckel's second case, twelve days after labor; Löhlein's first case, eight hours, his second case, ten days post partum; Bayer's, two days after birth. All these patients died of sepsis. On the other hand, in the cases of Leopold, Frank, and Halbertsma, recovery took place after the Porro operation; of Knauer,[1] after abdominal panhysterectomy; but Dischler reports a personal case in which recovery resulted after gauze packing. Dischler after a careful study of this condition arrives at the conclusion that subperitoneal emphysema is a valuable sign of uterine rupture, and that an emphysematous state of the pelvic connective tissue is a serious menace to the woman's life for the reasons which have already been stated, and that radical methods of surgery—notwithstanding the recovery in his own case by the gauze treatment—are indicated whenever it is encountered with uterine rupture.

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[1] Greig Smith: "Abdominal Surgery," vol. i., p. 407.

[1] "Die Behandlung der Uterusruptur" Verhand. d. Deutsch. Gesell. f. Gyn., vi., p. 8.

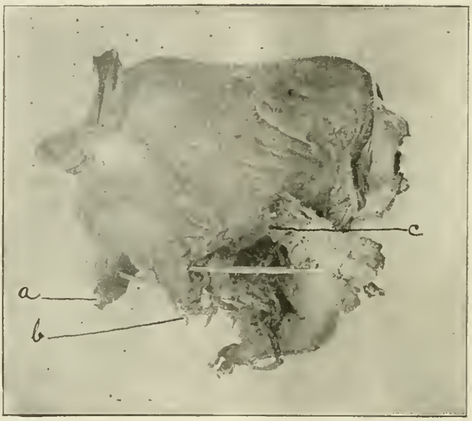

FIG. 1.

Irregularity of the uterine quadrant is regarded as a good sign of uterine rupture but was not present in this case, as there was no large collection of blood in the form of hæmatoma, and the fœtus did not leave the uterine cavity. The contraction ring was well marked and characteristic. Mobility of the uterus was readily demonstrated. The Cæsarean section was absolutely indicated here on account of the large head and the resistance of the fœtal base. Supravaginal amputation of the uterus was added because the uterus was so extensively injured, and because of the certainty of rupture in subsequent labor if conservation had been attempted, since the pelvic contraction would remain.

CASE II.—Vpara; complete rupture of the uterus with partial escape of the fœtus into the abdomen; pelvic obstruction by dermoid ovarian tumor; intrapartal vaginal ovariotomy and vaginal Cæsarean section; recovery.

Pelvic diameters: bisiliac 28 cm., bispinous 26.2 cm., bitrochanteric 30.5 cm., Baudeloque 20.3 cm., oblique conjugate 14 cm., true conjugate 11.7 cm.

Mrs. K——, Jewess, aged forty-three years, weighing one hundred and fifteen pounds, and wiry; she was married when seventeen years old. Her first, second, and third confinements were natural and averaged nine hours in duration. Her fourth confinement was in 1892; it lasted thirty-four hours, was followed by fever and much pelvic distress, but the midwife had not considered matters serious enough to call a physician, although the patient was confined to bed for five weeks. Since then and until the last conception occurred, she has complained of dragging pains, dyspareunia, and vaginal discharge. Her last menstruation was November 30, 1897. During the last four months of the present gestation she had to wear an abdominal binder to obtain relief from the distress caused by anteversion of the gravid uterus. The present labor began at 2 A.M., September 9, 1898. A midwife was in attendance. The membranes broke at 11 A.M., and the pains continued strong until 4 A.M., September 11th, when the patient complained of feeling weak; the midwife noticed that the contractions also became feebler and were separated by longer intervals. She thereupon ad-

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[1] "Klinische Beiträge zur operativen Therapie der Uterusruptur." Wiener klin. Wochenschrift, 1897, p. 290.

[2] "Ueber subperitoneales Emphysem nach Ruptura uteri." Archiv f. Gynäk., Bd. 56, S. 199.

[1] Wiener klin. Wochenschrift, 1897, S. 254.

ministered several doses of ergot, which increased the pains, although she noticed no descent of what she presumed to be the presenting part. Dr. H. B. Epstein was summoned and arrived at 7 A.M. He found the patient weak, with a temperature of 101° F.; pulse, 100 but feeble; the abdomen was very sensitive but soft because the abdominal walls were very thin and flabby. By gentle palpation he found the uterus contracted, reaching about 3 cm. above the umbilicus. The fœtal extremities were palpable in the peritoneal cavity, but no fœtal movements or heart-sounds were discernible. Indagation showed the vagina obstructed in the upper part by a hard, fixed tumor springing apparently from the rear. The obstruction was so complete that the finger could not reach the cervix. The doctor made the diagnosis of complete rupture of the uterus with partial escape of the fœtus into the abdominal cavity; he advised operation, and requested the writer to see the case with him. We agreed on immediate abdominal section, but on presenting the decision to the husband and some of the relatives who were present, they would permit only such operative intervention as could be done without cutting the abdominal wall or removing the uterus. We therefore concluded to attack the growth from the vagina and then deliver by the natural passages. Preparations were made for operation, and additional assistance was summoned. The catheter brought away about 80 c.c. of clear urine. The patient was anæsthetized with ether, placed in the lithotomy position, and the bladder and vagina were thoroughly irrigated. The labia and vaginal walls were retracted to expose the neoplasm. An incision was made in the median line about 12 cm. in length, which bled profusely; the adhesions were so dense and tough that the scissors were brought into requisition and applied freely until the pedicle was reached. Owing to the largeness of the tumor it became necessary to open it; much malodorous material and hair having been removed, the edges of the cyst wall were rolled in and sutured to prevent soiling of the field, and then dissection was continued with the scissors and fingers until the pedicle was isolated. During this time 1,200 c.c. of decinormal salt solution were introduced into the veins of the arm. A curved clamp was applied to the pedicle and the tumor cut away. The slender pedicle was tied off and allowed to retract. Many small vessels also required ligature. Bloody serum, clots, and meconium escaped from Douglas' pouch, which had been thoroughly opened during the dissection. The bleeding was now entirely controlled, and we turned our attention to the delivery of the fœtus. As a result of the low form of chronic inflammation around the tumor the cervix had become converted by induration into a hard, unyielding mass; all attempts at dilatation failed. Delivery was attempted by passing the hand into the belly through the Douglas incision to ascertain the feasibility of delivering by version through this channel, but it could be felt that the fœtus was grasped so tightly about the neck that traction would enlarge the uterine wound, and besides there was not room enough to permit the manœuvre successfully. The fœtus had escaped through a rent in the posterior wall of the uterus, nothing but the head remaining in utero. The only alternative remaining was vaginal Cæsarean section. The vaginal fornix was incised in front in the median line, the bladder separated to the replica, and several bleeding vessels were ligated. With heavy scissors the anterior lip of the uterus was split in the middle line to a distance of 5 cm. from the os externum. The rear wall, which consisted of a bridge of tissue intervening between the external os and the transverse tear in the lower segment (some 6 cm.), was also split; there was not much bleeding from the cervix on account of the induration, but above hemorrhage was decidedly free. The Taylor blades were now quickly applied and the child was extracted with ease, the placenta following. The uterus contracted firmly and all bleeding (above the ordinary) ceased. The vagina was now thoroughly sponged, then the peritoneal cavity cleansed with gauze. Another 1,000 c.c. of decinormal salt solution had been transfused during this period. The rupture proved to be a large, ragged transverse tear in the lower segment, so we attempted to draw it together with sutures. Slender Péan retractors were inserted in such a way as to retract the uterine and vaginal walls, the uterine flaps also being drawn divergent by means of slender volsella. Only two sutures could be placed, but they sufficed to appose the ruptured surfaces. The Cæsarean wounds were then closed by a few interrupted catgut sutures excepting the lower portions, which were left open for the purpose of uterine drainage. Three sutures closed the anterior wound of the fornix. The incision in Douglas' pouch was not closed. Gauze was passed into the peritoneal cavity, and the vagina filled loosely with gauze to absorb the products of drainage from the peritoneum.

The operation lasted two and three-quarter hours, the patient leaving the table with a pulse of 156 and a temperature of 97° F. By warmth and stimulation the pulse soon fell to 100, but in the evening of September 11th it went up to 140 and the temperature to 102.5° F. The abdomen was distended and much pain was complained of. Salines and the ice-bag were ordered, and by the 15th the temperature and pulse rate had fallen to the normal. The gauze had been changed daily. Five weeks from the operation the patient was allowed up. She was examined on the 9th of March, 1899. It was found that the induration had almost entirely disappeared; the uterus was retroflexed and adherent; the deep antero-posterior scars could be felt, but otherwise her condition was good, and she felt no distress.

The fœtus measured 32 cm. and weighed 2,600 gm. The suboccipito-bregmatic diameter was 8 cm.; biparietal, 8.2 cm.; occipito-mental, 13 cm.

Remarks: Several factors contributed to the occurrence of rupture: uterine anteversion, the fixed ovarian dermoid, and the chronic induration of the cervix and neighboring soft parts. The uterine anteversion was certainly a fortunate coincidence, because the fœtus was directed against the rear wall of the uterus, and the injury therefore was comparatively innocent as compared with ruptures occurring in the anterior wall of the uterus. The anamnesis indicates that the tumor must have caused the delay and subsequent complaints in the fourth labor. Pelvic obstruction by ovarian tumor is not a frequent cause of uterine rupture during labor. McKerron[1] collected one hundred and eighty-three instances of prolapsed ovarian tumors complicating pregnancy, but only three resulted in uterine rupture. The patients all died. Kerswill[2] reported three instances, two of which were fatal. Hintze's[3] case resulted in recovery after laparotomy, but was complicated by pneumonia and pelvic abscess. Subperitoneal emphysema could not be detected, neither was undue mobility present. This case demonstrated in a surprising manner how tightly the fœtal neck can be incarcerated by the uterine wound. The tumor so completely blocked the vagina that the cervix could not be indagated, thus leaving us entirely in the dark concerning the state of the cervix until the tumor had been removed. Given a case as related, is it justifiable as a rule to submit the patient to intrapartal vaginal ovariotomy? The answer should be, no. The shock resulting from two and three-quarter hours of anæsthesia, manipulation, and loss of blood is much greater than that of a twenty-minute abdominal section. The general rule should be applied here as in other surgical emergencies; that is, to relieve the individual of immediate peril. The deep shock attending uterine rupture is a bar to lengthy operations, although this case demonstrated in a superior manner how much more the patient can endure when her intestines are not exposed. If I were to meet the same condition as in Case II. minus uterine rupture, I would follow the advice of Löhlein[1] and perform intrapartal ovariotomy. The contents of the tumor were so thick that a trocar could not have emptied it. Abdominal section, extraction of the fœtus, cleansing of the peritoneum, supravaginal amputation, and provision for drainage was the plan settled upon before submitting the same for approbation to the relatives, and notwithstanding the successful issue of this case and much reflection, this plan appears the best, leaving the tumor unmolested until the patient is better able to stand its removal.

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[1] Martin: "Die Krankheiten der Eierstöcke," Bd. i., p. 506.

[2] *Ibid.*

[3] Frommel: "Berichte," Bd. xi, S. 734.

CASE III.—IVpara. Incomplete rupture of the uterus involving the bladder; escape of the fœtus into the right broad ligament; vaginal panhysterectomy, abdominal section for uncontrollable hemorrhage; recovery; pelvic measurements normal.

Mrs. G——, thirty-five years old, weight one hundred and thirty-five pounds, American. She was submitted to vaginal section in 1896 for a mural teleangiectatic myoma developing in the right side of the uterus, involving the corpus and upper part of the cervix and bulging into the right broad ligament. The right uterine and ovarian arteries required ligation on account of the very free hemorrhage. For this purpose chromicized catgut was employed. The uterine cavity was not opened during the removal of the tumor, but the bed of the neoplasm could not be accurately sutured. A physical examination conducted on August 21, 1897, showed the patient's pelvic organs in a very satisfactory condition. She menstruated the last time in April; her gestation passed without abnormal manifestations. Her previous labors averaged twelve hours in duration. Labor began at 5 P.M., December 19, 1898. Dr. H. F. Cook examined her at 8:30 P.M., and found the uterus sinistroverted, the contractions strong, the os dilating, membranes unbroken, but the head not engaged in the superior strait on account of the malposition. The fœtal heart was audible on the left. He placed the patient on the opposite side and matters appeared to progress favorably. The maternal pulse was 75 per minute; no fever. At 9:30 P.M., during a contraction the patient complained of fluttering at the heart, extreme weakness and pain in the right side; marked facial pallor and drawn features appeared. The pulse became very weak and rapid. Vaginal examination showed the cervix dilated to about three inches; the amniotic sack was unbroken, but instead of the head the foot presented. The doctor's left hand plainly felt the contracting uterus through the thin abdominal walls, and the fœtus in the right iliac region. Realizing at once the true state of affairs he broke through the membranes, seized the feet, and delivered a deeply asphyxiated male child. Much blood began to flow from the uterus. The placenta was removed by the hand. The doctor passed his hand carefully into the uterus and felt an irregular gaping tear extending from the middle of the right side to the right cornu. As the patient complained of an urgent desire to urinate, the catheter was passed and brought away a small amount of very bloody urine. The uterus and vagina were tightly packed with sterile gauze and a tight binder applied around the abdomen. It was now 10 P.M.; the pulse was 126, the temperature 98° F. There was no external bleeding, and after partaking of some hot tea the patient felt better. The placenta and membranes were now examined and exhibited but one opening, corresponding to the opening made by Dr. Cook. The amnion must, therefore, have enveloped the fœtus during its extrusion into the broad ligament. At 11 P.M. the pulse was 136 per minute, the temperature 98° F.; at 11:30 P.M., pulse 142, temperature 98° F. The doctor concluded that hemorrhage was going on in the parametrium or peritoneal cavity, and prepared for immediate operation. A little later the narcotized patient was placed in the lithotomy position. As the writer commenced the operation, 1,800 c.c. of artificial serum were thrown into the median basilic vein. After the gauze was removed from the vagina and uterus, and the field cleansed, the fornix was incised around the cervix; the bladder was detached with some difficulty because the rent in it communicated with the enormous cavity in the broad ligament, and also because the connective tissue of the paravesical space was so infiltrated and distorted by liquid and clotting blood as to render the landmarks very obscure. The hemorrhage from the incision was readily checked by strong downward traction on the uterus by the volsellum attached to the cervix; indeed, after separation of the posterior attachments the uterus could be developed with amazing ease. The left broad ligament was tied off with six ligatures of catgut; on the right side the broad ligament was so disorganized, and the peritoneal layers were so distended and distorted by the larger clots, that I concluded to morcellate the uterus in order not to include the ureter in the ligature. After this was done it was seen that no semblance of a broad ligament remained; the uterus was attached merely by peritoneum and a few shreds on the right side, and the blood was welling out from the side of the pelvis. The stump was cut away, and we tried to pick up the bleeding vessels with clamps, but without success. After losing twenty minutes in futile attempts because the oozing and clotting blood obscured the field, the abdomen was opened in the middle line with the patient in the Trendelenburg position. The wound retracted to the right; the ovarian and uterine and many smaller vessels were tied without further trouble. Clots were turned out, gauze was placed in the crater of the broad ligament, the end of the gauze led into the vagina, and finally the belly wall was closed with suture. The operation lasted fifty-seven minutes. The pulse numbered 180 beats per minute when the patient left the table. Altogether 3,000 c.c. of salt solution had been thrown into her venous system. She rallied nicely from the shock. The vesical wound closed on the eighth day. Convalescence was smooth. The child measured 37 cm., and weighed 2,300 gm. Biparietal diameter 9.5 cm., sub-occipito-bregmatic 7.9 cm., occipito-mental 13.4 cm.

Remarks: Unfortunately, the portion of the uterus containing the tear was cast away by an attendant before I had time to place it in safety, so that we are left to conjecture the condition of the uterus. However, it seems most likely that the weak scar in the uterus permitted a sacculation which gave way during a uterine contraction. The moral learned is, to remove the uterus whenever accurate suture of the wound is not possible during conservative myomectomy. An important and serious feature of this case was the vesical laceration, because of the great risk of urinary infiltration of the parametrium and consequent sepsis. Bonnaire[1] reported five cases, all of which were fatal. The first three cases were treated by vesical drainage and conservative surgery, and the last two by abdominal section.

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[1] "Erfahrungen über vaginale Bauchschnitt-Operationen," S. 98.

[1] "Des ruptures vésico-utérines dans le travail de l'accouchement." Arch. de Tocologie, 1891, p. 391.

The diagnosis of this case was easy. Subperitoneal emphysema was not present, although the peritoneum was stripped from its attachments as far up as the right kidney, probably because the fœtus pushed its amniotic envelope before it and thereby protected the connective tissue from contact with air. McLean[1] believes that this envelopment of the fœtus by the membranes is a not infrequent occurrence, and lays much stress on the rôle it plays of preventing septic material from contaminating the parametrium or peritoneal cavity.

During a discussion at the Obstetrical and Gynæcological Society of Vienna, R. Braun von Fernwald[2] expressed some apprehension that in rupture of the uterus, when the peritoneum, and particularly the ligamental peritoneum, is extensively lifted up and torn from its attachments, vaginal extirpation would meet with difficulties which would make laparotomy preferable. If vaginal hysterectomy is decided on as the preferable method, no great amount of time should be wasted in futile attempts to grasp the divided vessels with clamps; the abdomen should be opened and the arteries secured, because these patients as a rule have lost much blood before the operation and are not able to stand another serious hemorrhage. The vaginal operation should be the operation of choice whenever the prevention or amelioration of sepsis is required by the removal of the uterus, because of the greater facility for drainage of the peritoneum afforded through the vagina. The vesical injury impelled me to select the vaginal method, although I was aware of Braun von Fernwald's statement. I was also aware of Bonnaire's results with abdominal section for rupture of the uterus complicated by vesical laceration, and was therefore prepared to open the abdomen if necessary, because I believed the removal of the uterus would permit the urine to flow away from the lacerated and infiltrated connective-tissue surfaces. Permit me to give you an outline of Bonnaire's[3] cases submitted to ventral section. (1) A XVIpara was submitted to four fruitless attempts at delivery by the forceps, being finally delivered by version. Bonnaire believes that the forceps caused the injury to the uterus and bladder. The next day she was operated upon by abdominal section. The tissues were in such a state that he stitched the uterus to the parietes and left the wound open so as to drain the bladder through the abdominal wound. Death occurred twenty hours later. (2) A primipara sustained a spontaneous rupture of the uterus involving the bladder. The abdomen was opened, the fœtus extracted, and the vesico-uterine wounds were drained by stitching them into the abdominal wound. As a result of this experience Bonnaire concluded that supravaginal amputation of the uterus should be performed with provision for drainage through an incision in Douglas' pouch. To my mind this method does not do away with the worst feature of the case, which is the danger of allowing decomposing urine to flow over the lacerated and infiltrated wounds, particularly when one considers the roundabout manner proposed of draining the discharges through an opening in Douglas' pouch. After the uterus is removed, the bladder sinks down and the vesical laceration can be almost entirely walled off from the general cavity of the peritoneum and the parametrium. This I have been able to demonstrate several times when the bladder has been injured during hysterectomy. The indication in these cases is pointed by the wounded bladder after the question of hemorrhages has been settled, for the arrest of hemorrhage is only the milder element in the mortality rate; Koblank's statistics show that more deaths occur from sepsis than from hemorrhage, after rupture of the uterus. A ruptured bladder requires the freest possible drainage as early as possible after the injury. The infiltrated state of the connective tissue with blood, and the bruising of the wounds, dispose the patient to the most violent septic infections when urine flows over them; the swelling and distortion render any attempt to suture the bladder futile even if it were desirable, so that vaginal hysterectomy supplies the proper means for dealing with vesico-uterine rupture, though one must be prepared to do here as elsewhere in vaginal cœliotomy, that is, to open the abdomen if contingencies arise which cannot be successfully controlled from below, and finish the case. Vaginal hysterectomy has, however, proven itself the operation of election for ruptures on the anterior and posterior surfaces of the uterus, when the broad ligaments have not been torn up so extensively as to prevent the spurting vessels being secured through the vaginal incision. Total escape or even partial fœtal extrusion into the broad ligament always indicates so severe an injury that one may expect the landmarks to be so distorted and effaced, the tissues so torn up and mixed with clots, that only favorable cases can be finished from below. You may imagine what difficulties were encountered in our case, since eleven vessels on the right side required ligation after the abdomen was opened. Nevertheless we must wait for further experience with the vaginal route for this variety of injury before positive opinions can be given.

General Considerations.—An accident which notwithstanding the best treatment results in a loss of sixty mothers in every hundred instances makes it imperative that the question of prevention be given a prominent position. Dakin[1] claims that "rupture of the uterus is almost invariably due to want of attention on the part of the medical attendant, if he has had an opportunity of watching the course of the labor from the beginning." Grandin and Jarman[2] believe that rupture of the uterus will become rarer "as the benefits of strictly elective surgery become uniformly recognized." Its possibility should be kept constantly in mind, since the most diverse conditions obtain in the etiology of uterine rupture. For instance, v. Ramdohr[3] reported two fatal ruptures following primary inertia. Albers-Schoenberg[4] reported a case in which congenital dislocation of the left kidney into the cavity of the sacrum was the cause of dystocia. Braun v. Fernwald[6] averted rupture in an VIIIpara by Cæsarean section, the cause being the incarceration of a retroflexed horn of a bicornuate uterus. Sacculation was the probable cause of rupture in Case III. Hirst[5] saw a case in which the predisposition to rupture, he believes, was caused by general obesity. Fundal rupture occurs most frequently before the commencement of labor, and while not infrequent from external violence, it has occurred even during sleep.[7] But in most instances the essential factor disposing to rupture is over-retraction of the upper segment of the uterus with consequent excessive and therefore dangerous thinning of the lower segment and cervix. The most frequent cause of this condition is pelvic obstruction, the milder forms of pelvic contraction predominating. The latter condition should be sought for in every woman during pregnancy, or at the beginning of labor if one fails to see the case earlier. The severer grades of pelvic contraction are of course readily detected, but the diagnosis of milder forms of general contraction

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[1] "The Palliative Treatment of Rupture of the Uterus." American Journal of Obstetrics, vol. xxx., p. 47.

[2] Centralblatt für Gynäkologie, 1898, p. 21.

[3] *Op. cit.*

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[1] "Handbook of Midwifery," p. 492.

[2] "Practical Obstetrics," p. 430.

[3] American Obstet. and Gyn. Journal, vol. x., p. 46.

[4] Centralblatt für Gynäk., 1894, p. 1223.

[5] Monatsch. f. Geburts. u. Gynäk., vol. ix., p 454.

[6] "Textbook of Obstetrics," p. 544.

[7] Dewees: "Diseases of Females," p. 511.

can be made only by careful external and internal pelvimetry, and should always include the manual examination of the size and consistence of the fœtal head, the breadth and size of the fontanelles, since a relative disproportion may be caused by abnormal development of the head. During labor the frequency, strength, and effect of the uterine contractions should also be noted. If in spite of strong uterine contractions the head fails to descend, and frequent examinations of the abdomen prove that the upper segment of the uterus continues to retract as shown by the ring of Bandl and tension of the round ligaments during the contractions—particularly if the ring of Bandl becomes oblique, one or both poles near the navel and one or both round ligaments remain tense even between the pains—we may expect rupture to ensue unless the patient is speedily delivered. In the selection of methods, the choice will be given to one which does not increase the already excessive intrauterine tension, for in that case rupture will be precipitated. Prompt and deep chloroform narcosis should now be employed to stop the uterine contractions, and thereby retard further thinning until delivery can be effected.

In mild cases, the head presenting, the forceps may be applied with the greatest gentleness, but only by a skilful accoucheur. I have already stated that the dividing line between threatened and beginning rupture cannot be determined. Is it justifiable, then, to use the forceps in high degrees of thinning of the lower segment? Of Koblank's[1] eighty cases of rupture of the uterus, ten were caused by the forceps and all ten were fatal. "According to v. Winckel and O. Schaeffer, the high forceps operation gives the worst results to the mother, because the thinning of the imperilled side is exaggerated and therefore the rupture is hastened."[2] There are, then, two distinct rules applicable to head presentations with threatening rupture of the uterus: when thinning of the lower segment is slight and the round ligaments are tense only during the contractions, other things being equal, the child should be delivered by the forceps; but when the ring of Bandl is very high or very oblique, with one or both round ligaments tense between the pains, delivery should be effected by the Cæsarean section or craniotomy, as the case may require, for, as Fritsch[3] says, in head presentations the thinning of the lower segment is apt to be localized in one or other side of the lower segment, and the practitioner's desperate hope to save the child by the forceps often sacrifices both lives. The same holds good for version in head presentations, the hand being substituted for the forceps. The rule of action in transverse presentations is simpler, for when the child is living this fact indicates that dangerous thinning has not yet occurred, therefore version may be carefully attempted in deep narcosis. When the uterus is tetanic and the thinning great the fœtus may be considered dead; version is no longer the operation chosen, but embryotomy is now considered the proper procedure.[4] Malposition of the parturient uterus sometimes predisposes to rupture by directing the fœtus against the opposite wall instead of into the cervical orifice; it is to be treated by laying the patient on the opposite side or bandaging the uterus back, as the case may require. Placenta prævia is known to dispose to rupture by softening and thinning the lower segment at the seat of placental attachment. Braun v. Fernwald[5] believes that when rupture occurs it generally does so just as the extremity is pulled down through an insufficiently dilated cervix, and he advises therefore, in order to avoid this serious accident, to extract only after the cervix is thoroughly dilated.

When rupture has become a fact, the motives for action are to deliver without increasing the injury, to arrest hemorrhage, and to prevent or limit peritoneal infection. In head presentations with a living fœtus in utero, the child may perhaps be saved by the prompt application of the forceps without submitting the mother to undue risk, providing that she is in good condition, the os completely dilated, and there exists no decided pelvic contraction. Ludwig[1] apprehends (and the writer's opinion agrees) that even under these conditions there is much risk of increasing the extent of the injury or of converting an incomplete into a complete rupture. When the head remains in the uterus and the body has escaped, McLean[2] argues that the danger of increasing the size of the laceration no longer exists, because the intra-uterine tension has been decidedly diminished by the escape of the fœtal body, and he advises, instead of losing time by attempting to grasp the high and mobile head with the forceps, if any difficulty is encountered, boldly to advance the hand (closely applied to the child) into the uterus, to steady the organ with the other hand, to grasp a limb, and to rotate and deliver the child. McLean has reported a successful case treated after this fashion, but Ludwig and Koblank claim that withdrawal of the child through the wound increases the danger of hemorrhage. Perhaps their statement applies more correctly when the head has also escaped and is dragged back again. A dead fœtus would of course be delivered by perforation and cranioclasty.

Spontaneous rupture with transverse presentation results almost invariably in fœtal death. Embryotomy would therefore take precedence when the fœtus remained either entirely or in greater part in the uterus. If rupture occurs during version the operator must judge by the circumstances of the case whether he had better continue; in general the child should have a chance for its life. When the child has escaped entirely into the peritoneal cavity, the conjugate measuring less than 8 cm., abdominal section will be necessary to deliver it. Winter[3] proposed and carried out with success the plan of removing the fœtus from the peritoneal cavity through a very small incision in the abdomen, and then extirpating the torn uterus by the vagina. When the true conjugate diameter of the pelvic inlet measures 8 cm. or more, the writer proposes in such a case to extirpate the uterus by the vagina, since the primary danger is hemorrhage; then to grasp the feet and deliver through the natural passages.[4] This will obviate the objectionable features of abdominal section, but will be applicable only to cases having a true conjugate of 8 cm. or more. If the soft parts in any case should be similar to those in Case II., the operator should remember that the vaginal Cæsarean section is contraindicated when the true conjugate measures less than 8 cm.[5] The placenta is generally loose in the uterus or vagina, but it often escapes into the peritoneal cavity, and in some instances reported much trouble was experienced in finding it.

After the fœtus and membranes are born the maternal injury will require attention. The ruptured uterus presents to us a vascular organ frequently infected by repeated digital examinations and obstetric manipulations, the lacerated parametrium infiltrated with blood, communicating with the cavity of the uterus and therefore very liable to infection. If the patient fails

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[1] "Beiträge zur Lehre von der Uterusruptur," pp. 23 and 46 *seq.*
[2] *Ibid.*, 38.
[3] Verh. d. deutsch. Gesell. f. Gynäk., vi., p. 8.
[4] Fritsch: *Op. cit.*, p. 9.
[5] Centralblatt f. Gynäk., p. 513.

[1] Wiener klin. Wochenschrift, 1897, p. 289.
[2] American Journal of Obstetrics, vol. xxx., p. 46.
[3] Centralblatt f. Gynäk., 1898, p. 509.
[4] Dührssen: "Ueber vaginalen Kaiserschnitt." Samml. klin. Vorträge, N. F., p. 1375.
[5] *Ibid.*, No. 232, p. 1366.

to die of hemorrhage, the loss of blood has robbed her of her best barrier to infection. The requirements of an ideal procedure will be rapid and certain hemostasis, removal of infected tissues, and free drainage. The idea of restitutio ad integrum has attracted many surgeons, and has been advocated enthusiastically by Freund and Leopold in the form of laparotomy and suture of the tear. Theoretically nothing can be more correct, and some brilliant examples of successful results are reported. Nevertheless, as has been said before, with a mortality of sixty per cent. we should examine into the causes of the same and see what can be done to reduce it. The practical objection to abdominal section and suture of the wound in the uterus and parametrium is that the operation is a long one, that the majority of patients are in deep shock, that the long anæsthesia and exposure of the intestines and peritoneum increase still more this shock, and, further, the woman is left exposed to all the dangers of puerperal septicæmia because the case will seldom be aseptic. This method then would be applicable only to exceptional cases. To my mind there is another bad feature which should weigh against its acceptance, namely, the liability to rupture in subsequent labor. Subsequent ruptures are reported by Bandl, Wensel, Battlehner, Deutsch, Green, Alberts, Diepen, Bizzell, Rose,[1] Dittel,[2] and Walter,[3] and although later labors have been successfully conducted it seems illogical again to expose a woman to the serious risk of rupture. The frequency of puerperal infection spreading from the uterus with fatal results led Schultze[4] and Coe[5] to advocate abdominal hysterectomy. Reed[6] advises the removal of the uterus when it is much mutilated. Abdominal hysterectomy has never reached the popularity of supravaginal amputation of the uterus with fixation of the stump in the abdominal wound. The extirpation of the puerperal uterus by the abdominal route is always a time-consuming and sanguinary affair. By the Porro operation the abdomen can be opened, the fœtus extracted, the uterus removed, and the abdomen closed within fifteen minutes, as in Case I. The disadvantage of the Porro operation is sometimes the difficulty of applying the elastic ligature low enough to get below the rupture; it may be impossible in very deep tears, but reports demonstrate that the elevation and constriction of the stump usually suffice to close all bleeding vessels. A few instances are reported in which this failed to control all the bleeding points. Underhill[7] sutured with catgut the portion of the tear below his ligature on the cervix, and obtained a good result. Braun v. Fernwald[8] was obliged to place deep buried sutures in the floor of Douglas' pouch to control the hemorrhage. Ludwig[9] in a similar predicament resorted with success to gauze tamponade of Douglas' pouch. Had Case III. been submitted to supravaginal amputation, the elastic ligature would not have controlled the hemorrhage, because the vessels had retracted to the side of the pelvis. The Porro operation avoids the most serious features of abdominal hysterectomy; it will be often performed on account of the easy technique, and should be the method of choice by an operator of moderate experience. The treatment of a ruptured uterus by the tampon is only less objectionable than leaving the patient to the unaided efforts of nature. The arrangement of the muscular layers of the uterus is disposed in such manner that as they contract the cervix will be dilated by the impingement of the uterine contents against it. If the tampon be of an absorbent nature such as gauze, retracting fibres will push the mass of gauze against the the cervix, at the same time causing a gaping of the uterine wound (which is usually much the larger aperture), and the contents of the gauze will be squeezed into the belly. So the only remarkable feature about a case treated by the gauze packing or gauze drainage is recovery of the patient, for gauze drains only until its meshes are filled with fibrin, and this fibrinous deposition occurs as rapidly as the gauze is packed in. Dangerous hemorrhage occurs from the vessels outside of the uterus over which the gauze tampon has no control; the bleeding often ceases for several hours after rupture on account of the cardiac depression, only to recur with a fatal issue; thus the tampon gives a false sense of security. The occurrence of secondary hemorrhage is illustrated by a case of Gessner's,[1] in which the rupture was not detected until the fifth day after labor; during urination fatal hemorrhage occurred, and the autopsy revealed a rupture in the left lower segment of the uterus with a large subperitoneal hematoma extending to the kidney. Doléris and Bonus[2] also report an instance of rupture of the uterus with sudden death on the fourth day from hemorrhage; these cases were untreated, but Koblank,[3] Freund,[4] Loin,[5] and Winckel[6] report deaths of tamponed patients from hemorrhage, respectively on the seventh, ninth, third, and thirteenth days after delivery. As a result we are forced to conclude that there is no real safety from hemorrhage unless the torn arteries are secured by ligature. To the question then of "What shall we do when a case is seen six hours after rupture and no evidence of internal bleeding is apparent?" propounded by a learned writer, the most rational answer would be—operate, whether the tampon has been used or not. Backer[7] charges the tampon with increasing the size of the laceration; Fritsch and Chrobak[8] blame it for changing incomplete into complete ruptures. After a study of these clinical reports it becomes evident why the trend of opinion is increasing in favor of surgical intervention in all cases. The uterine tampon has, however, a definite place in our armamentarium as a temporary dressing to prevent prolapse of intestines or to retain them within the belly after reposition of prolapsed coils, pending the arrival of the operator or during transportation of the patient to a hospital.

To obviate the uncertainty of the uterine tampon and the risks of abdominal section, obstetricians have attempted to close the rupture and ligate the bleeding vessels from the vagina. Thus Green[9] advises drawing down the uterus with volsella after thorough exposure of the parts and applying sutures directly to the bleeding parts. Cholmogoroff[10] succeeded in suturing a bad laceration of the uterine lower segment by the vaginal route. The patient was a IVpara, bleeding profusely after a breech birth; the rupture was 10 cm. in length, situated about 3 cm. above the external os in the anterior wall of the uterus; the bladder was not injured. The placenta was removed from the abdominal cavity through the uterine wound. The cervix was steadied with volsella; the torn edges were trimmed evenly with scissors and closed with interrupted sutures, with the exception of one corner which was left open for drainage by a strip of gauze. She recovered. Cholmogoroff believes that uterine ruptures can be sutured from below, providing the tear is below the contraction ring. In Case II. suture of the rupture was relatively easy because the Cæsarean incisions permitted the approach with needles and needle-holder, but otherwise it would have been impossible. Vaginal suture will be limited to a very few favorable cases, as the objections to leaving a torn uterus in the woman obtain, and more particularly because bleeding vessels may be overlooked. Indeed, even after opening the abdomen one cannot always see where the bleeding vessels are located without opening up the pelvic serosa.

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[1] Koblank: *Op. cit.*, p. 37.
[2] Archiv f. Gynäk., Bd. 44, p. 396.
[3] Frommel's "Berichte," Bd. viii., S. 676.
[4] Centralblatt f. Gynäk., 1886, p. 765.
[5] American Journal of Obstetrics, 1891, p. 587.
[6] *Ibid.*, vol. xxx., iv., p. 749.
[7] Edinburgh Medical Journal, 1891, p. 206.
[8] Wiener klin. Wochenschrift, 1894, p. 34.
[9] *Ibid.*, 1897, p. 292.

[1] Zeitschrift f. Geburts. u. Gynäk., Bd. 37, p. 162.
[2] Gaz. hebdomadaire de méd. et de chir., 1896, p. 249.
[3] *Op. cit.*, p. 22.
[4] Zeitschrift f. Geb. und. Gyn., Bd. 23, p. 474.
[5] Clinique Bruxelles, tome iii., p. 177.
[6] "Berichte und Studien," Bd. i., p. 138.
[7] Centralblatt f. Gynäk., 1897, p. 139.
[8] Verhandl. der deutsch. Gesellschaft f. Gynäk., Bd. vi.
[9] American Journal of Obstetrics, vol. xxx., p. 41.
[10] "Zur Behandlung der kompleten Uterusruptur." Zeitschr. f. Geburts. u. Gyn., Bd. 31, p. 89.

I have already mentioned that the extirpation of the puerperal uterus from the abdomen is always a lengthy and bloody operation, attended with much risk of ureteral injury, because of the great vascularity incident to gestation. It was on this account removed only when extensively mutilated or septic, but recent experiences with the extirpation of the gravid and puerperal cancerous uterus by the vaginal route have demonstrated the extreme ease and rapidity with which the freshly delivered uterus can be removed; further, that as strong downward traction on the cervix is exerted its vascular apparatus becomes so attenuated by the traction that for the time being hemorrhage almost entirely ceases. It was at first feared that the volume of the puerperal uterus would be so great as to render extirpation difficult unless the organ was morcellated, but the experiences of Fritsch,[1] Chrobak,[2] Seiffart,[3] Winter,[4] Iwanoff,[5] Solowij,[6] and Dührssen[7] have demonstrated with positiveness the ease and rapidity of the vaginal operation.

Immediately and for several hours after delivery the uterus is very soft, compressible, and withal so loosely attached, owing to the softened condition of the ligaments, that the organ can be drawn out to the vulvar orifice, a corresponding diminution of its transverse diameter occurring. Fritsch concludes that vaginal extirpation is peculiarly adapted to the treatment of ruptured uterus, because after the abdomen is opened one frequently sees only a small opening in the peritoneum, whereas in the parametrium there is a large cavity, and he claims that when hemorrhage is severe after the child has been delivered by the natural passages, vaginal hysterectomy will give better results than the abdominal operation. Iwanoff arrives at the same conclusion after removing a ruptured uterus per vaginam. Winter believes vaginal hysterectomy preferable to abdominal extirpation or conservative treatment in all cases of complete uterine rupture. Johannosky[8] and Solowij are not so favorably impressed by the vaginal operation, because they cannot overlook the field of operation. The writer's experience with Case III. and the reported cases in the literature have convinced him that the vaginal operation for rupture of the uterus, like the vaginal operation for other pathological conditions, has its limitations, and is not applicable to all cases and conditions without discrimination. Partial or total escape of the child from the uterus results in such extensive displacement of the pelvic and abdominal structures that the damage done to the ureters or intestines may demand abdominal section as a supplement. For anterior and posterior ruptures vaginal hysterectomy has proven itself an ideal procedure, and in the light of my own experience I will add that it is the operation *par excellence* when the rupture is complicated by vesical laceration, also in those utero-vaginal lacerations which occur from neglected transverse presentations, and in all cases attended with septic endometritis. Another commendation is that it may be performed if need be without general anæsthesia, as in Iwanoff's case.

Technique of the Vaginal Operation. — The patient is prepared for abdominal section and vaginal hysterectomy, narcotized with ether, and placed in the lithotomy position. The catheter is passed, the urine withdrawn into a glass and inspected for blood. If the patient is undelivered, the true conjugate diameter will be measured again.

I shall suppose the case to be one in which the fœtus has escaped into the peritoneal cavity through a rupture in the anterior wall of the uterus, the placenta remaining in the uterus, with a conjugate diameter of the pelvis of 8 cm.

The placenta is removed from the uterus and all blood quickly swabbed away from the field. The labia and vaginal walls are drawn apart with broad retractors. The cervix is grasped on each side with a strong volsellum forceps and drawn down to the vaginal orifice; then with strong scissors the fornix is incised all around the cervix. Douglas' pouch is opened by blunt dissection, the retro-uterine ligaments are severed, the bladder[1] and the plica are opened, the uterus is retroverted, the ligaments are tied off from above downward, and then the uterus is cut away. The hand is passed into the wound and all tears of the peritoneum are followed up and examined for incarcerated intestinal loops, which if found are gently loosened, drawn down into the vagina, and inspected for injury before being returned into the abdominal cavity. The fœtus is grasped by the feet and delivered; if the intestines give much trouble by prolapsing before the child, Dührssen advises delivery in the Trendelenburg position. The peritoneal cavity is now cleansed of clots, amniotic fluid, and meconium, and gauze inserted for drainage. Saline transfusions should be administered with a free hand during the operation to replace the lost blood and combat shock. The after-treatment is that of an ordinary hysterectomy.

It will by this time be noted that the writer has not laid the stress which the text-books do on the differentiation of complete from incomplete tears. After all, this distinction is not of so much importance, for we have seen that in Case III., of subperitoneal rupture, the patient would have died of hemorrhage if the bleeding vessels had not been ligated, and Paschen[2] lost a case of incomplete rupture from pelvic abscess four weeks after the occurrence. On the other hand, in many cases of complete rupture the patients recover. Of main importance is the determination whether infectious material has entered the abdominal cavity or not; it seems to me that the thermometer is the more reliable guide, for Kroner found that all of his patients who had fever either before or during the period of rupture died of septic infection.

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[1] "Vaginale Totalextirpation eines carcinomatösen Uterus am Ende der Schwangerschaft." Centralblatt f. Gynäk., 1898, p. 1.

[2] Verhandl. der deutsch. Gesell. f. Gyn., vi.

[3] Centralblatt f. Gynäk., 1898, p. 121.

[4] *Ibid.*, p. 509.

[5] "Totale vaginale Extirpation einer während der Geburt rupturirten Gebärmutter." Centralblatt f. Gynak., 1889, p. 1.

[6] "Totalextirpation der Gebärmutter per Vaginam oder per Laparotomiam bei Gebärmutterzerreissung während der Geburt." Centralblatt f. Gynäk., 1899, p. 345.

[7] Volkmann's Samml. klin. Vortr., N. F., p. 1385.

[8] "Zur Uterusruptur." Prager med. Wochenschrift, 1894, p. 28.

[1] When vesical rupture complicates the uterine lesion, according to Dührssen it happens that trouble may be experienced in detaching the bladder. Dührssen, therefore, advises that the rear wall of the uterus be split to the fundus, the uterus retroverted and drawn out through the rear wound in the fornix, and the separation completed from above downward. Dührssen stated that the neglect to split the opposite wall of the uterus caused Winter so much difficulty that he was obliged to morcellate the retroverted uterus before he succeeded in detaching the bladder; this entails much loss of time.

[2] Centralblatt f. Gynäk., 1891, p. 915.

When intestines prolapse into the uterine cavity or the child escapes into the belly, the question of peritoneal laceration will be easily solved, but when delivery has been effected by the natural passages, even if the hand is passed through the uterine tear the untorn peritoneum often adapts itself so gently to the fingers that intestinal coils may be felt with deceiving accuracy, and undue force would rupture the delicate serosa. The writer agrees with those who regard every diagnosticated uterine rupture as an indication for operation; reasoning that if a woman subject to this calamity does not die of primary, she may die of secondary, hemorrhage, and that if she is fortunate enough to escape death from hemorrhage she will be still more fortunate if she escapes death by sepsis. I believe that prompt and radical surgical intervention presents the only solution to the question of reducing the mortality of uterine rupture, and the vaginal operation appears to answer both requirements, but should be supplemented if need be by abdominal section. Rupture of the uterus will always be a serious affair, and while the general rule enunciated holds good, the practitioner should not forget that his attitude must be modified by circumstances. To operate on a patient in collapse would only hasten death, but to transfuse several thousand cubic centimetres of decinormal salt solution into her veins will promptly revive her and give the surgeon time to remove her uterus and close the bleeding vessels. Neither should commencing peritonitis be regarded in any other light than as a peremptory command for immediate operation and provision for the very freest drainage, as patients not infrequently recover under the most adverse circumstances. Thus Reussing[1] reported an instance of rupture in which the fœtus remained in the abdominal cavity for three days before its removal by cœliotomy, but the patient recovered. What is known as conservative surgery should be avoided unless the relatives of the patient expressly forbid the radical procedures. If a conservative operation is performed one must be prepared for long suppurations and pelvic abscess; and if pregnancy occurs subsequently the practitioner will be called upon to choose either the Cæsarean section at term or to induce premature labor earlier in pregnancy. Should the undelivered patient be dying or just dead, the physician will examine for fœtal movements and heart sounds; if the child is living the post-mortem Cæsarean section should be performed. Kendall[2] reports two instances. The first child was born alive but died soon after; the second child was still alive a year later.

Résumé.—I. In threatened uterine rupture the woman is to be delivered at once by the method which does not increase the excessive intra-uterine tension.

II. After rupture occurs, delivery by the natural passages is permissible only if the uterine injury is not aggravated thereby.

III. If the true conjugate diameter of the pelvic inlet measures less than 8 cm. a completely intra-peritoneal fœtus should be delivered by abdominal section.

IV. But if the conjugate measures 8 cm. or more, the uterus should be removed by vaginal hysterectomy and the child delivered by the feet through the natural passages.

V. If life is detected in the child after the mother's death, the post-mortem section should be performed.

VI. The uterine tamponade is useful only as a dressing to prevent intestinal prolapse or to retain reposited loops of intestine within the abdomen until the case can be submitted to operation.

VII. Conservative surgery exposes the woman to the serious risk of subsequent rupture, and should therefore not be elected unless expressly commanded by the patient or immediate relatives.

VIII. Vaginal suture is open to the objection that bleeding arteries in the parametrium are apt to be overlooked.

IX. When laparotomy becomes necessary for the birth of the fœtus, the uterus is to be removed by supra-vaginal amputation, with the extra- or intra-peritoneal treatment of the stump, according to the exigencies of the case or ability of the practitioner.

X. Vaginal hysterectomy is the elective procedure in all cases, but should be supplemented by abdominal section whenever necessary.

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[1] Centralblatt f. Gynäk., 1895, p. 41.

[2] "Two Cases of Rupture of the Uterus; Post-mortem Cæsarean Section, etc." Virginia Medical Semi-monthly, vol. iii., p. 591.

LOSS OF HAIR; A CLINICAL STUDY FOUNDED ON THREE HUNDRED PRIVATE CASES.[1]

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In 1892 the subject of loss of hair was discussed by this association, following the reading of a paper upon the subject by Dr. George T. Elliot. In 1893 I published in *The American Medical and Surgical Bulletin*[2] a clinical study of one hundred private cases of loss of hair. Both Dr. Elliot and I maintained the same proposition, namely, that a disease of the scalp variously called seborrhœa, pityriasis, dandruff, seborrhœal eczema, or dermatitis was the cause of a great majority of the cases. In the present study I have not endeavored to touch upon any pathological or bacteriological question, but have simply tried to find out what my clinical experience teaches. I have chosen the term loss of hair rather than alopecia so that it would be readily understood that baldness was not present in every case. Most of the patients who consult us are *losing* their hair, and have not *lost* it.

Of the three hundred cases, a study of which forms the basis of this paper, one hundred and fifty-eight occurred in men, and one hundred and forty-two in women.

In this paper I have made no account of the nationality of the patients, as naturally the vast majority of them were natives of this country.

Condition: Married, 38 men and 61 women, or 99 in all. Single, 97 men and 60 women, or 157 in all. Widowed, 1 man and 7 women, or 8 in all. Not recorded, 36.

Occupations—of the men: Actor, 2; architect, 3; banker, 1; bookkeeper, 1; bookbinder, 1; broker, 9; butcher, 2; clergyman, 2; clerk, 20; commercial traveller, 1; dentist, 2; electrician, 1; engraver, 2; farmer, 2; grocer, 1; gymnast, 1; hotelkeeper, 1; lawyer, 8; lecturer, 1; librarian, 1; manufacturer, 2; mechanic, 4; merchant, 8; musician, 1; physician, 40; printer, 1; student, 13; tailor, 1; teacher, 4; telegrapher, 1; waiter, 1; not stated, 21. Of the women: Artist, 2; clerk, 1; domestic, 1; dressmaker, 1; glover, 1; housekeeper, 56; musician, 2; nurse, 3; physician, 1; proofreader, 1; reporter, 1; student, 1; teacher, 4; unstated, 67.

Age at beginning: From ten to twenty years, 27 men and 24 women, or 51 in all. From twenty to thirty years, 97 men and 50 women, or 147 in all. From thirty to forty years, 31 men and 36 women, or

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[1] Read before the American Dermatological Association, May 1, 1900.

[2] Amer. Med. and Surg. Bull., 1893, vol. vi., p. 1047.

67 in all. From forty to fifty years, 3 men and 17 women, or 20 in all. Over fifty years, 19 women.

The largest number of cases in any one year was 20 cases in the twenty-sixth year. The next largest was 18 in the twenty-second year. It is notable that 12 cases began under sixteen years of age.

Regions affected: General thinning, 21 men and 80 women. Crown, 56 men and 21 women. Crown and forehead, 18 men and 3 women. Crown and temples, 16 men and 2 women. Temples and forehead, 24 men and 8 women. Occiput, 1 woman. The tonsure was formed in 19 men and 3 women.

Diseases of the scalp and hair, as probable causal factors in the production of the loss of hair: Atrophia pilorum propria, 13 cases; atrophy of the scalp, 6 cases; canities, 9 cases; dandruff, 218 cases; dryness and heat of scalp, 6 cases; hyperæmia of scalp, 1 case; hyperidrosis capitis, 10 cases; keratosis capitis, 1 case; seborrhœa oleosa, 6 cases; erysipelas, 1 case.

General diseases as probable complicating factors: Anæmia, 15 cases; chorea, 1 case; constipation, alone 7 cases; with and without dyspepsia, 39 cases; gall stones, 1 case; gonorrhœa, 2 cases; gout, 1 case; hypochondria, 1 case; inebriety, 3 cases; insomnia, 2 cases; invalidism, chronic, 1 case; malaria, 10 cases; malnutrition, 1 case; menopause, 8 cases; neuralgia, 3 cases; nervousness, 11 cases; neurasthenia, 5 cases; obesity, 1 case; overstudy, 2 cases; over-training, 1 case; poor circulation, 1 case; spermatorrhœa (?), 1 case; urethritis chronica, 1 case; uterine disorders, 4 cases.

Family history: A history of baldness in the family was found in 132 of the 300 cases, as follows: Father only, 27 men and 6 women; father and paternal uncles, 13 men; father and paternal cousins, 1 man; father and paternal grandfather, 2 men; father, paternal grandfather, and brother, 1 man; father and brother, 17 men; father, brother, and maternal aunt, 1 woman; father and mother, 4 men and 6 women; father, mother, and brother, 2 men and 4 women; father, mother, and maternal grandfather, 1 man and 1 woman; father and sister, 1 woman; father and maternal aunt, 1 woman. Paternal uncle and brother, 2 men; paternal uncle, 3 men; paternal uncle, maternal grandfather, and uncle, 1 man; paternal grandfather and cousins, 1 woman. Mother only, 3 men and 13 women; mother and maternal grandfather, 1 man and 1 woman; mother and maternal grandmother, 2 women; mother and maternal aunt, 5 women; mother and paternal uncle, 1 man; mother and sister, 1 woman; mother and brother, 1 man and 1 woman. Maternal uncle, 3 men; maternal uncle and brother, 1 man; maternal aunt, 1 woman; maternal grandmother, 1 woman. Brother, 8 men; brother and sister, 1 woman. Sister, 1 woman.

What inferences can be drawn from these statistics?

1. It would seem at first glance that loss of hair was more common in men than in women, as 158 is to 142. But I feel sure that the proportion is not altogether correct, because it is well known that women value a good head of hair much more than do men. They will do everything in their power to save their hair. Men either regard the loss of their hair as inevitable, or will not take the time or trouble even to try to save their hair. It is therefore probable that the statistics represent fairly well the prevalence of loss of hair among women; but that they inadequately represent the prevalence of loss of hair among men, which is doubtless greater than they show. It can, then, be fairly inferred that loss of hair is much more frequent among men than among women, which is the general impression without the aid of statistics.

2. It would seem at first glance that the unmarried state is specially bad for the hair, as we find that there are 157 unmarried men and women to 99 married. But when we note that the number of the unmarried women (61) and of the married (60) is practically the same, while the bachelors outnumber the married men by 59, or are nearly three times as many, we suspect that our first inference is a little lame. The reason why the number of bachelors is so far in excess of that of the married men is found in the expression I hear so often from them: "I would not mind growing bald if I were married." When a man marries, grows old, and has resting upon him the task of winning a living for himself and his children, his personal appearance usually is a matter of secondary importance, and he bears the loss of his hair with equanimity. A woman, no matter how old she may be, nor how heavy her cares, still studies her personal appearance, and glories in her hair, or mourns its waning luxuriance. The correct inference, then, should be drawn from the statistics of the women, and that is, that neither the married nor the single state has any influence in the production of baldness.

3. We now come to the question: What influence does occupation have in causing loss of hair? My statistics show a great variety of occupations among those who are losing their hair. Two facts come out prominently, namely: (1) The great majority of my patients lead indoor lives. The 67 women put down as having no occupation belong to the leisure class of unmarried women, and are housed most of the time. (2) Nearly all of my patients belong to the intellectual class. That $13\frac{2}{3}$ per cent. of them are physicians does not necessarily mean that physicians are specially prone to loss of hair, any more than because $18\frac{2}{3}$ per cent. of them are housekeepers means that that occupation specially tends to loss of hair. And yet perhaps it does in both cases. The life of the physician and the housekeeper is alike in that their work is never done, and in that worry and nerve strain are constant elements. If we add together the actors, architects, bankers, brokers, housekeepers, lawyers, manufacturers, merchants, nurses, physicians, students, teachers, and telegraphers, all of which can fairly be regarded as occupations in which the elements of worry and nerve strain enter largely, we have 155, or more than one-half of our cases, subject to these influences. It may, then, be fairly inferred than an intellectual, indoor life, specially when coupled with worry and nerve strain, is a predisposing, if not a determining cause of baldness.

4. Without doubt my statistics show that the majority of the cases of loss of hair begin before the thirtieth year of age, sixty-six per cent. Further, more cases begin in the decade between the twentieth and thirtieth years than in any other decade, the largest number in any one year being 20 in the twenty-sixth year. It would seem, then, that if one passes the thirtieth year of age without showing signs of incipient baldness, the chances for keeping the hair intact are very much increased. This would seem to apply specially to men, though here again comes in the fact that married men care less about their hair than do single men. Here again, also, the figures in regard to the women are probably most to be depended upon, and we can infer that loss of hair occurs with rapidly decreasing frequency in the decades after thirty years, as represented by 36, 17, and 9.

5. My statistics show that loss of hair in women most often takes the form of a general thinning, while in men the whole top of the head is most often affected. The receding temple is very common in men, exceptional in women. Though not brought out in my statistics, I would say that I have come to regard the receding temple as a family trait, having often found it so in talking with patients. The tonsure was formed in only 19 of my male and 3 of my female patients. That the top of the head was so much more often affected in men than in women is doubtless due to the well-known difference in the make-up of the

scalp in the two sexes, the woman preserving the infantile fatty cushion under the scalp much longer than the man. If you put your hand on the head of a man you will usually find the scalp close down on the skull, while under the scalp of a woman you will feel a more or less thick layer between it and the skull.

6. As to the causes of loss of hair, apart from acute febrile diseases causing defluvium capillorum, which are not included in this study, we have predisposing and exciting causes. I believe that my statistics show that the great predisposing cause is heredity. We find that out of the 300 cases 132 have a well-marked family history of loss of hair. Without doubt in many of the cases of baldness in ancestors dandruff has played an important part. Still in a great many other diseases heredity is recognized as a predisposing factor, and it cannot be lightly set aside in the etiology of alopecia. I believe that in some families the hair falls at an early age without any discoverable cause in the scalp itself. The, to me, most interesting fact brought out both by my former statistics and the ones now before you is that the hereditary tendency to loss of hair runs in sex. So far as I know I am the first to draw the attention of the profession to this. If you study my figures you will find that when the father and father's family only show a tendency to loss of hair, there are 75 men and 21 women; while when the mother and mother's family only are concerned, there are 18 men and 32 women. When it was the father only who was bald, there are 27 men and 6 women; while when it was the mother only who was bald, there are 3 men and 13 women.

It seems to me that it is a fair inference to draw from the above that heredity is a factor of marked influence, a strong predisposing cause of loss of hair at least, if not in many instances the actual cause of baldness.

A glance over the list of complicating diseases noted in 122 cases shows us that they are all disorders that affect the general nutrition of the body. It is recognized that the hair sympathizes with the general nutrition of the body, falling out after fevers and the like. There does not seem to be any reason why it should not suffer in anæmia, 15 cases; dyspepsia, 30 cases; malaria, 10 cases; neurasthenia, 16 cases; and we see that it does. Therefore it can be stated as another conclusion that all diseases of lowered nutrition are predisposing, and at times determining, causes of loss of hair.

As exciting causes of loss of hair we find in ninety per cent. of all the cases some disease of the scalp or hair itself. In 218 cases, or 72⅔ per cent., there was dandruff. I use this term to include both pityriasis and seborrhœa sicca, both forms of seborrhœal dermatitis, so-called. In Dr. Elliot's statistics the proportion of dandruff cases was even greater, 88⅖ per cent. There is, therefore, no doubt that dandruff is found in connection with loss of hair in the majority of cases. It is a matter of common experience that dandruff may be present in large amount for years and the hair escape all damage. It does, however, antedate the loss of hair so often that it must be regarded as the most active exciting cause of alopecia.

I would state my belief in regard to the etiology of alopecia as follows: In a small minority of cases it is due to heredity alone; that heredity or any debilitating disease predisposes to loss of hair; that dandruff in some form is the exciting cause in the great majority of cases; that atrophic processes in the scalp, hyperidrosis and keratosis and a few other diseases may cause loss of hair in exceptional instances. Or, to state it differently, I believe that while it is possible for one without a family tendency to loss of hair to have dandruff for years without losing his hair, the same disease affecting one coming of a family the members of which lose their hair early is very sure to cause alopecia unless the dandruff is held in check by treatment. The important part played by dandruff in the production of alopecia is shown by the fact that if we can cure the dandruff the loss of hair is checked, unless the scalp has been too much damaged by the atrophic processes to which it gives rise. If the dandruff relapses the fall of hair will begin again.

Treatment.—On looking over my notes I find that I was able to follow only about a third of my cases long enough to draw conclusions in regard to the effects of treatment. Many of my patients were seen but once in consultation with other physicians. In others the calvities had gone too far for any hope of making the hair grow. But enough of them were followed sufficiently long, and from a number of them I have heard more or less directly as to the results of treatment to enable me to form quite definite ideas in regard to what may be expected from treatment.

If there is absolute baldness, and the scalp is atrophied and bound down, there is little use in trying to treat the case. All such a patient can do is to endeavor to stay the evil day by keeping his scalp in as good a condition as possible by hygiene, massage, and applying remedies for the dandruff if it is present. What the latter are will appear later. It is possible to stimulate the dying hairs for a time into a stronger growth, but ultimately calvities is inevitable.

I have had positive results in checking the fall of hair and increasing its amount by using precipitated sulphur 10 per cent. in a good cold cream with or without either salicylic acid, three to five per cent., or extract of jaborandi, a drachm to the ounce. These are my favorite remedies. The ointment proposed by Dr. Bronson, composed of ammoniated mercury gr. xx., calomel gr. xl., in an ounce of vaseline, has also done good service in some cases. In a few cases resorcin in solution and in increasing strength has proved helpful. On the other hand, naphthol and cantharides have proved perfect failures; resorcin has failed as often as it has helped; and my favorite sulphur preparations have failed about one-third times as often as they have been successful.

Medicated ointments and lotions are useful for overcoming the dandruff. I believe that there is no permanent cure for that disease, because it is parasitic, and the scalp once having been infected is all the more liable to reinfection. Therefore I am in the habit of telling my patients that they must expect relapses, and have their remedies constantly at hand so as to apply them as soon as the dandruff reappears.

For stimulating the growth of the hair I believe that there is only one remedy worthy of the name, and that is massage. For this a skilled professional is best, but a great deal can be done by the patient pinching up the scalp between the ends of the extended fingers of both hands for five minutes night and morning. Massage must not be used until the dandruff is checked.

To state it clearly, my treatment for the ordinary case of loss of hair with dandruff is as follows: I first attend to the general condition of the patient. The patient is given one of the sulphur preparations and is directed to use it once a day for three days, and then to wash the hair and scalp. Immediately after the hair is dried, the ointment is again applied and repeated every other day for ten days. The scalp is again washed and the ointment continued twice or three times a week until the dandruff is controlled, the washing being repeated from time to time. When the scalp is in good condition massage is ordered. If the patient will not use an ointment I order a lotion of resorcin, at first three and afterward five and ten per cent. strength, to be used morning and night. If the sulphur is used in the form of what my druggist calls "sulphur cream" it is not at all objectionable, and being used but twice a week or so, it is not so much trouble as it is to use a lotion twice daily. For a case of loss of hair without any apparent trouble with the scalp I rely mostly upon massage, using the sulphur preparation occasionally to keep the scalp a little oily.

Prognosis.—The prognosis is bad when calvities is already present. A bad family history as to the hair is a bad element in prognosis. The longer the dandruff has lasted the worse is the prognosis. It is less easy to help a man than a woman. The best prognosis is founded upon the patient being a woman without a history of baldness on the maternal side, the loss of hair not being of long standing.

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CELLULAR SPECIFICITY AND ITS BEARINGS ON NEOPLASMS.

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The question of the specificity of cells could not arise so long as their origin remained obscure; that is to say, until about 1840, when Schleiden for the vegetable, and Schwann for the animal kingdom, demonstrated that cells cannot arise *de novo*, as had been supposed, but only from pre-existing cells, and Virchow, applying their discoveries to pathological processes, formulated the axiom, "Omnis cellula e cellula." According to Virchow, the sole agents in regenerative and neoplastic processes are the connective-tissue cells, which, assuming embryological characteristics by a kind of atavistic change, are then enabled to differentiate themselves and form various tissues, of connective or epithelial types, according to circumstances. These views were generally adopted and held good until 1865, when Thiersch, after an exhaustive study of epitheliomas of the skin, arrived at the conclusion that the epithelial elements in these tumors are derived solely from the epidermis; the connective tissue taking no part in their development. Waldeyer followed suit in 1867 and 1872 with extended observations on epithelial, principally glandular, tumors, in two hundred of which he found that new-formed epithelial masses were always in connection with pre-existing epithelium, and there was no evidence whatever that the development of these masses proceeded from the connective-tissue cells.

Rémak had already maintained that from the moment the germinal layers are fully formed there can be no metaplastic interchange between the cells composing them, but beyond this he did not go, and it was not until the publication of Thiersch's and Waldeyer's researches that the theory of cellular specificity was generally adopted. From this time the idea rapidly developed, and has been carried to what appear absurd lengths by Bard, whose first article on the subject appeared in 1886. Bard starts with the ovum as the most complex cell, from which less and less complex cells arise by a process of what he calls dédoublement, in which the cells resulting from division are of unequal value—as opposed to simple multiplication, in which they are of equal value. He supposes the first division of the ovum to be such a dedoubling, giving rise to two less complex transitory cells of unequal value, which continue to increase by a simple multiplication until there is another dedoubling process, so that cells become less and less complex as they recede from the ovum; the finished tissue consisting of simple cells which can reproduce their own species only by a process of multiplication, and are unable to take on the properties of other species by metaplastic interchange. He expands Virchow's axiom into "Omnis cellula e cellula ejusdem generis," and draws up a scheme for a histogenetic tree in which the branches increase by dichotomic division, the nodal points representing the dedoublings and the final twigs the various species of cells.

Bard gets along swimmingly until he has to account for the appearance of ova and spermatozoa in the newly formed organism, which carries him into a maelstrom of speculation where no one can follow, for he has to assume that there are cells which have been derived direct from the ovum by simple multiplication and have never passed through stages of dedoubling. This not only contradicts his own view that the first division of the ovum is a dedoubling—a matter of little moment—but is utterly opposed to all that is known of the histogenesis of ova and spermatozoa. That they arise by differentiation of the columnar mesothelium of the peritoneum is a fact which cannot be disputed, and there is no evidence whatever to show that they are set aside from the beginning of things to fulfil their special functions.

Bard's ideas are evidently too simple for the German mind to grasp, so Hansemann, basing his belief in cellular specificity chiefly on the fact that each type of cell has certain mitotic characteristics peculiar to itself, elaborates a more complicated theory. He supposes that the ovum is a complex cell containing a large number of what he calls plasmas, each plasma having a potentiality of forming a certain type of cell. On repeated division each cell contains all the plasmas, but in unequal quantities, so that one particular plasma, Haupt or chief plasma, is developed in each cell at the expense of the other Neben or secondary plasmas. No metaplastic interchange can take place except between cells whose Hauptplasma is similar.

Supposing the ovum to contain equal quantities of three plasmas, 6*a*, 6*b*, 6*c*; on division one resulting cell may contain 4*a*, 3*b*, 3*c*, and the other 2*a*, 3*b*, 3*c*. In the first case, therefore, the chief plasma would be *a*, and the secondary ones *b* and *c*, and this inequality would go on increasing as the cells receded from the ovum. By this method he is able to explain the formation of new ova by supposing a gradual re-equalization of the plasmas; this re-equalization being the sole function of the ovum.

Both Bard and Hansemann maintain that the function of a cell is strictly limited by its origin; for example, certain cells are predestined to form fat, others bone, and yet others fibrous tissue, and between these there can be no interchange of functions. The same, in their opinion, holds good for the different kinds of epithelium. Facts, however, hardly justify these conclusions; it seems more probable that the function of a cell depends more on its environment than its origin, and that, except when the function is already of a highly complicated nature, cells may vary both functionally and morphologically within very wide limits if there is a change in their environment. Lubarsch says: "Such already differentiated cells always produce like offspring under like conditions, but only then."

All cells form certain derived products which must not be confounded with their products of excretion. The former may be called synthetical, and the latter analytical, products. The synthetical products may be (1) intracellular, as those of striated muscle or nerve cells, and contribute to the activities of the organism; or (2) extracellular, as those of connective tissue or epithelium, and contribute to the support of the organism.

I. Striated muscle and nerve cells, both functionally and structurally, have reached a very high degree of organization. No instance of metaplastic interchange between themselves or between them and any other group of cells has ever been observed, and they may safely be considered to constitute distinct species. Death is the only result of a change in their environment, so that their power of reproduction and tumor formation is practically *nil*.

II. In this group the synthetical products, after being formed, are removed from the cell and contribute in various ways to the support of the organism. It may be at once conceded that there are apparent exceptions to this rule as in the cells of the sebaceous glands and epidermis, but in these cases the cells themselves die and are cast off with their contained products, so that, as far as the living organism is concerned, the latter may be regarded as extracellular. In other instances, the formation of synthetical products is reduced to a minimum, as in the lining cells of ducts and vessels.

The cells forming this group may be subdivided into A, the epithelial, in which the synthetical products on being separated from the cell are removed to a distance, and B, the connective tissue in which they remain practically *in situ*.

A. The epithelial sub-group may be classified according to its morphological and functional properties:

Morphological.	*Functional.*
1. Stratified.	Defence—external influences.
2. Columnar.	Transmission or absorption.
3. Flattened.	Defence—internal influences.
4. Cubical or spherical.	Specialized secretions.

The functions of the first two classes are simple, and the cells manifest a comparatively low grade of organization in their capability of proliferation and regeneration, of metaplastic interchange, and formation of neoplasms if there is any change in their environment.

Their capability of regeneration is too well-known to be dilated upon, but it may be mentioned that Hansemann, Bizzozero, and other recent investigators maintain that in the normal adult organism mitoses can be observed in some tissues; in epithelial principally those communicating more or less directly with the exterior, as the epidermis with its hair follicles and sebaceous glands, mucous membranes of the intestinal and respiratory tracts, the epithelial recesses of the uterus, etc., and finally the ducts of glands, all of which can undergo physiological regeneration, *restitutio ad integrum*. Such mitoses are scarcely to be found in the more complicated glands, with the exception of the mammary and testicular, and when present indicate considerable proliferative power.

Metaplastic interchange between the first two classes may take place physiologically. Examples of this are monotremes, marsupials, and edentates, in which the teeth are absent or rudimentary, so that the task of mastication falls to the lot of the stomach, the epithelium of which takes on the functions and structures of the epidermis, even to the formation of keratohyalin, as shown by Ernst and Posner, the latter of whom remarks that keratinization is not a monopoly of the epiblast as had been hitherto supposed. Huxley compares the stomach of edentates with that of graminivorous birds, which is also lined with stratified keratinizing epithelium, but in his day the minute anatomy had not yet been fully studied. In the above instances the unusual environment necessitating increased defence is evidently the cause of the structural changes.

In the domain of pathology Virchow was the first to point out the change to flattened stratified epithelium, which often occurs along the track of the tracheotomy cannula; a similar change having been also observed in the nasal passages in ozæna, in chronic endometritis, and in inversion of the uterus. To these it may be objected that the change has been brought about by progressive invasion of the epidermis from without, rather than by metaplasia, but such objections can have no weight in the cases reported by Ernst, Siegert, Gruenwald, Ohloff and others, of primary keratinizing epitheliomas arising in the bronchi and gall bladder. Here the natural conclusion is that, in consequence of long-continued irritation from foreign bodies, the epithelium has to assume the defensive and changes its character accordingly. Such occurrences may be relatively frequent, but except when there was subsequent tumor formation would be liable to remain unnoticed.

That metaplastic interchange can take place between columnar and stratified epithelium seems certain, and they cannot therefore be regarded as distinct species, although they may be of widely different origin.

As regards neoplastic formation, it is astonishing how closely the cells of tumors derived from these two classes often resemble those of the parent tissue, although malignancy may already be pronounced, showing that their power of proliferation is great, even in the adult though not very highly differentiated condition. As examples may be quoted keratinizing epitheliomas of the skin, malignant adenomas of the rectum, and tubular carcinomas of the liver arising from the gall ducts.

A very generally accepted hypothesis, first mooted by Weigert, for the etiology of tumors is that of a disturbance of balance within the organism. Certain tissues become weakened and are unable to maintain their normal physiological resistance to the encroachments of other neighboring tissues which have retained their vigor. The functions of the cells under consideration being simple, they are less liable to regressive changes than certain others; any possible relative weakening of their neighbors constituting a change of environment for them, of which they are able to take advantage by virtue of their proliferative capabilities. This is in reality a regenerative effort, but, not being controlled by the normal resistance, it proceeds lawlessly and gives rise to a structurally atypical growth. The flat single epithelium lining the vessels and the large serous cavities appears to be more highly differentiated, and yet more so are the secreting cells of the true glands, in which latter the conditions are favorable for specialization. Being for the most part deeply situated, they have, from the earliest ages, been protected against changes in their environment, and have therefore been enabled to devote all their energies toward providing materials for the support of the body, in which process they have reached a high level of organization. As already remarked, in the adult normal state mitotic figures can rarely be observed in them, showing that their capabilities of proliferation and regeneration are comparatively slight. In organs composed of such cells there can never be a *restitutio ad integrum* on loss of substance, although there may be, and usually is, a compensatory hypertrophy of the remaining parts. If, for instance, a lobe of the liver be removed, although the organ may regain its normal size, the lost lobe is not regenerated, but the individual microscopic lobules of the remaining lobes, being stimulated to unusual activity, increase in volume, though not in number, as shown by Meister.

Metaplastic interchange is unknown among the secreting cells of deep-seated organs; like muscle and nerve cells they are to be considered as constituting distinct species. Primary carcinomas of compound glands almost always arise from the ducts and not from the specific secreting epithelium. In the pancreas they start, as a rule, at the head, in which the ducts are most numerous, and in the liver, in which their origin can be traced, it is usually found to be in the gall bladder or bile ducts. The small multiple adenomas found in cirrhosed livers or kidneys are probably more in the nature of localized compensating hypertrophies than true tumors.

Siegenbeck von Heukelom describes three cases of adeno-carcinoma of the liver with cirrhosis, numerous small nodules up to the size of a cherry being scattered throughout the organ; a condition, the "cirrhosis carcinomatosis" of Perls, occasionally observed though by no means frequent. Von Heukelom is unable to account for the combination, but it seems probable, as suggested by Orth, that "compensating hypertrophic patches from some unknown cause may overstep the limits of hypertrophy, and by a typical growth lead to the formation of malignant tumors."

The glands arising from the epidermis are more exposed to external influences than the deep-seated ones, and their secreting cells have not become so highly specialized. Sebaceous glands can apparently become formed *de novo*, and Fabre Domergues maintains that remains of sweat glands on a denuded surface can assist in the regeneration of the epidermis by becoming transformed into stratified epithelium. Tumors, both benign and malignant, arising from these glands are by no means infrequent.

In the mammary glands, which are probably modified sebaceous glands, mitoses are frequent in the cells of the acini, even in the adult state. The necessity for proliferative power in these cells is obvious, and the frequency of mammary tumors may not only be ascribed to this, but also to the fact that the mamma is both phylo and ontogenetically the last of the organs to attain its full functional activity, so that, its stability being naturally less than in older organs, a disturbance of balance between its epithelial and connective-tissue elements can more easily occur. Among domesticated animals, statistics of carcinoma in seventy-eight cases, collected by Casper, show about eighteen per cent. both in dogs and horses, including both sexes, to be mammary; no other organ giving such a high percentage. On the other hand, McFadyean maintains that mammary carcinomas in animals are relatively uncommon, and in sixty-four cases only quotes five or eight per cent. among horses and dogs, while in the cow, so far as he is aware, there is no authentic case on record. Still even eight per cent., including both sexes, is a high percentage, and seems to indicate that among domesticated animals, as in the human species, malignant tumors are more likely to arise in the female breast than in other organs.

B. Connective Tissue: The second sub-group comprises the connective-tissue cells, whose different kinds of synthetical products assist in building up the endoskeleton and—following Mark—may be called sustentative. It is not, however, quite determined in what way the intercellular substances are formed by the cells, although it is certain that the presence of the latter is essential to their development and continued existence.

Acording to Goette, the primary mesenchymal substance is formed by transfusion from the entodermal canal, and is destitute of cells. Later on cells become detached from the mesothelium, and by amœboid movements penetrate into the mesenchymal fluid; further differentiation being influenced by them, but the actual changes occurring altogether outside of the cells. It may be taken for granted, then, that the secretions of the cells so act upon preformed undifferentiated intercellular substance as to cause it to assume various characteristics, and the question then arises: "Is the character of the secretion of a mesenchymal cell dependent on its inherent specificity, in which case there can be no metaplastic interchange between the different kinds, as maintained by Bard and Hansemann; or is it merely dependent on the cell's environment, so that with a change of the latter the cell can alter the nature of its products?"

Those mesenchymal cells which are purely sustentative will alone be considered here. Some have taken on other functions, as the fat cells which form a reserve fund, the involuntary muscle cells which contribute to the activities of the organism, and the lymph and blood cells. The mesenchymal fluid at first is probably only a serous effusion (Minot) either derived primarily from the entodermal canal, as already mentioned, or, as Hertwig maintains, from the cells of the middle germ layers—the mesothelium—and later by transfusion from the immature blood-vessels which penetrate it in every direction; mucin being the first product added to it by its own contained cells. In the resulting gelatinous tissue, the cells are no longer able to wander freely, but become fixed; assuming a stellate form with branching anastomosing processes. Mucoid tissue then is œdema plus mucin, as maintained by Köster and Kickhefel, and in the embryo is the first stage in the differentiation of connective tissue. In the lower vertebrates mucoid tissue persists in places throughout life, but in the higher is purely embryonic, except in pathological conditions. As the walls of the blood-vessels reach a higher stage of organization, the serous effusion becomes relatively less; the intercellular substance condenses and under the influence of the cellular products assumes by degrees its various adult forms. Of the three kinds of sustentative connective tissue, cartilaginous, fibrillar, and osseous, the former is both phylo- and ontogenetically the oldest, being found in invertebrates, and appearing before either of the others in vertebrate embryos.

Schmiedeberg has studied the constitution of cartilage, and finds the matrix to consist of a meshwork of fibrils, identical with those of fibrillar connective tissue and bone, the interstices of which are filled with chondrin, which by long-continued maceration in potash can be dissolved out, leaving the form of the cartilage intact. The synthetical products, therefore, of cartilage cells act on the intercellular substance, mucus plus serum, in precisely the same way that those of fibrillar or osseous connective tissue act, viz., by transforming it into gelatinous fibres or collagen. But in addition there is formation of chondrin, and Schmiedeberg has isolated from this substance an acid, freely soluble in water, which he calls chondroitin sulphuric acid. If a solution of this be added to gelatin, a precipitate is formed which is identical with chondrin; the same occurring, though not so readily, with egg albumen and serum albumin. We may infer from this that the cartilage cell secretes the acid in order to give stability to the matrix by the formation of chondrin.

Cartilage may be considered as the first crude attempt at the formation of an endoskeleton. In the life history of animals, as the necessity for increased support in certain places arises, there is first a massing together of the mesenchymal cells, which become so closely packed that the blood-vessels are to a great extent excluded. Further support is then attained by the production of gelatinous fibres and chondrin, which afford a certain amount of stability and flexibility combined. There is, however, no provision for the entrance of vessels, and the way in which cartilage cells obtain nourishment is somewhat obscure, though there can be little doubt that it is the chondrin which in some way or other enables them to carry on their existence in the absence of blood-vessels. However this may be, formation of cartilage seems to be favored by a deficiency of vascular supply. In the course of development the structures affording stability and flexibility become separated, cartilage is supplanted by osseous and fibrillar connective tissue, and in the higher vertebrates remains only in isolated patches, where it can be utilized as pads or for keeping tubes open, for which purposes it is admirably adapted. But it must not be forgotten that the cells of these three tissues have one property in common; that of secreting a substance—possibly in the nature of an unorganized ferment—which can change the mesenchymal fluid into gelatinous fibres, other secretions being secondary and depending on the environment of the cell. Where support is needed and vessels are few, there may be deposition of chondrin; where rigidity is needed and vessels are plentiful, there may be calcification; and where flexibility is the main requisite, there may be formation of elastic fibres. It would, therefore, not be surprising to find the connective-tissue cells capable of changing their secondary secretions in order to adapt themselves to a change of environment whether occurring physiologically or pathologically.

Physiologically, in the formation of the shaft of a long bone, for example, we find the bone being formed by the action of connective-tissue cells which remain in the osseous tissue as bone cells. As the bone increases in size, the necessity for lightness arises, and the centre becomes hollowed out by absorption of the calcified matrix, setting free the bone cells, which again take on the functions of fibrillar connective-tissue cells and form lymphadenoid tissue, which can be regarded only as fibrillar connective tissue, in which the fibres are reduced to a minimum and the lymph spaces enormously distended.

As an instance of metaplasia in cartilage, the history of Meckel's cartilage is instructive. To quote Minot: "The lower portions of the cartilage ossify metaplastically, and the bony part is incorporated in the permanent mandible, but the rest of the cartilage atrophies and entirely disappears except a small portion of the end next the malleus, which becomes changed into fibrillar tissue, and remains as the ligamentum internum maxillæ inferioris." Minot explains elsewhere, that by metaplastic ossification he means a direct conversion of the cartilage cells into bone cells, which here occurs, although in ossification generally the cartilage cells are destroyed in the process. Here, then, we have connective-tissue cells developing a cartilaginous bar, one end of which is further converted into bone, while the other end becomes a variety of fibrillar connective tissue; the change taking place metaplastically in both places, obviously on account of the cells adapting their secondary synthetical products to perform functions indicated by their environment.

Pathologically, metaplastic interchange often occurs between the different kinds of sustentative tissues. In experiments on rabbits Ribbert transplanted pieces of periosteum into intermuscular connective tissue and other places. He found they would frequently take root and grow up to a certain point, after which regressive changes occurred, and they were resorbed. Cartilage was always produced first, after which was occasionally some attempt at osteoid formation.

Birch-Hirschfeld, also working on rabbits, rubbed up early embryos in which there was not yet any differentiation of the connective tissues, and injected them into various organs and tissues—principally under the capsule of the liver. His experiments were mostly failures, save when growth cartilage was the only tissue produced. He argues from this in favor of the specificity of cartilage cells, holding that the cells predestined to form cartilage alone survived, but it seems much more probable that, in his cases and also those of Ribbert, the cells, finding nourishment scarce in their new situation, secreted chondroitin sulphuric acid, so that by fixing serous effusion from the surrounding tissues in the form of chondrin they were enabled to continue their existence for a time by drawing supplies from a distance.

In callus formation, cartilage is formed from the periosteum, especially, as Bonome points out, "just at the seat of fracture where circulatory disturbances are greatest, while further away the osteoblasts change directly into bone corpuscles without passing through the intermediate chondroblast stage."

Warren Coleman, in reporting a case of osteosis of the cutis occurring in the foot, refers it to metaplasia of the connective tissue, comparing it to the osseous formation in rider's bone, and in myositis ossificans. Rider's bone, however, according to Berthier, arises from torn-off pieces of the periosteum, and he was able to produce it experimentally on rabbits by cutting out the insertions of the adductor muscles, together with small fragments of the periosteum, which were then dragged off by the contracting muscles and formed foci of ossification. As an argument in favor of metaplasia rider's bone would, therefore, be ruled out by strict adherents of cellular specificity, but in myositis ossificans, as shown by Mays and Caen, foci of ossification occur for the most part in the intermuscular connective tissues quite unconnected with the periosteum.

According to the "disturbance-of-balance" theory for the causation of connective-tissue tumors, it would naturally be supposed that where loss of normal resistance is slight and sharply localized the cells would proliferate slowly, and be able to attain their normal life cycle; elaborating their synthetical products as usual, and forming the benign so-called adult connective-tissue tumors.

If the loss of resistance be considerable, the cells by virtue of their proliferative power multiply in order to fill up the breaches, but their increase being met by little or none of the usual counteracting influence, they continue to multiply rapidly and lawlessly, no time being allowed them to attain functional activities. It is not necessary to suppose that the cells themselves assume embryological characters. The conditions—plenty of elbow-room—existing in the early embryo are reproduced to a greater or less extent, and the cells conduct themselves according to their environment. It is evident, therefore, that the cells which take part in the formation of the three varieties of sustentative tissue cannot be considered as distinct species. According to their environment they can produce any one of these tissues, proving, by their power of multiplication whenever a chance is given them, that they have not reached a very high degree of organization. The differentiation of the sustentative tissues appears to lie more in the intercellular substances than in the cells themselves.

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NOTE ON THE TREATMENT OF CHRONIC HEART DISEASE BY THE ARTIFICIAL NAUHEIM BATHS.[1]

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THE balneo-therapeutics of chronic disease of the heart as practised at Bad Nauheim originated with Professor Beneke, of Marburg, physician at Bad Nauheim, in the year 1859. Beneke observed that in treating chronic articular rheumatism with the carbonic-acid mineral waters of Nauheim, patients suffering from valvular lesions of the heart were not only vastly benefited, but in many cases the improvement became permanent; that relapses were the exception, not the rule. About this time Beneke began the treatment of chronic valvular disease by the use of carbonic-acid mineral baths and drinking-waters in a more systematic manner, finding that the results obtained were so extraordinary that other therapeutic measures could not be compared with them.

Of course he found that new connective-tissue formation about the valves or contractions produced stenosis, especially when the result of an infectious endocarditis could not be overcome, but the general condition of such patients was vastly relieved, and cyanosis and œdema disappeared. About thirteen years later, in 1872, Beneke published a history of one hundred and one cases of disease of the heart principally the result of an endocarditis, showing that the benefits derived from these carbonic-acid mineral baths were beyond question. Later Groedel, the Schott brothers, Bode, Graeupner, and others not only verified these observations but systematized the methods, and introduced a series of exercises framed to replace Oertel's Terrainkur, which exercises were for the purpose of increasing the lumen of the arterial vessels, filling the arteries with more blood, and thus relieving passive congestion. So that to-day, in the treatment of chronic diseases of the heart, we have no therapeutic measures so potent as the Nauheim baths and exercises.

Until within two years ago the writer had frequent occasion to send patients suffering from chronic disease of the heart to Bad Nauheim for treatment as prescribed there by the Schott brothers, the elaborators of this therapeutic measure. The Schotts have always claimed that similar results could be obtained from baths artificially prepared so as to resemble the Nauheim waters, and, if they were carried out on the same principles, a journey to Germany would be entirely unnecessary. Not considering the expense of such a trip, a great many patients afflicted with heart troubles cannot stand the debilitating effects of an ocean voyage. It occurred to me that if the Nauheim baths and system of exercises could be carried out here these drawbacks would be obviated.

Various methods may be employed for the production of a carbonic-acid effervescent bath. The action of hydrochloric acid on bicarbonate of sodium is a simple way for generating the gas. Used in conjunction with the saline mixture (described below) in varying proportions, the degree of effervescence may be regulated by the quantity of acid and alkali employed, so that a mild, medium, or strong ebullition results. The mild bath is prepared by adding three-quarters of a pound of hydrochloric acid to one-half pound of bicarbonate of sodium; the medium, by doubling these quantities; the strong bath by the action of three pounds of hydrochloric acid on two pounds of bicarbonate of sodium. The procedure is as follows: A given quantity of the saline mixture is dissolved in thirty gallons of water, 4 or 5° warmer than the bath calls for. Bicarbonate of sodium is now added and thoroughly mixed with the saline solution. The hydrochloric acid, contained in a stoppered bottle, is placed at the bottom of the tub, the stopper is removed, and the acid is slowly distributed throughout the lower layer of water. In this way rapid effervescence takes place, and the bath is ready in a few minutes.

Or the acid sulphate of sodium (or potassium) and bicarbonate of sodium may be used with great advantage. The acid sulphate of sodium is fused into suitable cakes weighing about two ounces. Six or eight of such cakes are placed on tinfoil strips or in saucers at the bottom of the tub containing the saline solution of proper strength and temperature, and two pounds of bicarbonate of sodium added. Effervescence begins at once, and the patient is immediately immersed in the bath, his head only being above the level of the water, properly supported by a cross-piece of webbing. The strips of tinfoil protect the porcelain or wooden tub from any deleterious effect. It is wise to distribute the cakes on the bottom of the bath in such a way that two each will correspond to the shoulders, buttocks, and feet of the patient. Fused cakes of the acid sulphate of sodium or potassium may be procured in the shops, and produce with the bicarbonate of sodium an ideal effervescence.

The employment of liquid carbonic acid gas may be mentioned here. Unless used in conjunction with a suitable apparatus this method may prove dangerous on account of the poisonous nature of the gas when inhaled.

I use the following mixture for preparing the saline bath: Sodium chloride (sea salt), 30 lbs.; potassium chloride, 10 oz.; calcium chloride (granular), 30 oz.; magnesium chloride, 8 oz. These ingredients are thoroughly mixed and kept in a moisture-proof tin box till required for use. It is advisable to begin with a weak saline solution, three pounds of the above mixture in thirty gallons of water, and increase gradually until five pounds of the mixture in the same quantity of water is used. The latter strength closely resembles the Nauheim Spring No. VII., called the Grosser Sprudel, the strongest of the waters there. The temperature of the bath should be 95° at first, which is gradually reduced in each succeeding bath till a temperature of 85° F. is recorded. The duration of the first bath must not exceed five minutes. As the strength of the bath is gradually increased and the temperature diminished, so the period of immersion is lengthened until the limit of fifteen to twenty minutes is reached. Following the usage at Nauheim it is necessary to omit the baths every second or third day. The number of baths necessary varies with each individual case; usually a course of treatment extending over several months is required. During the past year, 1899, twenty-eight patients with chronic diseases of the heart have been treated by me with these artificial Nauheim baths. The results obtained have been so gratifying that I can without hesitancy claim that the therapeutic influences of these baths are identical with the natural ones.

The baths in Nauheim consist of various saline thermal waters impregnated with natural carbonic acid gas. In some of the bathrooms these waters enter a specially designed wooden tub in a continuous flow, and leave by an overflow pipe, so that during the entire immersion bubbles of carbonic acid gas are constantly rising to the surface and adhere with great tenacity to the body.

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[1] Read before the Metropolitan Medical Society, January 23, · 00.

The effects of the Nauheim baths, as given by Schott, Thorne, and others, are "to lower the frequency and increase the force of the action of the heart, to cause a recession of cardiac dulness of considerable amount, and to induce a sense of refreshment and invigoration which is shortly followed by an agreeable inclination to avail one's self of rest in the recumbent position." The effect of the immersion in the artificial bath is exactly similar. One of the effects noticed is sometimes a slight oppression for the first few seconds, a diminution of pulse beat amounting to ten or twenty pulsations at the end of two minutes, which continues for the next ten minutes. In an individual case of a boy seven years of age, suffering from mitral insufficiency with considerable enlargement, the pulse was reduced in frequency from 90 to 70 at the end of two minutes, with a further reduction to 64 at the end of ten minutes; so that in ten minutes the pulse ran down from 90 to 64. This subsequently rose a few beats at the end of another ten minutes. The dyspnœa, which in this case was very striking, was entirely relieved while the patient was in the bath. Such effects last for some hours after the bath, the pulse rate being only slightly raised by the exertion of dressing.

In order to verify the observations of Schott, Thorne, and others, and to prove that the effect of the artificial bath was identical with the natural one, the writer submitted to a test bath in the presence of Drs. J. Kaufman and M. S. Kakels, who were asked to witness it, make the physical examination, and record the observations. The temperature of the bath was 92° F. The saline solution contained three pounds of the saline mixture in thirty gallons of water. Carbonic acid gas was equal to 900 c.c. to the litre. The bath was taken December 17, 1899, at 4:20 P.M. The pulse in sitting position before entering the bath was 76. Immediately after entering the bath a sense of oppression was experienced, which lasted about a minute. during which time the writer was forced to take very deep inspirations. After two minutes' immersion the pulse was 65 and a sense of glow came over the entire body. At the end of three minutes the pulse was 62 and the whole body was covered with bubbles of gas. After ten minutes the pulse was still 62 and a sense of exhilaration was felt. Then arising from the bath and getting a brisk rub while enclosed in a warm bath robe, I rested ten minutes in the recumbent position. The pulse then taken was 64. Dressing leisurely, the pulse rose to 68 and remained so for several hours. The most astonishing feature of the bath was the effect on the area of cardiac dulness. Before immersion a careful physical examination of the heart and liver was made, and the area of cardiac dulness and liver was carefully outlined on the chest and abdomen. These areas being normal, it was doubted whether any diminution would take place after the bath. Nevertheless, the area of cardiac dulness decreased nearly half an inch; over the liver a somewhat larger diminution was observed.

As said before, there is produced a momentary effect of oppression in breathing which causes one to breathe deeply and slowly, and which is followed by a reduced and more rhythmic inspiratory and expiratory movement. As Thorne justly remarks: "The carrying power of the peripheral vessels is increased and a sense of warmth in the extremities and on the surface of the body is experienced. The general arterial capacity, systemic and pulmonary, is increased, and without the loss of blood the relief of a general bleeding is afforded to an overloaded and laboring heart." In neurasthenics, and in patients suffering from a scanty flow of urine, it was also noticed that a series of baths caused increased diuresis. These baths through their action on the heart, and lessening its burden, indirectly relieve the deep-seated organs, and consequently cause them to resume a general normal functional condition. The mineral and gaseous constituents of the water produce a cutaneous excitation and thereby reflexly the above effects are produced. Schott supposes that from the surface of the body by imbibition into the superficial layers of the skin an influence is transmitted to the central nervous system which is centrifugally reflected to the vasomotor system and the ganglia which control the action of the heart. That the nerve centres are influenced is attested by improvements noticed in patients suffering from neurasthenia, anæmia, etc., nearly all of whom showed decided amelioration of their symptoms. There is no doubt, according to my observations of the invigorating influences which these baths exert on the heart and circulation, of the improvements observed, lasting for three or four months after a series of immersions. Excepting in cases of arteriosclerosis and advanced cardiac degeneration due to myocarditis, benefits may be expected in all cases of chronic heart disease.

The therapeutic influences of the baths are augmented by a system of exercises, the results of which are nearly as efficacious and which can be employed in conjunction with the baths, or independently especially in obese or bedridden patients. Schott calls these exercises "Wiederstands-Gymnastik," or resistance gymnastics. They consist of regulated movements of the entire voluntary muscular system, which are resisted by an expert attendant in such a way as slightly to oppose the muscular action without arresting it. These exercises, originating with the Schott brothers, have been carefully studied by Thorne, Lauder Brunton, Morrison, Gibson, and others. Without going into details of these various resistant movements, it will be sufficient to state here that the operator must be thoroughly conversant with the actions of the different groups of muscles; the patient must be carefully observed during the manœuvres, which must be at once suspended on the slightest symptom of circulatory or respiratory interference. The results of the exercises are similar to those of the baths; that is, a correction of circulatory disturbances and strengthening of a diseased and weakened heart. The changes which attend these graduated exercises are disappearance of cardiac irregularity, palpitation, and uneasiness, better filling of the arterial system, reduction of the frequency of the pulse, increased energy of the heart, and absence of all respiratory distress. The increased capacity of the blood-vessels enables the heart to contract in such a manner as to empty its cavities with each beat. The exercises taught in a scientific manner by the physician to his patient can be successfully carried out by him at home without an attendant. We can readily see that these measures can be utilized and are within the reach of every sufferer from chronic disease of the heart.

This paper has not been written for the purpose of presenting a statistical report of cases, and so I have refrained from burdening you with histories.

In considering the treatment of chronic heart disease we must consider that there is a loss of the equilibrium normally existing throughout the circulation. This loss of normal relation produces a tendency to a diminished amount of blood in the arteries and an excessive amount in the veins, from which there results a liability to the accumulation of fluid in the system. In consequence of these disturbances all the great functions are interfered with. Venous stasis results with its pernicious effects on all the important organs; lungs, stomach, liver, kidneys, and the nervous system, all suffer from the disturbed circulatory condition. These results are again reflected on the blood and through it on the heart, and hence a continuous circle of vicious influences is kept up.

Of all methods of treating chronic diseases of the heart—and by treating I mean relieving not only the circulatory disturbances but the concomitant effects on the different organs of the body—I am convinced that the artificial Nauheim baths, like the natural ones, together with the resisting exercises, are the most efficacious and lasting therapeutic remedy yet devised.

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Remarks on Facial Paralysis with Special Reference to Treatment.—T. Sydney Short states that researches tend to show that in Bell's paralysis, in some cases at least, the lesion is a real parenchymatous inflammation of the nerve structure itself, and not due to pressure alone. Pain seems to be more frequently absent than present. The writer divides the treatment into local, general, and electrical. He believes counter-irritation to be of great value early in the condition. Potassium iodide is usually given. Galvanism is the most valuable treatment. Short also describes the "face crutch."—*The Birmingham Medical Review*, April, 1900.

The Therapeutic Uses of Yeast.—Elsie Reed Mitchell reviews Landau's work on this subject, then giving her own experiences. Out of eight cases of leucorrhœa treated by local applications of yeast, one was entirely unaffected. This was a syphilitic and the discharge was not of local origin. Five cases were still under treatment or passed from under observation, markedly improved, one of these being of known gonorrhœal origin. Two cases were cured, with relapses under peculiarly unfavorable circumstances, possibly a reinfection. One case was cured with a relapse after four months. The writer has observed no unpleasant after-effects. Brewers' yeast was used when it could be obtained: when it was not to be had, compressed yeast gave apparently similar clinical results. A quarter of a cake of "Fleischmann's" was dissolved in half a cupful of water mixed with about a teaspoonful of either flour or sugar.—*The Woman's Medical Journal*, April, 1900.

The Motor Innervation of the Palate.—From the prolonged observation of a child who presented total loss of power on the right side of the palate and larynx, and who was operated on for a left tuberculous otorrhœa by the radical method, Brindel comes to the conclusion that the motor innervation of the palate is through the vago-spinal nerve. He expresses the hope that the statement which appears in even the most recent treatises, that the innervation is through the facial, will speedily be corrected.—*Revue Hebdomadaire de Laryngologie, etc.*, March 3, 1900.

On the Administration of Anæsthetics to Children.—W. I. McCardie and C. F. Marshall consider the main physiological differences between the child and the adult which concern the induction of anæsthesia, and lay stress upon the fact that the administration of anæsthetics, especially chloroform, is by no means so free from danger in childhood as is generally supposed. They also consider the question of the best anæsthetics to employ in the various operations performed on children. Chloroform is never free from danger, and it is better to use, as a routine anæsthetic, ether, A. C. E. mixture, or a mixture of two parts of ether to one of chloroform. Nitrous oxide followed by ether may be given to the older children. Nitrous oxide alone has been used by one of the authors successfully in operations lasting from five to ten minutes. It should never be followed by chloroform. Local anæsthesia is inapplicable to children owing to the great difficulty in keeping them quiet and overcoming terror.—*Treatment*, April, 1900.

The Mosquitos of the City of Grosseto.—Francesco Testi made a study of more than five hundred mosquitos collected chiefly in the city of Grosseto. He found that while the variety Culex was most abundant in all houses where there had been cases of malaria, the Anopheles was so rare that only eighteen were found to four hundred and forty-nine Culex. The fact is a curious one, in view of the importance attributed to the Anopheles in the dissemination of malaria. The author does not draw any conclusions therefrom, but merely mentions the fact as such. The Anopheles is more apt to be found in the country than in the city, and the persons suffering from malaria may have become infected out-of-doors, especially toward the evening hours.—*Giornale Medico del Regio Esercito*, March 31, 1900.

A Case of Meningism from Helminthiasis.—C. A. Annaratone reports the case of a patient who died apparently of meningitis. No abnormality was found in the meninges or brain, but in the stomach was a mass of ascarides lumbricoides. Chauson has found that by injecting the juice of ascarides obtained from horses and pigs into guinea-pigs, death was produced. The author believes that in the reaction against the too great importance which used to be attributed to intestinal worms as a cause of disease, their real powers of injury by the production of intoxication has been overlooked or underrated. The subject deserves study.—*Giornale Medico del Regio Esercito*, March 31, 1900.

Facial Hyperidrosis of Nervous Origin.—E. Ruggiero reports the case of a young sailor, aged twenty years, whose face is constantly covered with perspiration, both summer and winter, day and night. There are no symptoms of hemicrania, facial neuralgia, cephalalgia, disturbance of facial muscles, of cutaneous or olfactory sensation. The chief seat of the disturbance is the tip of the nose, where in freezing weather the perspiration freezes. The author believes the trouble to be of nervous origin, probably in the anterior horns of the cervical spinal marrow, the lesion involving the fibres which the trigeminal receives from Gasser's ganglion. The prognosis in this case is bad, as the disorder has already lasted seven years. Local remedies have had no effect, and nothing can be hoped from the use of electricity. It might be useful to resect the nerves distributed to the affected region, the naso-lobular nerves of Chaussier.—*Annali di Medicina Navale*, March, 1900.

Adherent Pericardium.—H. W. Rogers reports the case of a colored woman, about twenty-five years of age, who was brought to the hospital suffering from intense dyspnœa, with physical signs of delirium cordis and a pulse which was rapid, irregular, and arrhythmic. The right heart was much dilated and extended over to the right side of the sternum, passing beyond at least two fingers' breadth. The left heart did not show any very marked degree of enlargement. There was a murmur heard with greatest intensity at the apex, presystolic in time and of a musical intonation. A diagnosis was made of mitral stenosis with a presystolic murmur and excessive dilatation of the right heart. The necropsy revealed extensive adhesions between the layers of the pericardium and a band of adhesion extending over both ventricles, and also attached to the apex down to the diaphragm. There was no pulsus paradoxus.—*Cleveland Journal of Medicine*, March, 1900.

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MEDICAL LEGISLATION IN NEW YORK STATE.

THE last legislature passed several amendments to the public health law; but none of them was so important as the entire recasting of Article XI. The amendment is the result of several years' agitation and several failures to secure satisfactory legislation. There have been three boards of pharmacy, one in New York, one in Erie, and one whose province was the remainder of the State. The new rule provides for a single board for the whole State.

The State is divided into three sections. The eastern (New York) comprises New York, Kings, Queens, Nassau, Suffolk, Richmond, and Westchester counties; the western (Erie) section takes in the counties of Erie, Niagara, Orleans, Genesee, Wyoming, Allegany, Cattaraugus, and Chautauqua; and the middle (Albany) section comprises the other counties in the State.

The members of the board, to the number of fifteen, are to be elected every June, five from each section, and they must be licensed pharmacists, one from each section to go out of office every year. The maximum term is five years. For the eastern section two members are to be elected from the Manhattan Pharmaceutical Association, two by the Kings County Pharmaceutical Society, and one by the New York German Apothecaries' Society. The members for the western section are to be elected at a meeting of the licensed pharmacists and druggists residing in such section, called by the Erie County Pharmaceutical Association, and those for the middle section are to be elected at the annual meeting of the State Pharmaceutical Association, at which meeting all licensed pharmacists and druggists residing therein are entitled to vote.

The State board is to meet in January annually in Albany, and elect a president and a secretary, who shall also be treasurer. The board fixes the salaries of the secretary of the State board and the secretaries of the branches for the eastern, western, and middle sections. After the organization of the State board, the members of the State board from the respective sections shall organize branches therein and elect a chairman and secretary and treasurer. Each member of the State board shall receive $5 for each day actually engaged as a member of such board, or one of its branches, provided that no member shall receive more than $150 in any one year, together with his necessary expenses.

The State board is empowered to regulate the practice of pharmacy, the sale of poisons, the character and standard of drugs and medicines dispensed in the State; to employ inspectors of pharmacy; to examine all applicants for license or registration, and to issue two grades of licenses to be known respectively as that of "licensed druggist" and "licensed pharmacist," and one grade of certificates as "registered apprentice"; except that, in New York City, a license for the grade of "licensed druggist" shall not be issued; to investigate and prosecute violations of law governing the practice of pharmacy and sale of poisons; to require the annual registration of every pharmacy, store, dispensary, or place where drugs are dispensed or sold, and to charge a fee of $2 therefor; and to revoke for cause any license issued. Existing licenses are continued, and as regards the issuing of licenses the law does not take effect until the end of the year.

After next January 1st, any person who holds a certificate of registration granted upon examination as an "assistant pharmacist" from any legally constituted board of pharmacy of the State, the same not having been revoked, may apply to the State board, surrendering such certificate, accompanied by a fee of $1 and an affidavit that he or she has had three years' practical experience in the compounding, dispensing, and retailing of drugs, medicines, or poisons, and may be granted a license as a "licensed druggist," entitled to practise outside of New York City.

Any person holding a certificate of registration as a "pharmacist" granted upon examination by any legally constituted board of pharmacy of the State may be granted by the State board a license to practise as a "licensed pharmacist" anywhere within the State, upon the payment of $1 fee. Provision is made for the registration of apprentice pharmacists for a fee of 50 cents.

Otherwise no person shall be granted a license as a "licensed druggist" who has not had three years' practical experience in the business and passed an examination, and the fee is $5. To be licensed as a pharmacist a person must have four years' experience and have passed an examination. The fee is $10.

The bill very properly prohibits the sale of the usual domestic remedies by country stores, and provides that they can be dealt in only by regularly licensed dealers. A provision for the proper labelling of poisons is also incorporated. The State board is empowered to regulate the hours of labor of employees in drug stores and pharmacies in New York City, which shall not exceed one hundred and thirty-six hours in two consecutive weeks.

Another amendment to the public health law provides that the commissioners of quarantine, at the port of New York, shall pay all salaries of persons appointed by them from money appropriated by the State. They shall collect from the owners, agents, or consignees of vessels all bills for the care and maintenance of persons detained in quarantine, and shall have power to enforce such payment by process of law against the vessel upon which such detained persons have arrived, or against the agents, or owners, or consignees of such vessels, and, in case of an emergency arising, the quarantine commissioners shall, upon the certificate of the health officer that such an emergency really exists, use all means conducive to the protection of the public health, except when such emergency calls for the expenditure of money beyond such amount as may be in the hands of the commissioners, when such expenditure may be made only by and with the approval of the attorney-general and controller. The health officer is also directed to inquire relative to the plague and all other infectious diseases on board incoming ships; and he is required to keep the department of health of the city of New York informed of the number of cases of quarantinable diseases and the character of the same held at quarantine, and he may receive any vessel or merchandise sent to him by the health authorities of New York which in his opinion is dangerous to the public health.

The commissioners of statutory revision offered a bill amending, generally, the public health law, but it did not pass; neither did proposed amendments relative to imperfect licenses of physicians and surgeons, and relative to the practice of dentistry.

A charter was granted to the New York State Medical Association for the purpose of the cultivation and advancement of the science of medicine, the promotion of public health, and the establishment of a death benefit fund for the dependents of its members. It may hold property to the amount of $100,000. The incorporators are: D. Ayres, J. C. Bierworth, L. J. Brooks, J. D. Bryant, H. D. Didama, C. E. Denison, E. D. Ferguson, J. M. Farrington, C. E. Fritz, C. H. Glidden, G. W. Goler, J. W. S. Gouley, E. E. Harris, N. H. Henry, J. G. Hunt, F. W. Higgins, W. E. Johnson, E. M. Lyon, E. M. Moore, D. C. Moriarta, M. C. O'Brien, T. D. L. Rochester, B. T. Smelzer, E. H. Squibb, W. H. Thornton, M. W. Townsend, T. A. Wales, and F. W. Wiggin. An unsuccessful attempt was made to exempt from taxation the property of certain medical societies situated in cities of the first class.

A law was passed providing that pharmacists and drug clerks shall not work to exceed one hundred and thirty-six hours in any two weeks; and that an employee shall have at least one full day off in two consecutive weeks. Several amendments to the charter of New York, relative to pharmacists and druggists, were not passed because what they proposed seemed to be covered in the amendment to the public health law, first noted above.

The code of civil procedure was amended so as to include malpractice, along with slander, assault, etc., in the limitation of actions to two years. An unsuccessful attempt was made to amend the same code, relative to disclosures by physicians and surgeons, by making an exception that in any action heretofore or hereafter brought by a person authorized to practise physic or surgery, or by his legal representatives, for the value of any professional services alleged to have been rendered or performed for such patient, the plaintiff in such action or any other physician or surgeon assisting him in the performance of such services may testify concerning the same, so far as may be necessary to prove the performance or the value thereof; provided, that the court in its discretion may exclude any testimony tending to disgrace the patient. The medical profession successfully opposed the bill regulating the practice of midwifery in the city of New York.

A law was passed providing that whenever the board of health in Buffalo shall declare that rabies is prevalent in the city, or in the vicinity thereof, the commissioner of public health shall prepare ordinances prescribing the conditions under which dogs may be kept, brought, or allowed to be within the city, and providing for the destruction of dogs suffering from rabies and to prevent the spread of the disease, with penalties for their violation. An unsuccessful attempt was made to amend the charter of New York City relative to the sale of lymph and antitoxin; also to give the State board of health unlimited power to designate the style of boxes or bottles in which poisons shall be put up; also to repeal the school law relative to instruction in hygiene and narcotics; also to require that no person, association, corporation, or company shall sell, offer for sale, or dispose of within this State any proprietary or patent medicine or tonic, snuff, tobacco, or headache, catarrh, or hay-fever remedy containing cocaine.

A bill for the protection and improvement of the purity of the waters of the State, and conferring additional powers on the State board of health, did not pass; neither did a bill allowing New York City to spend unlimited amounts for the sanitary protection of its water supply.

A law was passed establishing a State hospital, in some suitable location in the Adirondacks, for the treatment of incipient pulmonary tuberculosis. The city of New York was authorized to accept the real and personal property of the Brooklyn Homœopathic Hospital. The authorities of New York City were authorized to change certain leases to the Mt. Sinai Hospital. The city of Buffalo was authorized to issue $50,000 in bonds to erect a quarantine hospital; and Lockport, $5,000 for a city hospital. Bills calling for the establishment of a State hospital for crippled children, and for New York City hospitals for pulmonary tuberculosis and contagious eye diseases, did not pass.

REPORT OF THE ELMIRA STATE REFORMATORY.

The 1899 report of this institution provides much instructive and interesting reading. It appears that the gross number of inmates who had been upon the books from September, 1898, to September, 1899, was 2,035, of which number 556 have been received during that period and 651 discharged, producing a daily average of 1,474.6. No transfers to State prisons have been made, but with the exception of fourteen per cent. who were specially paroled invalids, etc., of the 651 discharged 425 were sent out on regular parole to work at trades taught them at the Reformatory. The health of the inmates is stated by the physician on the whole not to have been so good during the past six years as in the preceding twenty years, but the increase in the death rate is attributed to overcrowding. The remedy for this state of things suggested by the board of management is a reduction of the population to 1,200. A large amount of attention is paid to gymnastic training, including Turkish baths and massage, with, it would appear, most satisfactory results. Personal instruction is also given in elementary physiology and the hygienic care of the body. In the physician's report attention is drawn to the fact that tuberculous disease appears as the largest single cause of admission to the hospital and as the greatest factor of mortality. The reason suggested for the prevalence of this disease is that at the present time the hospital has inadequate accommodations except for those in whom the disease is well marked and progressive, but that an unrecognized case, or a person in the incipient stage, may so infect a cell that it becomes a menace to the health of succeeding occupants. During the period covered by the report forty men were transferred to the Matteawan State Asylum for the Insane, and for the first time since 1894 there were two cases of suicide.

SIR WILLIAM MACCORMAC ON THE SOUTH AFRICAN WAR.

Sir William MacCormac, like Mr. Treves, has been making public the result of his experiences in South Africa. His opinions as to everything connected with the medical arrangements were in a high degree laudatory; he nevertheless permitted himself to criticise, although in words much less pungent than used by his professional brother, the hampering interference of certain ladies ignorant of hospitals and nursing, and whose inexperience rendered their services ineffective for good. Hospital trains were referred to by him in the most favorable manner, and as in some instances they were enabled to go on to the field of battle itself, the fact may be easily understood that by their aid the removal of the wounded to the base hospitals was facilitated to an extent not known in any previous war.

There has been an altogether universal consensus of opinion among surgeons serving in the present campaign with regard to the humaneness of the Mauser and Lee-Metford bullets. Sir William, who has several times drawn attention to this matter in his letters to the London *Lancet*, reverts to the subject at some considerable length in an account published in the New York *Sun* of May 13th, a part of which reads as follows: "Speaking generally he found the wounds inflicted by the Mauser and Lee-Metford to be very similar and both much less fatal than the larger projectiles used in former wars. As many as ninety-six per cent. of the cases in the general base hospitals recovered and were discharged, a very large proportion being able to return to duty at the front." He says: "One finds case after case convalescent after a bullet has traversed the lung and in many cases both lungs. The heart and pericardium have so often been found to lie in the track of the bullet that it seems probable that these, highly vulnerable structures must in several instances have been actually pierced." Sir William expresses himself as by no means in favor of laparotomy, as he feels sure that the mere fact of a Mauser or Lee-Metford rifle bullet traversing the abdomen is of itself no sufficient indication of the necessity for abdominal exploration or operation.

It is satisfactory to notice that notwithstanding the many charges made by both British and Boers as to the alleged use by the former of Dum-dum bullets, and by the latter of explosive or soft-nosed bullets, Sir William declares that he never came across a wound caused by a Dum-dum bullet, and tha the saw no evidence of the use of explosive bullets, although it was reported on good authority that some of the wounds had been caused by them. With respect to inoculation against enteric fever, which was largely practised by British troops before proceeding to South Africa, the distinguished surgeon says: "No decided opinion can yet be given on this point, since there are not sufficient data for statistics. The observations made seem to show that those inoculated are less apt to take the disease, or if they are attacked they have it in a milder form; but the question is still *sub judice*." Whether the lyddite shells were so destructive to life as the British assert, or whether they were, in accordance with the testimony of the Boers, comparatively innocuous, is a point that has not been made clear. At any rate it has been conclusively shown in our war with Spain, and on a larger scale in the South African campaign, that even within the past twenty years the conditions of warfare have greatly changed for the better, and indeed that, contrary to general prognostications, modern weapons have been mainly responsible for this state of things.

News of the Week.

A Correction. — Dr. Paul F. Mundé writes: "Permit me to correct an error in the discussion on fecal fistula at the last meeting of the American Gynecological Society, published in the Medical Record of May 19th. Your reporter makes me say that I 'agree with Dr. Currier that it was well to wait in fistula of the *small* intestine; but with fistula of the *large* bowel the abdomen should be opened.' (Italics are mine.) Now, I said exactly the opposite, for in my experience fistulæ of the large intestine, especially when near or in the pelvic cavity, show a great disposition to contract and in time heal spontaneously; whereas fistulæ of the small bowel usually require operation, either. if small, by trimming and uniting the edges and adjacent peritoneal coat, or, if large, by free opening of the abdomen and enterorrhaphy or Murphy button. The point is of sufficient practical importance to warrant my wishing to be correctly reported in the matter. I may add that this tendency to spontaneous closure of fistulæ of the large intestine was first impressed on me by three cases of gunshot wound of the ascending and descending colon and of the upper pelvic part of the rectum which I saw in the Austro-Prussian war of 1866, and which I described in a letter to the *Boston Medical and Surgical Journal*, January, 1867, under the title of 'Gunshot Wounds of the Pelvic Viscera.'"

Post-Graduate Medical School.—Dr. Charles Warrenne Allen has been elected adjunct professor of skin diseases.

Philadelphia Polyclinic.—Dr. James Thorington has been elected to a new chair of diseases of the eye, created by the trustees.

Gloucester County (N. J.) Medical Society.—At a meeting held at Woodbury on May 17th Dr. Judson Daland, of Philadelphia, read a paper on "Aneurism," and Dr. G. Betton Massey one on "Mercurial Cataphoresis."

The New York Eye and Ear Hospital.—A two-story addition to the New York Eye and Ear Hospital will soon be erected on the lot 311 East Thirteenth Street, in the rear of the present buildings of that institution at the northeast corner of Second Avenue and Thirteenth Street.

College of Physicians of Philadelphia.—At a stated meeting of the section on general medicine, held May 14th, Dr. F. Savary Pearce exhibited a case of hysterical monoplegia cured by suggestion. The patient was a colored woman who presented at first paralysis upon one side of the body, with improvement in the condition in the lower extremity, while that in the upper disappeared in the sequence of hypnotic suggestion and applications of static electricity. A similar attack had occurred on a previous occasion. Dr. William G. Spiller exhibited a case of unilateral progressive ascending paralysis, with exaggerated scapulo-humeral reflex (v. Bechterew), occurring in a man who presented symptoms of spastic hemiparesis, with fibrillary tremor, of several years' development. Dr. Spiller exhibited also a case of pseudo-rhizomelic spondylosis, occurring in a man in whom the apparent rigidity of the spine was due to muscular pain. He exhibited further a man who presented brachial palsy following a fracture of the arm, together with atrophy of the thenar eminence and the interossei muscles, the latter being found on careful inquiry to have been an antecedent condition and not related to the accident. Dr. A. A. Eshner presented a communication upon "Angina Pectoris," in which he deprecated the use of the terms true and false, preferring rather those of mild and severe, contending that the two sets of cases are essentially of the same nature, though differing in degree, both clinically and pathologically. He reported a case in a man thirty years old, in which typical paroxysms of angina pectoris occurred in the absence of demonstrable organic disease related to the heart. Dr. M. H. Fussell exhibited a case of myxœdema with complications. The patient was a boy eighteen years old, exhibiting marked dementia of gradual development, together with excessive accumulations of fat upon the abdominal wall, and to whom thyroid extract had been assiduously administered in large doses without noteworthy therapeutic effect. Doubt was expressed as to the exact nature of the disease, the symptoms of which did not wholly conform with those of myxœdema. Dr. Walter I. Pennock read a paper entitled "An Unusual Influence of Strychnine in Diseases of the Kidneys," reporting two cases in which the administration of strychnine in full doses induced symptoms closely simulating those of uræmia.

The Cholera is spreading rapidly in India. A despatch to a London paper from Hyderabad says that in one division no fewer than forty-five famine camps have been attacked by the pestilence. The most virulent type is at Gujerat, where many thousands have perished. In the Godhra camp alone there have been thousands of victims. An appalling loss of life seems inevitable.

A Man with a Quiver Full.—A French Canadian living in a Rhode Island town was recently presented by his third wife with his forty-first child. His first wife gave birth to several pairs of twins, and his second presented him with three sets of triplets. Thirty-six of the children are living and many of them have families of their own. Eight of the grandchildren also are parents.

China a Field for Women Physicians.—At the graduating exercises of the Woman's Medical College of Pennsylvania, the Chinese minister, Wu Ting Fang, delivered an address to the graduates in which he advised them to seek their fortunes in China. In that country, he said, there are about two hundred million women, but the number of woman physicians is very small. Midwives there are, but few or no women with medical knowledge and training, and the speaker said he was sure women doctors would receive a welcome and good treatment in China. Twenty-six women received diplomas.

Bureau of Information for the Members of the American Medical Association Passing through Philadelphia.—The directors of the Philadelphia County Medical Society will establish a bureau of information for the benefit of physicians on the way to Atlantic City, at the College of Physicians of Philadelphia, northeast corner of Thirteenth and Locust streets. This bureau will be open from 10 A.M. until 5 P.M. daily except Sunday, from Monday, June 4th, to Monday, June 11th. Physicians are invited to make free use of the bureau, where they may obtain full information relative to the situation of the various hospitals, medical colleges, and other scientific institutions of Philadelphia, and the time of operations and clinics at the different hospitals throughout the city.

Testimonial to Dr. Jacobi.—On Wednesday of last week the Woman's Health Protective Association of New York presented to Dr. A. Jacobi a set of resolutions of esteem and congratulations on the recent celebration of his seventieth birthday. After the congratulations and wishes for many more years of usefulness and honor, the resolutions spoke of Dr. Jacobi's wise counsel to the association, and aid in enforcing the health laws of the city, and also of his services as a public benefactor, and his devotion to children. The resolutions were handsomely bound in pamphlet form, and were presented with an appropriate address by Mrs. Esther Herman, vice-president of the association.

The New York Polyclinic.—Drs. Francis J. Quinlan and R. C. Myles have been elected professors of laryngology and rhinology in this school.

The New York County Medical Association has become a part of the New York State Medical Association under the new charter of the State society.

A New Investigation of Yellow Fever.—The Liverpool School of Tropical Medicine is soon to send a commission to Brazil to study yellow fever.

A Large Dose of Electricity.—An electrician in Mount Vernon, N. Y., recently received a discharge of 1,040 volts, and though badly burned and made insensible was not otherwise seriously injured.

Trinity Hospital, Varick street, was closed Tuesday for the first time since its foundation, twenty-seven years ago. It will reopen October 15th, after extensive alterations, in charge of trained nurses, instead of the Anglican Sisters of St. Mary, headed by Sister Eleanor, who has been in charge of it since its inception.

St. John's Hospital, Brooklyn, will, it is said, soon be taken from the list of city hospitals and become a private institution to be under control of the Episcopal Church Charity Foundation. The reason for this change is said to be that Comptroller Coler's recent cutting down of appropriations to institutions of the sort has greatly impaired the working efficiency of the hospital.

Formalin as a Milk Preservative.—It is reported from Chicago that the health department of that city has decided that the use of formalin as a preservative of milk must be stopped. Experiments have been made proving to the satisfaction of the health officers that formalin is poisonous. Kittens fed on milk preserved with this substance died in a few days, while other kittens from the same litter fed on ordinary fresh milk grew plump and fat. Guinea-pigs were also experimented on with the same result.

The Section on Materia Medica of the American Medical Association.—The troubles of the American Medical Association are perennial. For years the annual quarrel surged around the permanent secretary, and now, no sooner has the permanent secretary been unseated and removed from the scene of conflict, than clouds gather round the section on materia medica. The American drug manufacturers are alarmed by a report that the section is to be captured by members of the American Medical Association who are on the side of German chemical houses, and who will turn the work of the section into an advertising bureau for foreign drugs. The medical press is urged to raise its voice to thwart this nefarious scheme. But surely this alarm must be without foundation in fact. The American firms seem to have forgotten that every member of the American Medical Association is an avowed upholder of the code of ethics, and no one whose life is regulated by this moral law could descend so far as to bamboozle his fellows in this unprincipled manner.

Yellow Fever is reported epidemic in San Salvador, the capital of the Central American republic of Salvador. In a communication from the United States consul there, dated April 11th, it is stated that eighteen cases were in the pest-house and twenty known cases were being treated in their homes. The mortality had been very considerable and many persons were leaving the city on account of the disease, which had appeared at a much earlier period than usual. No foreigner had so far been attacked, the disease being confined to natives of Central America.

The Plague is reported to have spread to nearly every seaport town in Australia and to have invaded many places in the interior. In Sydney there have been one hundred and forty-two cases and forty-nine deaths up to April 25th.—The board of health of San Francisco has adopted a resolution declaring that the plague exists in that city. Surgeon-General Wyman of the Marine-Hospital service states that March 8th Surgeon Kinyoun reported that a suspicious case had been fatal in Chinatown, and on March 11th he found the plague bacillus. On April 27th another case occurred, verified by bacteriological examination and so reported on May 2d. On May 13th there were two cases from plague. On May 16th another case was reported. There have been six cases, and so far as known the disease has appeared only among the Chinese. Four marine-hospital surgeons, in addition to those already there, have been ordered to San Francisco. A large supply of Haffkine's serum has been sent, and an endeavor will be made to vaccinate all the Chinese in the city. The timid health officials of Texas have taken alarm and have declared a rigid quarantine against freight and passengers from San Francisco.—It is reported from Tokio that Kitasato has discovered a second plague bacillus which is thought to explain the fact that the Yersin serum has had such different effects in different cases. Kitasato is preparing a new serum from which he hopes to obtain more satisfactory results.

Home of the Kings County Medical Society.—On Saturday last the new library building of the Medical Society of the County of Kings, on Bedford Avenue, Brooklyn, was dedicated in the presence of many of the members of the society and guests from other cities. The building, of colonial design, is fifty-nine by eighty-five feet, three stories in height, and fireproof in construction. Entering the building, one steps into a foyer from which three doorways lead into the main auditorium, which will seat about four hundred. Opening from the foyer are a reception room, a women's room, and a cloakroom. The library is on the second floor and the third story is devoted to the apartments for the librarian and custodian of the building, storage rooms, and two large section rooms, which may be used separately or in conjunction. Dr. Lewis S. Pilcher, president of the society, presided. After a prayer by the Rev. Dr. A. J. Lyman, addresses were made by Drs. G. M. Gould, James R. Chadwick, and A. Jacobi. Dr. William Maddren, chairman of the building committee, transferred the building to the trustees, and the building was then accepted with brief remarks by Dr. Frank E. West, chairman of the board of trustees, and Dr. Pilcher in behalf of the society. After a benediction by the Rev. John P. Chidwick, United States navy, there was a reception to the women present from 5 to 6 P.M. In the evening a dinner in honor of the occasion and for the entertainment of the invited guests was held at the Farmhouse, Prospect Park. Dr. Pilcher was toastmaster, and among the speakers were the Rev. A. J. Lyman and Drs. Abraham Jacobi, William Browning, Fairbairn, McLean, and J. H. Hunt.

Navy Department, Bureau of Medicine of Surgery, Washington, D. C., May 12, 1900.—Changes in the medical corps of the United States navy for the week ending May 19, 1900. May 17th (changes by cable from Asiatic station).—Assistant Surgeon J. C. Thompson detached from the *Bennington* and ordered to naval hospital, Mare Island, Cal., for treatment. Assistant Surgeon E. O. Huntington detached from the *Newark* and ordered to the *Bennington*.

The New Hampshire Medical Society.—The one hundred and ninth annual meeting of this society will be held on Thursday and Friday, May 31st and June 1st, at Concord, under the presidency of Dr. Charles R. Walker, of Concord. The secretary is Dr. Granville P. Conn, of Concord. The annual meeting of the alumni of Dartmouth Medical College will be held on May 31st, and the first annual meeting of the New Hampshire Association of Military Surgeons will also be held on the same day.

A School of Instruction for Health Officers.—The second annual school of instruction for health officers, conducted by the Vermont State board of health, was held on Tuesday, Wednesday, and Thursday of this week in Burlington. The object of the annual sessions of this school of instruction is to have a conference and discussion between the officers of health of the State as to the latest and most efficient means at command for preserving the health of the citizen and of communities, and it is believed that this is the most practical way of accomplishing the purpose.

Prof. Wilhelm Conrad Roentgen will be awarded the Barnard medal, in commemoration of his discovery of the *x*-rays, at the commencement of Columbia University on June 13th. The award will be made on the recommendation of the National Academy of Sciences. The medal is of gold and was established by the provisions of the will of former President A. P. Barnard, of Columbia University, and endowed by him. It is awarded every five years "to such person, if any, whether a citizen of the United States or any other country, as shall within the five years next preceding have made such discovery in physical or astronomical science to purposes beneficial to the human race, as in the judgment of the National Academy of Sciences of the United States shall be esteemed most worthy of such honor." The award of 1895, which was the first, was made jointly to Lord Rayleigh and Prof. William Ramsay.

Acting Assistant Surgeons in the Army.—A bill is before Congress granting to all acting assistant surgeons of the army of the United States the same rights and privileges as regards leaves of absence, quarters, and commutation, and all other rights, privileges, allowances, and emoluments (except pay, which shall be, except as otherwise stipulated, at the rate of $150 per month) as commissioned officers of the army of the grade of first lieutenant, mounted. The bill provides also for back pay, rank, etc., for acting assistant surgeons who served during the Spanish war and who were dropped for illness or disability, and also enacts that those who have served for one year or more shall be commissioned assistant surgeons of volunteers with the rank of first lieutenant, mounted, subject to honorable discharge whenever their services are no longer needed.

Obituary Notes.—DR. WILLIAM R. RAMSEY died at Norristown, Pa., on May 13th, from some disease of the throat, at the age of sixty-eight years. He was a student and subsequently an assistant of the late Dr. William Corson. He was assistant surgeon in the United States army during the Civil War, and was in charge of the field hospital at the battle of Gettysburg. Subsequently he practised medicine at Hazleton and Norristown.

DR. COLEMAN F. LEAMING died at Cape May Court House, N. J., on May 13th, at the age of eighty-two years. Early in life he engaged in mercantile pursuits, but at the age of twenty-one he began the study of medicine and was graduated after three years, settling in New York and practising there for some time. Later he returned to his native place, where he acquired a fortune from business enterprises.

DR. CHARLES S. COLLINS, of this city, died on May 20th from the effects of an overdose of chloral. He was a graduate of the College of Physicians and Surgeons in 1884.

DR. SHERRARD R. TABB, of the United States Marine-Hospital service, stationed in Savannah, disappeared on April 30th, and his body was found on May 10th in a dense thicket near the Bonaventure cemetery. He had committed suicide by means of chloroform. He was born in Virginia in 1869 and was a graduate of the medical department of the University of Virginia in the class of 1892.

The Frequency of Goitre at Different Ages.—Lucien Mayet presents the results of the tabulation of over thirteen thousand cases of goitre, occurring in those parts of France where the affection is endemic, with a view especially to determine the age at which the disease is most frequently encountered. This age was found to be, for both sexes together, between forty-six and fifty years. In men the greatest number was in those from twenty-one to twenty-five years, and in women between the ages of forty-six and fifty.—*Lyon Médical*, April 15, 1900.

Progress of Medical Science.

Journal of the American Medical Ass'n, May 19, 1900.

A Case of Hysterical Hip-Joint.—J. L. Porter reports a case of this nature occurring in a girl aged eleven years, who stood with the right thigh flexed and rotated outward and only the toes touching the floor. In walking, the same position was maintained, the weight being carried on the toes, but the flexion increased each time the weight was borne by the right leg. On inspection the affected hip and leg seemed perfectly normal, there being no swelling. The length of the two legs was the same, but the circumference of the right thigh was one-half inch greater than that of the left one. The latter was easily flexed, rotated, and put through the normal motions, but as soon as any motion was attempted in the affected leg a resistance was felt. If the leg was forcibly flexed and suddenly released, it assumed extension without any evidence of pain. If the forcible flexion was continued until all resistance was overcome, the thigh went up into normal flexion on the trunk and could be rotated freely. Though she covered her face with her arms and cried a little, she did not shed tears or give indications of pain. The thigh was forcibly flexed on the pelvis several times, and if flexion was maintained until she found that resistance was useless, it ceased. No acute symptoms whatever followed the forcible manipulations. The foregoing examination, together with the absence of any objective indication of intra- or para-articular disease, such as swelling, thickening of the tissues, or local elevation of temperature, gave the findings on which a diagnosis of hysterical hip-joint was made.

Vesico-Rectal Anastomosis, with Special Reference to the Treatment of Exstrophy of the Bladder.—J. Frank believes that from the careful histological and bacteriological examination which was conducted in a number of the cases experimentally operated on by him, it appears beyond a doubt that vesico-rectal anastomosis may be performed on a dog without leading to an infection of the kidneys. In two instances both the histological and bacteriological examinations showed a total absence of infection, and one of these cases was that of a dog killed six months after the operation. If the results on dogs, which naturally cannot be kept under the best hygienic conditions and in which no after-treatment could be instituted, furnished results like the above, it is not unreasonable to expect far better terminations in the human patient when after-treatment such as washing out the bladder could be commanded. The advantages of vesico-rectal anastomosis may be summarized as follows: (1) Simplicity and shortness of time required for the operation; (2) no danger of ureteral constriction by the bowel scar, nor sloughing of an implanted trigone, as in Maydl's operation; (3) comparatively little danger of infection; (4) it is applicable not only in exstrophy of the bladder but also in other pathological conditions of that organ rendering life a burden.

Use of Opium in Infancy, seen in Adult Life.—T. D. Crothers states that the use of opium and its alkaloids in infancy creates a diathesis or predisposition to its use in later life. Acting as they do on the most unstable organisms, the brain cells and centres, they not only retard but prevent healthy physiological growth. Another point which must be remembered is the concealed danger from opium drugging in infancy. If only neurosis is present, if defects of growth and function exist, opium will of necessity increase this condition. Anæmia, exhaustion, and perversion of organic activity follow. If some temporary state is present, opium, by covering up the pain signal, is not curative but may be destructive in many ways not easily recognized until later in life. No one can tell whether this danger begins with the first dose or only after a succession of doses.

Antitoxin and Intubation, with a Report of One Hundred Cases.—B. R. Shurly gives the following summary of results: number of operations, 100; recoveries, 69; deaths, 31; mortality under three years, 49 per cent.; mortality over three years, 19 per cent.; complicating measles, 8 cases, 5 deaths. Age of patients operated on: One to two years, 16, of whom 9 recovered, 56.25 per cent.; two to three years, 23, with 11 recoveries, 47 per cent.; three to four years, 20, of whom 16 recovered, 80 per cent.; four to five years, 15, of whom 12 recovered, 80 per cent.; five to six years, 11, with 10 recoveries, 90.9 per cent.; six to eight years, 10, of whom 7 recovered, 70 per cent.; eight to twelve years, 5, of whom 4 recovered, 80 per cent.; number of doses of antitoxin, 160. Eighty-five per cent. of the cases occurred on streets that were not paved.

Eustachian Catheterization.—S. O. Richey makes a plea for the greater use of the Eustachian catheter, claiming that it is far superior in its action to either politzerization or the method of Valsalva. An astringent or antiseptic solution may be blown through it into the tube, later into the cavity. It dilutes the secretion it reaches, destroys germs more or less, and its astringency increases the calibre of the tube, acting antiphlogistically. Secretions can also be withdrawn from the tube by suction. The two methods above alluded to are in the opinion of the writer a frequent cause of extension of inflammation from the middle ear to the mastoid antrum. For the catheter, the small hand-bulb of the atomizer is preferable to the large, unwieldy Politzer bag.

Abdominal Surgery; Five Interesting Cases—Pancreatic Cyst, Hepatic Calculi, Fecal Fistula, Combined Appendectomy and Nephrorrhaphy.—By F. W. McCrae.

Cleft Palate; A New Urano-Staphylorrhapy.—By A. H. Ferguson.

Bubonic Plague in San Francisco. By W. H. Kellogg.

Philadelphia Medical Journal, May 19, 1900.

Common Colds; their Cause, Prevention, and Treatment.—D. H. Bergey finds absolute immunity from colds quite rare. Specific micro-organisms have not been demonstrated, hence it is probable that micro-organisms commonly found are the cause, anatomical differences in tissue giving the various inflammations encountered. Constitutional conditions render one portion more vulnerable than another and act in influencing location. Constitutional symptoms indicate that large quantities of the poisons generated *in loco* are absorbed into the circulation. One person in a family may infect the whole household, and a subject of chronic catarrh must be looked upon as a source of danger, and as such should be excluded from public schools. Mouth washes are discussed and therapy is suggested.

Rupture of the Plantaris Muscle.—John H. Gibbon reports the case of a man aged thirty-eight years who while playing tennis was suddenly seized with a sharp pain in the calf. As soon as the diagnosis was made, a firm bandage was applied from the toes to the knee. In a month the function was re-established. The writer suspects, in severe cases, a laceration of the deeper calf-muscles.

A Case of Chronic Pneumonia.—M. S. Councill reports a case of unusual persistence, extending over a period of about twelve months in a child of two years. Tuberculosis was excluded. The writer thinks such cases will be found to be more frequent when all means of diagnosis are brought to bear upon them.

Mütter Lectures of the College of Physicians of Philadelphia.—By J. B. Roberts.

Intestinal Indigestion and its Consequences.—By W. H. Porter.

Gastric Analysis.—By A. P. Francine.

New York Medical Journal, May 19, 1900.

The Genesis of Antitoxins.—J. D. Lisle states that antitoxins are the result of cell stimulation. The question is, How does the cell produce the antitoxin?—admitting, for the time, that the antitoxin is the product of the cell. If a cell, when properly stimulated, will produce an antitoxin, the question naturally arises, How or what is the process? A cell receives a stimulus; now, what does the cell do? According to the theory of Ehrlich, the protoplasm of each living cell is divided into a number of groups, and each group is susceptible to a different stimulus. Among these groups there is one or more which, when stimulated by a toxin, begins an internal molecular change that results in the production of the antitoxin. If the impression of the stimulus upon the cell is only slight, the effect is only molecular rearrangement and nothing is excreted; this is called vaccination, and accounts for cellular resistance; but if the stimulus is increased or is caused by another class of toxins, the process of molecular change goes on, and an antitoxin is poured into the circulation as fast as it is made. Ehrlich has given to these groups of hypothetical elements the name of "side chain," a term borrowed from modern organic chemistry, and which contributes nothing toward solving the mystery of the function of the cell in its production of the antitoxin.

Trachoma.—N. B. Jenkins gives a general description of this affection. In speaking of treatment he says that perfect rest will usually give relief to trachomatous eyes. This may be had by instillations of atropine, together with protection of both eyes from light and use by bandages, cataract shields, etc., put on as after a major operation on the eyeball. Before bandaging, a weak iodoform ointment may be put in the eyes and on the lids. At night these blinds are removed and the patient is kept in an absolutely dark room. No ray of light should enter the eyes. Uncomplicated trachoma may, in time, be cured by this treatment. Proper glasses, in the writer's limited observation, cure simple trachoma without other treatment, but if there is much organic destruction, of course they can have little if any curative effect.

Cystitis.—H. H. Morton concludes a lengthy article with observations on treatment. For acute cystitis, he believes that the only application which can be used without harm is nitrate of silver beginning with four grains to the ounce, twenty drops of this solution being deposited every second or third day in the posterior urethra, from which point it flows back into the bladder. The indication for its use is painful and frequent micturition, provided the bladder is capable of emptying itself. For chronic cystitis, the indications to be met are: (1) To remove any source of local irritation within the bladder or any obstacle to its evacuation; (2) to remove the urine from the bladder and keep it empty; (3) to destroy micro-organisms or check their growth, and remove pus and fermentation products from the bladder.

Study of the Blood in Cancer of the Stomach.—W. Osler and T. McCrae come to the following conclusions: (1) In a doubtful case a blood count below 1,000,000 red blood corpuscles is strongly in favor of pernicious anæmia. (2) While nucleated red blood corpuscles are present in all very severe anæmias, megaloblasts rarely if ever occur in cancer of the stomach. (3) Neither an increase in the leucocytes nor special variations in the forms appear to be of any moment in the diagnosis of cancer of the stomach. (4) The presence or absence of digestion leucocytosis is too uncertain to be of much assistance in diagnosis.

"Æstivo-Autumnal Fever" in New Orleans, Summer and Autumn, 1899.—By H. A. Veazie.

Physical Training in School and Home.—By H. S. Pettit.

Medical News, May 19, 1900.

The Status of Gynæcology in 1876 and 1900.—Alexander J. C. Skene says that in 1876 gynæcology may be said to have graduated with honors and to have taken a well-merited position among the grand divisions of the profession. The author describes the condition of knowledge at that time, in respect to various uterine diseases. There were few actual specialists or experts in the branch. There were only three journals and one society exclusively gynæcological in 1876; now they exist in every town, and the books have multiplied from three hundred to one thousand. All that was obscure then in regard to inflammation of the uterus twenty-five years ago has now been cleared away; equally strong lines and high light may be used in sketching the present status of uterine displacements. There has been extraordinary advancement in the knowledge of neoplasms, great improvement in ovariotomy, and knowledge of diseases of the urinary organs. Many other advances are mentioned by the author, but are too numerous to find place in an abstract.

The Treatment of Suppurative Otitis Media in Young Children.—George L. Richards, in chronic cases, syringes the ear with warm sterile water or with a solution of bichloride 1:1,000, dries the canal, and inspects the ear. If there is much destruction of the tympanic membrane he applies peroxide of hydrogen on a cotton pledget, as long as there is any exudation of gas, and after again drying the parts applies on a cotton pledget a saturated solution of boracic acid in from forty to ninety per cent. alcohol. He then dusts the ear lightly with powdered boracic acid, and lightly stops the ear with a narrow wick of antiseptic gauze which must reach the bottom of the canal. Careful instruction is given the mother as to home treatment.

Fibroid Tumor of Uterus; Enteroptosis; Retroversion; Ruptured Perineum; Operations; Recovery.—By Matthew D. Mann.

The Pharmacopœia of 1900.—By Horatio C. Wood.

Boston Medical and Surgical Journal, May 17, 1900.

A Case of Pernicious Vomiting of Pregnancy.—E. L. Twombly reports a fatal case which illustrates that displacements and faulty positions of the pregnant uterus which delay its rising out of the pelvic cavity and press upon the cervix are more often the causes of excessive vomiting than has been generally supposed. If all measures of replacement of the uterus and correction of the faulty position fail in the early months of pregnancy, we should not trust to nature and time to effect a cure, but should proceed to empty the uterus by surgical means. Indication for emptying the uterus are: (1) Inability to retain any food taken by the mouth; (2) intolerance of rectal enemata; (3) more or less albuminuria; (4) progressive emaciation; (5) constant headache; (6) frequent and feeble pulse; (7) a certain apathy on the part of the patient.

Bicornate Uterus with Twin Pregnancy; Abortion from One Horn.—Charles H. Winn reports a case in which the salient features are: (1) An abortion with twins some years ago, in which one fœtus was macerated and the other not. (2) A second twin pregnancy, both horns being occupied. Abortion of one fœtus was complete, as shown by foul, decomposing tissue removed by a vigorous curetting, and the immediate relief of septic conditions which followed. (3) The demonstration of the bicornate condition by the facts mentioned, and by the finding of a contracted horn on the left side of the pregnant uterus. (4) The probability of superfœtation. (5) The tolerance of the pregnant uterus to adverse influences is shown by the persistence of pregnancy, in spite of catheters, abortion, sepsis, curetting, intra-uterine douches, and iodoform gauze intra-uterine packing.

A Study of the Nature and Significance of the Symptoms in Disorders of the Stomach.—Henry F. Hewes states that the results of his investigations have been (1) to show that there are certain symptoms which are common to all affections of the stomach, and that they frequently form the whole symptomatology of cases with distinctly opposite causes, as in cases of hyperacidity and hypoacidity; (2) to show what symptoms are the manifestation of this habit. The author considers the habit as the manifestation of the organ working to perform its function under untoward conditions. Hyperæsthesia of the stomach would explain the functional cases to some extent, but it does not explain the hypoacidity cases.

A Case of Pernicious Vomiting of Pregnancy.—H. S. Knight reports a case in which vomiting was so excessive and so continuous that it seemed as if the end must be fatal. The vomiting was found to be due to anteflexion of the neck of the uterus. Packing the vagina and the use of the ball pessary were not entirely satisfactory, but the insertion of a small soft-rubber pessary, which raised the uterus and also gave an opportunity for the cervix to straighten itself, was followed by the best results. There was gradual cessation of the vomiting, with return of sleep. The patient is now on a generous diet, and everything promises well.

The Question of Supernumerary Fallopian Tubes; with Specimens of Fallopian Tubes with Supernumerary Ostia.—By Agnes C. Vietor.

The Ideal Ration for an Army in the Tropics.—By Edward L. Munson.

Berliner klinische Wochenschrift, April 30, 1900.

The Struggle against Tuberculosis as a Universal Disease.—W. Winternitz makes a plea for the systematic use of hydrotherapy in the treatment of tuberculosis. He finds as the great characteristics of this disease a weakening of the circulation and a condition of anæmia. He claims for this mode of therapy that it strengthens the heart action, increases vascular and tissue tone, and calls forth an active or collateral hyperæmia in the affected organ, re-establishes the normal relations in and about the organs involved, and strengthens the entire organism, especially innervation and circulation. Hæmoptysis, hectic fever, and night sweats are all benefited. The remainder of the article is devoted to an explanation of methods of application.

What Chances Have We to Eradicate Infectious Diseases, Especially Tuberculosis?—D. Dönitz traces the various steps which have led up to our present knowledge concerning immunity and the preparation of the various therapeutic serums. He finds great encouragement in the progress made, and believes that we shall some day succeed in obtaining an antitoxin which will combat tuberculous ravages. He calls attention to the fact that it has been found that under some circumstances it is possible to use the serum of an immunized animal or human being for purposes of further immunization in others.

The Occurrence of Peculiar Crystals in the Bones of Rachitic Children Treated with Suprarenal Substance.—By Stoeltzner and Salge.

Observations on the Demonstration by the Roentgen Rays of Bone Structure.—By J. Wolff.

French Journals.

Post-partum Hemorrhages Cured by Simple Drainage and followed by a Psychosis.—C. Zalackás says we can admit a post-puerperal psychosis; that the psychoses following gynaecological operations are very exceptional, and when they exist we usually have to do with women predisposed or already affected with insanity. There is no connection between the psychoses and the operative procedure. Psychic troubles can be produced as well after any other operation as after ovarian castration. The operation never of itself produces madness. There exists a psychic state before operation, called phobia, which may persist after the operation. In psychoses at precocious menopause a certain predisposition is at work. The fear of mental perturbation should not deter one from operating when the indications are clearly present.—*Le Progrès Médical*, May 5, 1900.

Infantile Typhoid Fever of the Exanthematic Forms.—E. Weill and Ch. Lesieur report upon a remarkable frequency of typhoid in children presenting an abundance of rosy spots. They find that classic cases with few spots have marked or intense intestinal symptoms, and that the prognosis is often grave. Slight fever with few spots and intestinal symptoms slightly marked has a good prognosis. Intense fever with abundant spots and marked intestinal symptoms has a very grave prognosis. Purely exanthematic typhoid, such as exemplified in the cases now studied, with very abundant rosy spots, intestinal symptoms slight or almost nil, has an extremely benign prognosis.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, May 6, 1900.

Bathing in the Typhoid Fever of Childhood.—E. Ausset finds a series of cases in children more severe than the adult form. He never finds at autopsy in an infant typhoid which has escaped recognition during life. In forty-five cases there were four before the fifth year, twenty-nine between five and twelve years, and twelve between the twelfth and fifteenth years, with two deaths in each series. The author believes in systematic bathing from the very onset. The temperature should be regulated for each case. The younger the child the less cold is the bath. It is unnecessary to give baths as cold as the pure Brand method calls for.—*Journal de Medecine de Paris*, May 6, 1900.

Note on Two Cases of Cutaneous Manifestations in the Course of Infectious Diseases of the Digestive Tube.—P. Engelbach found in the recent epidemic of typhoid fever at Havre that severe eruptive phenomena were frequent. He cites an instance of scarlatiniform generalized eruption in typhoid with cardiac complications followed by death, and a case of enteritis with similar eruption and death in the course of convalescence. He does not look upon the erythema as belonging to the typhoid process, but as a secondary infection.—*La Revue Médicale de Normandie*, May 10, 1900.

The Permanent Sound in the Treatment of Urinary Infection.—Félix Guyon discusses, with temperature chart illustrations, the use of the catheter *à demeure* in prostatic and urethral hemorrhages attended with infection. It constitutes the method of choice of bladder drainage in febrile cases. In a study of fifty cases we find forty-two cases and eight deaths or twenty per cent. mortality. The decline of fever is, as a rule, rapid. The instrument must be carefully managed and watched to get the best results, but this is not a contraindication to its employment.—*La Presse Médicale*, May 5, 1900.

The Treatment of Large Rectal or Ano-Rectal Prolapse by Excision of the Rectal Mucous Membrane.—Professor Delorme concludes that ablation of the rectal mucous membrane, reserved hitherto for the treatment of prolapse purely mucous, is equally applicable to prolapse of the second group, in which all the tunics of the intestine participate in the rectal protrusion, whether or not there be invagination.—*Le Bulletin Médical*, May 9, 1900.

The Practitioner, May, 1900.

The Distinguishing Features of Rheumatoid Arthritis, Gout, and Rheumatism.—Arthur P. Luff believes many cases of rheumatoid arthritis are diagnosed as rheumatism or gout. Chronic rheumatism of the joints is a comparatively rare affection. It may not manifest itself as an arthritis at all. A rough clinical test is to ascertain the effect of treatment with salicylate of sodium. By rheumatoid arthritis the writer means the same as arthritis deformans or polyarthritis deformans, or rheumatic gout. The latter term is confusing. It occurs most often in females, while gout occurs mostly in males. It occurs among the poor and ill nourished. There is little pain at first, but some aching in the joint, and the onset is very insidious. He accepts neither the uric-acid nor the lactic-acid theory. In a great number of cases it is an infective disease, due to a settlement of micro-organisms in the affected joints, in which they produce a toxin, which passing into the circulation is responsible for the nervous symptoms. In children it is often secondary to scarlatina, rheumatic fever, and acute septic tonsillitis. In adults it also follows ulcerative disease of the tonsils or of the gastro-intestinal tract. Rheumatism certainly predisposes to rheumatoid arthritis.

Some Clinical Varieties of Osteo-Arthritis.—A. E. Garrod finds it an open question whether we have here a single morbid process. In young patients a rapid course may cause widespread deformity. In older subjects the progress is much more gradual. The more acute cases of early life may be further subdivided into the fusiform and crippling varieties, the former being the more common. The vertebral column is usually involved early, and stiffness of the neck is a common symptom. The crippling variety is usually met with in early adult life and shows little tendency to be restrained by treatment. In nodular cases no marked degree of repair is possible. The fusiform variety is beneficially influenced by attention to certain points: perseverance in treatment; rigid dietary is injurious; drug medication should be tonic, and not depressant. Mineral baths often prove most helpful.

Osteo-Arthritis or Rheumatoid Arthritis; its Pathology and Treatment.—G. A. Bannatyne thinks more care should be exercised in differentiation. There are three types: (1) An acute polyarticular disease; (2) a chronic polyarticular disease of primary and secondary forms; (3) a monarticular disease. These are not all one disease. There is no connection between the acute polyarticular and the monarticular affection, or between the latter and the chronic polyarticular condition. The conditions under which the different forms occur are treated at length. The pathology is entered into, and treatment appropriate to the various conditions is laid down, with indications for baths, etc.

Mechanical and Traumatic Arthritis.—W. A. Lane employs the term mechanical or traumatic arthritis to cover all the pathological changes known as rheumatoid arthritis. True rheumatoid arthritis resembles in no manner the pathological condition to which the same term is still almost universally applied. A series of excellent drawings shows modifications of bone at joint regions due to occupation, injury, etc.

The Varied Forms of Osteo-Arthritis, with Illustrative Cases.—By William Armstrong.

The Treatment of Osteo-Arthritis at Aix-les-Bains.—By H. Forestier.

Archives of Otology, vol. xxix., No. 1, 1900.

Suppurative Disease of the Temporal Bone.—S. M. Burnett reports a series of cases, the paper being of special interest from what the author observes concerning diseases of the temporal bone in the negro. He had previously stated his belief that the affection of the middle ear, known as sclerosis or dry catarrh, was much less common among the negroes than among the whites. This referred particularly to the adult. Furthermore, his added experience has shown him that suppurative diseases of the temporal bone are also very uncommon among negro adults. He has never seen a case of mastoiditis in an adult negro. This is by no means the case, however, with the negro in infancy and childhood. Negro children are very subject to diseases of the bones, particularly in the form usually called "tuberculous." Not only this, but suppurative disease of the bones when once established is very difficult to eradicate, and relapses are frequent. The negro child is almost without exception badly nourished, and nearly always "scrofulous." It would not perhaps be safe to say that in every case this means tuberculosis in a demonstrable form in some organ, though few autopsies show its absence, but the power of resistance is much reduced and recuperation sluggish. Whether all cases of temporal-bone suppuration in these children start in the middle-ear inflammation is doubtful. There seems at any rate to be a strong predisposition among them to take on suppurative disease in these bones on slight provocation.

Facial Paralysis as a Complication of Acute Otitis Media.—W. R. Murray has seen this complication twice in two hundred and fifty-eight cases of this form of ear trouble. He says that during its passage through the Fallopian canal the anatomical position of the nerve accounts for the somewhat unusual complication of facial paralysis attending an otitis media, and, when present in an acute catarrhal case, is due to the direct extension of the inflammatory process to the nerve sheath, which, lying within the unyielding bony walls of the Fallopian canal, may be subjected to sufficient pressure, from the swelling attending a slight inflammation of the nerve sheath, to interfere, partly or completely, with the functions of the nerve, and is probably due to some abnormality of the bony structure surrounding the nerve, probably in the neighborhood of the fenestra ovalis, in the internal wall of the tympanum, where the canal turns from its horizontal course and passes downward to its exit at the stylo-mastoid foramen.

Excessive Hemorrhage following the Removal of a Myxo-Fibroma from the Ear.—C. R. Dufour has recently met with an experience of this kind, his patient being a woman aged fifty years. The tumor protruded in a polypoid form and was surrounded with the wire snare, but the latter could not cut through, so the growth was removed by torsion. Severe arterial hemorrhage followed, which hot water did not control but which was entirely checked by compression of the carotid. Release of pressure was followed by immediate recurrence of the bleeding, so under anæsthesia the meatus was packed with gauze, which stopped all further trouble. The gauze was removed without incident in four days.

The Rinné and Gellé Tests.—G. Brühl comes to the following conclusions: (1) If the Rinné test is positive, then Gellé is also unexceptionally positive, and the impaired hearing is due to nervous affections. (2) If the Rinné test is negative absolutely and totally or up to c', the Gellé test is unexceptionally negative, and the impaired hearing is due to a stapes ankylosis. (3) If the Rinné test is negative below or up to the c limit, and positive above it, then the Gellé test decides whether a stapes ankylosis exists or not.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

DINNER TO RETURNED CIVIL SURGEONS—MR. TREVES AND THE PLAGUES OF SOUTH AFRICA—CAUSE OF SCURVY—CYSTS OF THE BREAST—CIRRHOSIS OF THE LIVER—STATUE TO HUXLEY—SIR BATTY TUKE—DEATH OF PROF. VINER ELLIS.

London, May 4, 1900.

Lord Rosebery presided at the dinner to Sir William MacCormac and Mr. Treves. In commending their work in South Africa he extended his praise to the army medical service which has so completely done its duty in the campaign. As the only department which has been on all hands pronounced perfect the Royal Army Medical Corps has justified its position and its profession. Lord Rosebery's eulogy of the service will do much good, and it was indorsed by both the distinguished guests. Sir William MacCormac spoke of the war as one of the happiest things that could have happened in view of the way it has brought out the noblest part of the national character and consolidated the power of the empire to put an end to the most corrupt oligarchy. Mr. Treves confined his remarks to more professional topics, but in speaking of amateur nurses he put his foot in it, and the screaming sisterhood are seeking revenge. He is a bold man and refuses to retract, but he has expressed to an interviewer his amazement at the misunderstanding of his remarks. It is true he said there were two plagues in Africa—the flies and these women. The women were those who went out apparently in search of a novel excitement—society butterflies, who knew nothing and cared nothing for real nursing, and only hindered the surgeons in their duties. I hear army men declaring what he said is too true, and it needed some one out of the army to say it. Sir A. Milner had spoken, but it seems these women could not take a hint, so Mr. Treves has translated it into vigorous denunciation.

The Times made an extraordinary blunder by attributing the perfection of the Royal Army Medical Corps to Sir William MacCormac and Mr. Treves. Those gentlemen accordingly at once wrote a joint letter to *The Times* disclaiming any share of the credit, as they went to South Africa only after the Royal Army Medical Corps had completed all its arrangements, and could therefore only testify to the efficiency of those arrangements. That letter in *The Times* will be appreciated by their army brethren and by the public. Its prompt appearance does justice to the writers' sense of right.

That scurvy is caused by lack of fresh vegetables and may be prevented by lime-juice is still, I believe, generally thought to be an indisputable fact. Even when the precise manner in which the result is brought about is disputed, the fact has been admitted for more than a generation. Still here and there doubts have been expressed, chiefly on account of the impossibility of reconciling some outbreaks with the theory, which may yet have to be greatly modified or discarded. A communication has been made to the Royal Society by Mr. Frederick G. Jackson and Dr. Vaughan Harley, detailing an investigation into this matter which points to the conclusion that ptomain poisoning is the cause of scurvy. The suggestion is not novel, but it is now founded on a careful research. A number of monkeys were kept under the same circumstances on a strictly regulated diet. In one group fed on boiled rice and maize with fresh meat mixed in it, they lost weight and diarrhœa was produced. The diet was probably insufficient, and monkeys are not carnivorous. In another group on exactly the same diet, except that the meat was tainted instead of fresh, the same wasting occurred, but the diarrhœa became bloody, in some cases the motions just before death consisting principally of blood and mucus. Further, five out of the eight monkeys in this group developed spongy gums, in some ulceration occurring. A third group of five, dieted in the same manner, except that an apple or banana was added daily, showed similar effects but not so intense. Four had blood and mucus in the stools, and two of them spongy and bleeding gums. Thus it would seem that the vegetable only restrained but did not prevent the symptoms of scurvy. The facts of Arctic expeditions are in agreement with the conclusion that vegetable food or lime-juice is not alone able to prevent scurvy when the meat is tainted. Therefore the condition of the diet generally must be considered, and most of all the state of preserved meat, whether tinned or salted.

The blood of two of the scorbutic monkeys was analyzed, and that of a healthy monkey, and these analyses were compared with those recorded in cases of human scurvy. The results supported the conclusion that the two diseases corresponded.

A paper on cysts of the breast comes opportunely after the Lettsomian lectures of Sir W. M. Banks on cancer of that organ. At the Medical Society the relative frequency, diagnosis, and treatment of such cysts was considered by Mr. Bryant. This communication was a sequel to one he read before the same society in 1896. From an analysis of two hundred and forty-two consecutive cases seen by him in the last ten years he was brought to the following conclusions: (1) Simple cysts are more common than is generally believed; (2) they are chiefly found at the period of life in which cancer is met with; (3) they are amenable to treatment without the sacrifice of the gland; (4) there is no reason to believe that women who have these cysts are more liable than others to cancer. Separating the cases proved by operation to be correctly diagnosed, Mr. Bryant was able to report that of every four cases which simulated cancer one proved to be cystic. He then showed how safely these cysts may be dealt with either by simply laying them open and plugging with iodoform gauze after destroying the inner surface with carbolic acid or solution of iodine; or by dissecting the cyst from the gland, when intracystic growths can be seen attached to its walls. In his cases permanent recovery has always followed. But should the cyst be found to contain solid cancerous or sarcomatous growth he would remove the whole gland, and, indeed, had done so on two occasions, the cases being classed as solid tumors. If one in four cases simulating cancer turned out to be cystic, Mr. Bryant thought that eliminating cases with clear indications of cancer it might be that half the remaining doubtful cases would be cystic. Such an inference may well give pause to the practitioners who would regard every lump in the breast as cancer. An exploratory incision would make the diagnosis clear. Mr. Bryant admitted that the figures had somewhat surprised him, particularly as they were of consecutive cases. Cysts were generally thought rather uncommon, but these figures disproved that.

Some remarks were made by fellows on the difficulties of diagnosis, and one said he thought innocent tumors were even more common than Mr. Bryant's statistics showed, but these were of course restricted to cysts.

At the same meeting Dr. Campbell Pope read a paper on "Twenty-four Years' Death Certificates in General Practice." His figures pointed to the prevalence of respiratory diseases in the district, situated in West London, the slight fatality of infectious diseases, and the frequency of cancer. Further, influenza was not very fatal, and the infantile death rate was high. In the absence of statistics from other general practices in the district it seems to me difficult to assign a proper value to these.

When a question arises as to the condition of the liver in a given case, I am reminded of a remark once made by Addison. After careful palpation, percussion, and consideration in a consultation on an obscure case, that able observer said: "We feel, and feel, and give a guess." The difficulties of diagnosis remain much the same, and the clinical history of hepatic disease has not kept pace with the progress of our knowledge of other maladies. Still some points have been made clearer and others are being elucidated. They were well treated by Dr. Cheadle in his recent Lumleian lectures on "Some Cirrhoses of the Liver." He has for a long time taken great interest in this subject, and was able to enforce his views from extensive experience. I need only mention one or two practical points to show the value of his lectures. The advent of ascites is so often regarded as the beginning of the end that practitioners will be glad to learn that Dr. Cheadle has not found it so surely and rapidly fatal as many suppose. In the contracted, atrophic form of cirrhosis, due to alcohol, he admits the full gravity of the symptom and thinks that to these cases is to be attributed the hopeless prognosis generally entertained. On the other hand, in hypertrophic and syphilitic cases the advent of ascites is less serious. The cirrhosis is of course incurable, but in itself of little consequence, only important by the pressure it produces. Therefore a certain degree may persist for a long time without precipitating the end. Another point relates to treatment. Dr. Cheadle is a thoroughgoing advocate of early and repeated paracentesis, and some of the cases he related were very convincing as to the value of this practice. Every one will admit that the indication is to get rid of the fluid, and most will subscribe to the doctrine—the sooner the better. But many, perhaps too many, cling to the hope that diuretics or cathartics may suffice. The futility of the former has too often been experienced, and the latter Dr. Cheadle finds do not often reduce the ascites, though they do reduce the patient's strength. He therefore deprecates the postponement of paracentesis until the vital powers are exhausted, and would repeat the operation as it may be called for until the fluid ceases to accumulate.

On Saturday the Prince of Wales unveiled the statue of the late Professor Huxley in the Natural History Museum. He referred to the fact that he had fifteen years ago unveiled a similar statue of Darwin.

It seems that Sir Batty Tuke will have a walk-over for the vacant Scottish University seat.

An outbreak of typhoid at Leeds is causing some anxiety.

It seems like going back for a generation to record the death of George Viner Ellis, the professor of anatomy and author of the "Demonstrations." He died on the 25th ult. at the advanced age of eighty-eight years. He retired as long ago as 1877 to his country house, where he died. The beautiful colored plates he issued in his "Illustrations" were drawn from his own dissections.

THE MEDICAL ASPECTS OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

Lord Roberts' Genuine Success in occupying Brandfort, and his more qualified successes both to the north and the southeast of his halting-place at Bloemfontein, all of which have taken place since I last wrote, may be of more significance than they appear. But few prisoners have been taken, and there is no evidence that the Boers have lost more than a dozen lives, while their guns and provisions have been safely removed and all attempts at cutting off their retreat upon their main army have failed. But, on the other hand, the fertile country from which they have been ousted is the best corn land in South Africa, a consideration to both sides now that the immense importance of cavalry in this war is recognized, while the onward march of the British is sure to lead, as it did previously, to desertions from the Boer commandos.

The Total British Casualties, according to a War Office return published on April 21st, amounted to just about fifteen thousand men, this total being exclusive of sick and wounded actually in hospital at the time of publication of the return. No official return has been made by the Pretorian government of the Boer losses, and the reason of this is probably the apprehension of the Boer leaders lest appreciation of the risks should prevent some of the burghers from joining the flag; but as a matter of fact it is common knowledge that the Boers have not lost anything like so many men as the English. Sir William MacCormac has said, after walking round the trenches of Colenso, that the place was practically impregnable. At the battle of Colenso there were eleven hundred and forty British casualties, while the Boer losses, if the figures of Mr. Fischer, the secretary of the Free State, are received as accurate, amounted to five killed and twenty-five wounded.

Rain and Dust Storms are causing the British troops much discomfort and some sickness. There are now considerable differences in temperature during the twenty-four hours, for the night temperature falls very low, while the torrents of rain occasionally swamp out the tent-dweller. The rain storms are usually preceded by a wind which sweeps up with it the dust of the veldt to deposit it in a fine layer over everything and into everything. This dust makes the mucous membranes of nose and mouth and pharynx sore, causes sore throat with headache and feverish symptoms, and, in the opinion of some, is responsible for diarrhœa. The lull in fighting is enabling the base hospitals to get empty of their patients. Most of those sent down to the base are suffering from enteric fever, but the number is not very great when the size of the British army is considered. It will be interesting to see if any proofs can be obtained that the dust storms are followed with any regularity by enteric symptoms.

The Boer Prisoners at Simonstown are still suffering from enteric fever. The number of cases is great and the mortality considerable. A special hospital has been established at Simonstown for their treatment, and every comfort and even luxury compatible with their condition is provided by the British government. The Boers must have brought the disease down with them from their trenches, which were in a terribly fetid and unsanitary condition, for there was no enteric fever at Simonstown previous to their arrival, and none of the British transports has put in from England with the disease on board.

Moral Support.—I referred in my last letter to the value of the moral support which Sir William MacCormac has been able to give to the Royal Army Medical Corps during their campaign, and a striking illustration of my meaning has been furnished by Sir William MacCormac himself, who has thus summarized his opinion of the department:

"The professional surgical effectiveness shown by the officers of the Royal Army Medical Corps during my intimate connection with them, while they have struggled with difficulties of location, transit, want of water, and a hundred and one other impediments never experienced in a civil hospital in peace, is, in my opinion, of a very satisfactory character, and everything has been done which one could possibly suggest under the varying circumstances for the comfort and skilful treatment of the wounded. The rapidity and completeness with which large field hospitals were conveyed by road or rail, unpacked and re-erected, reflect great credit upon the organizing powers of the officers and the effective carrying out of their orders by the hard-working and patient non-commissioned officers and men of the corps under them."

Such a testimonial from the president of the Royal College of Surgeons of England will be of great value to the corps. Hitherto even when praised (which seldom occurred) the praise was always bestowed with somewhat doubting accents, for the commendation had to come from men with no expert knowledge whatever of the work of the military surgeon. In the South African campaign Sir William MacCormac, and in no less degree such civilian surgeons as Mr. Treves and Mr. Watson Cheyne, are vouching and will vouch for the standard of the scientific work, and will thus enable the commander-in-chief to understand the merits of the corps. Sir William MacCormac, who, by the way, is a strong and sensible man, quite unlikely to bespatter with praise undeserving objects for the sake of making himself agreeable, describes the work of the nursing sisters also in terms for which they will be grateful. "The work of the army nursing sisters," he says, "has been admirable and endless. As soon as one batch of serious cases from the front was comfortably settled and a partial rest seemed possible, another batch arrived. The untiring energy and patience shown by these ladies under great difficulties and stress have been beyond praise."

The "Maine."—The American hospital ship *Maine* is now nearly due again at Cape Town. Lady Randolph Churchill, who has acted as chairman of the American ladies' committee, has published a statement explaining why only male nurses have been engaged for the second voyage.

"Our sisters," she says, "were not 'lady volunteers,' but skilled professionals, having received the same training and receiving the same salaries as the male nurses from the Mills schools, the whole nursing staff having been sent to us by Mrs. Whitelaw Reid. In reference to the sisters, nothing could exceed their excellent work, and if we are parting with them, our decision casts no reflection on their efficiency. It has been found that the nursing staff was too large for the number of patients we could take on board, and for the class of cases which hospital ships, practically three days' journey from the front, necessarily received. There is no doubt that a wounded or sick man at death's door prefers a woman to nurse him; one before whom he need not fear to break down, one whose gentle touch no man can replace. But the bulk of our patients were men able to do a good deal for themselves, who, if given the choice of equally good men or women nurses, would prefer the former. Under these circumstances, and added to them the fact of the cramped accommodation and want of privacy the ship affords for women, it has been thought advisable to dispense with their services."

Lady Randolph Churchill's explanation was probably due to the feeling that the public, reading Mr. Treves' estimate of the value of amateur nurses, and hearing that the *Maine* was going out on its second errand of mercy with only male nurses, might jump to the conclusion that the women who had nursed on the *Maine* were exactly the incompetent ladies of fashion whose actions had been so criticised. I do not know if any one has had this erroneous idea, but I do know that the patients on board the *Maine* were excellently looked after in every way.

Firing on the Red Cross.—Sir William Thompson, who is head surgeon with the Irish Hospital, has publicly stated, in reference to the oft-repeated allegation against the Boers that they fire on ambulances and hospitals, that when this occurs it may well be an accident; for the Red Cross markings are not made the proper size to be visible at the present long ranges, and can be seen only at a distance of six hundred yards or so.

METHYL BLUE AND METHYLENE BLUE.

To the Editor of the Medical Record.

Sir: In the Medical Record for April 28, 1900, in Dr. Willy Meyer's article on "Bottini's Operation for the Cure of Prostatic Hypertrophy," he mentions his use of methyl blue in two- to three-grain doses three times daily, combined with quinine in eight-grain doses. He must mean methylene blue, which is used in cystitis, pyelitis, malaria, rheumatism, and carcinoma. Methyl blue, on the contrary, is never used internally, but is dusted on the throat in diphtheria in a two-per-cent. mixture with sugar powder.

Methylene blue with sodium hydrate is changed to a violet color; methyl blue with sodium hydrate (NaOH) is changed to a reddish-brown.

CHARLES TEUBNER, M.D.

2387 HOWARD STREET, SAN FRANCISCO, CAL.
May 4, 1900.

LYMPHATIC INVOLVEMENT IN CANCER OF THE STOMACH.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the issue of the MEDICAL RECORD for May 5, 1900, is an abstract of a paper on "Malignant Diseases of the Stomach and Pylorus," which I read before the American Surgical Association, in which I am made to say that lymphatic involvement, so called, is now known to be a simple septic glandular enlargement—the relation between the abdominal glands and the carcinoma being utterly different from that which exists between the breast and axilla; and that abdominal adenitis is, therefore, of little importance.

What I did say was: "Lymphatic infection is a still more serious complication because, if palpable glandular malignancy can be established, it is altogether probable that the involvement has passed beyond reach. In twenty-eight cases of non-malignant dilatations of the stomach from various causes which I have operated upon, in more than half enlarged glands could be palpated, due to an accompanying chronic gastritis. This may be, and frequently is, true of cancer of the stomach, the enlarged glands being the result of septic complications. The modern operation for the removal of the glands with carcinoma of the breast suggests a similar glandular extirpation in radical operations on the stomach. Linder does not believe this feasible. In twenty-eight recurrences after extirpation, fifteen were local, twelve distant, and only one involved the glands. An investigation leads to the belief that glandular infection in cancer of the stomach is not uniform, many such cases die without such involvement, and that a moderate enlargement may be septic. Should they become infected their situation renders radical removal practically impossible."

As involvement of the lymphatics takes place in at least two-thirds of the cases of cancer of the stomach, I feel that the statement should be corrected, and more especially when I consider the large circulation of your journal.

W. J. MAYO, M.D.

ROCHESTER, MINN.

PEROXIDE OF HYDROGEN AS A LOCAL ANÆSTHETIC.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have not seen anywhere peroxide of hydrogen spoken of as a local anæsthetic, and as it has proved very satisfactory in my hands I venture to mention it in your paper. Injected under the epidermis it produces immediate and complete anæsthesia of the whole skin. I have used it for over a year, in opening abscesses, cutting off redundant tissue in in-growing toe-nails, opening the pleural cavity, and in one case the abdominal cavity. I do not think any absorption takes place, as the intercellular inflation from the gas generated seems to produce such pressure that the skin cuts like frozen tissue.

H. E. KENDALL, M.D.

SYDNEY, NOVA SCOTIA, May 4, 1900.

PRIORITY IN THE PUBLIC-BATH QUESTION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In reply to the editorial in the MEDICAL RECORD of May 12th, permit me to say that a careful reading of my article will show that I made only two claims—first, that so far as I knew the Lunacy Commission were the first (1891) to introduce spray bathing into institutions for the insane; second, that I was the author of the first general State legislation (1892) providing for the erection and maintenance of free public baths and making their erection mandatory (1895). Dr. Baruch did not secure me as a coadjutor. The first act was passed in 1892—three years before I knew Dr. Baruch. In 1895, at his request I met him and subsequently invited him to appear with me before a legislative committee, but he was unable to do so.

Dr. Baruch is entitled to great credit for his efforts in behalf of public baths, but he was in no wise reponsible for the acts of 1892 and 1895, nor, I am satisfied, would he claim to be so.

All of the experiment with rain and spray bathing were made about the same time—1890–1891—and by many people at different dates. It is not strange that I did not learn of Dr. Baruch's, for I did not know of him or meet him until 1895.

GOODWIN BROWN.

Reviews and Notices.

PRACTICAL TEXT-BOOK OF MIDWIFERY FOR NURSES AND STUDENTS. By ROBERT JARDINE, M.D. Edin., M.R.C.S. Eng., F.F.P. and S. Glasg.; Physician to the Glasgow Maternity Hospital, Glasgow. With thirty-six illustrations. 245 pages. New York: The Macmillan Company. Edinburgh: William F. Clay. 1899.

THIS volume treats of midwifery in a simple, direct way especially adapted for beginners. The descriptions are clear and concise, and technical terms are avoided as much as possible. The actual duties of nurses are well described and the procedures for asepsis particularly insisted upon. The author does not claim to have written for practitioners, but merely for those who are their assistants, and he has succeeded admirably in his task of pointing out what they should observe and what the probable meanings of the more evident symptoms are.

A MANUAL OF SURGICAL TREATMENT. By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S., etc., and F. F. BURGHARD, M.D. and M.S., Lond., F.R.C.S. Vol. II.: The Treatment of the Surgical Affections of the Tissues, including the Skin and Subcutaneous Tissues, the Nails, the Lymphatic Vessels and Glands, the Fasciæ, Bursæ, Muscles, Tendons and Tendon Sheaths, Nerves, Veins and Arteries, Deformities. Philadelphia and New York: Lea Brothers & Co. 1900.

THE second section of this commendable work is now before us, and we find that the promise of the first volume is well maintained. The book is especially strong from the practical point of view, and contains many useful hints, often upon minor details, care for which contributes so much to surgical success. As the title indicates, the subject of treatment receives a very large share of attention, and most of the illustrations bear upon this part of the subject. The deformities, congenital and acquired, of the hand and foot occupy considerable space in the first part of this volume, and make a very concise and readable section upon orthopædic surgery. Under the division devoted to the surgical affections of the tissues, among other matters, the subject of the treatment of many of the minor surgical conditions, especially of the extremities, receives attention, and adds much to the interest and value of the book. Pathology does not receive much consideration either in text or in illustrations. It is good advice which tells us to make the curved incision in front of the knee, when removing a bursa, with the curve up instead of down, so as to keep the cicatrix out of the way when the patient kneels later. The chapter upon diseases of the tendons and their sheaths is satisfactory and complete, but there is no noteworthy departure from generally understood and accepted principles. We do not think it necessary to suture a ruptured quadriceps-femoris tendon with silver wire, because it is not logical to depend on strength of suture material to maintain apposition against a pull, when we know that sutures which exert tension upon living tissues will cut through. The authors have not had satisfactory permanent results with nerve stretching for sciatica and allied conditions, and with this experience our own coincides. The last part of this volume is devoted to diseases of the blood-vessels, the treatment of aneurism of course receiving most attention. A short description of the older methods, some non-operative, is followed by a very complete discussion of the later procedures. The authors' materials of preference for ligatures are thick chromicized catgut and kangaroo tendon, these substances having the advantage of slow absorbability. The illustrations in this part of the book are clear and useful, and the index has evidently been very carefully made. The introduction of so much advertising matter at the end of the volume is offensive to those who are fond of a well-made book.

EXPERIMENTS ON ANIMALS. By STEPHEN PAGET; with an Introduction by LORD LISTER. London: T. Fisher Unwin. New York: William Wood & Co. 1900.

THERE could not be a fairer or more convincing statement of what animal experimentation has done for the progress of medicine than is to be found between the covers of this volume. Its appearance is opportune, and a United States Senator who has been persistently advocating a certain ill-advised and thoughtless bill should have a presentation copy. The first part of the book is devoted to a description of what the older investigators have accomplished for physiology by experiments upon animals, and contains much of historical interest. The main part of the book contains an exceedingly accurate, interesting, and concise description of the results of bacteriological and pathological investigation of the various infectious diseases, in which, of course, experiments upon animals have figured largely. We do not think that even the most confirmed "antivivisectionist" could be so bigoted or wrong-headed as to read the chapters upon diphtheria, or tetanus, or the plague, among others, and still continue to deny the usefulness and propriety of our use of animals in this connection. The book is a timely one, and we have seldom seen a work on a scientific subject so well written.

Nordrach at Home. By Joseph J. S. Lucas. Bristol: J. W. Arrowsmith.

This little sixty-page brochure gives the hygienic open-air or "sanitorium" treatment of consumption adapted to English home life. The simple directions, if followed, would go far toward diminishing the spread of the disease while contributing to the patient's comfort and cure.

Essentials of Physical Diagnosis of the Thorax. By Arthur M. Corwin, A.M., M.D. Third edition, revised and enlarged.

This work, though revised and enlarged, still remains a book essentially adapted to the use of the student, and as such, without doubt, will continue to be appreciated. It successively deals with: I. Topography and Landmarks of the Chest; II. Methods of Physical Diagnosis; III. Physical Signs in Diseases of the Chest; IV. Diseases of the Pericardium, Heart, and Great Vessels. The various subjects are, as far as practicable, presented in a tabulated form, thereby increasing its value as a handy book of reference and a useful guide to the intelligent examination of the thoracic cavity and its contents.

The Rise and Development of the Liquefaction of Gases. By Willett L. Hardin, Ph.D., Harrison Senior Fellow in Chemistry in the University of Pennsylvania. New York: The Macmillan Company. 1899.

The work is a very timely one, considering the general interest which has recently been aroused by the liquefaction of hydrogen. The worker in this field has found his literature rather scattered, and will welcome a book bringing together foreign investigations and discoveries, as well as those with which he may be more familiar. This small volume of two hundred and fifty pages gives a rather complete account of methods now in use, while enough of the theoretical aspects of liquefaction have been included to enable the layman to grasp the subject intelligently. It is the references to scientific works which make the book most valuable to one already up in the general subject, while the style is one which will appeal to the popular reader. The work is illustrated with a number of drawings.

Text-Book of the Embryology of Invertebrates. By Dr. E. Karschelt, Professor of Zoölogy and Comparative Anatomy in the University of Marburg, and Dr. K. Heider, Professor of Zoölogy in the University of Berlin. Translated from the German by Matilda Bernard. Revised and edited with additional notes by Martin F. Woodward, Demonstrator of Zoölogy, Royal College of Science. Vol. II., 374 pages, and Vol. III., 441 pages. London: Swan, Sonnenschein & Co. New York: The Macmillan Company. 1899.

These volumes follow the one translated by Professors Mark and Woodworth, who were obliged to abandon the work in favor of the present translator and editor. Vol. II. deals with the embryology of phoronidea, bryozoa ectoprocta, brachiopoda, entoprocta, crustacea, and palæostraca; Vol. III. is devoted to arachnida, pentastomidæ, pantopoda, tardigrada, onychophora, myriapoda, and insecta. Although a work of such scope and abounding in such minute details would naturally appeal more strongly to the special student, the general reader cannot fail to be impressed with the amount of erudition displayed, as well as by the clear and orderly arrangement of the subject-matter. Each chapter is richly illustrated, and is followed by an exhaustive bibliography. To those who are familiar with the difficulties attending the translation of a German book abounding in such ponderous scientific terms as a work on comparative embryology, it must be evident that the present volumes are singularly free from idioms and obscure sentences. The English edition will be invaluable to special students.

The Urine and Clinical Chemistry of the Gastric Contents, the Common Poisons, and Milk. By J. W. Holland, M.D. Forty-one illustrations. Sixth edition, revised and enlarged.

In view of the fact that the above work has reached its sixth edition but little need be said of its merits. Originally intended for the student, its present form is such as to render it of value to the general practitioner as well. It is divided into the following chapters: I. Examination of the Urine; II. Examination of the Gastric Contents; III. Examination of Common Poisons; IV. Study of Normal Milk, and Milk Examination. For convenience the more important matter is printed in large type. The text is clear and concise, and the microscopical drawings are well reproduced.

Loveliness. By Elizabeth Stuart Phelps. Boston: Houghton, Mifflin & Co. 1899.

This is a charming tale which will, however, pervert none of those who believe that vivisection in the hands of the humane and scientific investigator has proved and ever will prove an inestimable boon to mankind. The story tells how Loveliness, the pet dog of a little invalid girl, is stolen, bringing the child to death's door. The dog is finally recovered by her father in a somewhat dramatic fashion, at the very moment it is about to suffer vivisection in the medical college of which he himself is one of the professors. Carried home in triumph, it is the means of restoring its young mistress to health. Had the author in her task gone one step further and actually depicted her canine hero suffering various tortures without the boon of an æsthetic, we would have heartily concurred with her in condemning such an act as one of unnecessary cruelty. Let us be mindful, however, that but for vivisection many branches of medical science would to-day be but in an embryonic state, and countless lives be sacrificed through ignorance of the functions governing that intricate and wonderful mechanism, the human body.

A Text-Book of Embryology for Students of Medicine.. By John Clement Heisler, M.D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia. With 190 illustrations, 26 of them in colors. Pp. 405. Philadelphia: W. B. Saunders. 1899.

This volume is a worthy companion of the others in this well-known series. The author has succeeded in presenting a subject which has always been the *bête noire* of medical students in an unusually clear and interesting way, though necessarily much condensed. The introductory chapter deals with ovulation and fertilization. We note on page 33 the surpassing statement that if the ovum "instead of passing into the tube drops into the abdominal cavity and is fertilized there, it undergoes partial or complete development *in situ*; this condition is known as extra-uterine pregnancy or ectopic gestation." Chapters II. and III., on segmentation of the ovum and the germ layers, are followed by a chapter on the beginning differentiation of the embryo. The two succeeding chapters, on the fœtal membranes and the deciduæ, are beautifully illustrated by colored plates. Chapters VIII. to XVIII., inclusive, take up the development of the various systems of the body, beginning with the connective tissues and lymphatics, and concluding with the skeleton. A tabulated chronology of developments is appended. The index is unusually full and accurate. While a work which deals largely with dry anatomical details does not admit of criticism from a literary point of view, it may be said that the author's style is lucid and pleasing. Each sentence is so clearly expressed that there is no chance of misunderstanding its meaning. The illustrations are excellent; in fact, the book is in every way worthy of commendation.

Ueber Gangrän bei Diabetes Mellitus. Von Dr. Fritz Grossman, in Berlin. 8vo, 134 pages. Berlin: August Hirschwald. 1900.

In this excellent monograph the author considers the various theories as to the cause of gangrene and trophic disturbances in diabetes mellitus; his conclusions are that these are due either to arteriosclerosis (thrombosis) resulting from the abnormal products, such as acetone, lactic acid, butyric and oxybutyric acids, which are present in the blood of diabetics, or due to inflammatory processes induced by bacteria whose virulence has been increased by the hyperglycæmia acting on tissues whose resistance has been lessened by the diabetes mellitus. The author has also fully discussed the relation of nerve degeneration to the arteriosclerosis and to the trophic disturbances and gangrene; he rightfully concludes that the nerve degenerations are not the cause of these pathological states, but are in themselves only a manifestation of a diminished nutrition of the nervous system, resulting from the arteriosclerosis. In the chapter on treatment the author advocates the use of local anæsthesia when operating on diabetic patients, and also the employment of "digital" compression for temporary hæmostasis during an amputation. In view of the frequent association of arteriosclerosis with the gangrene he prefers to amputate at a high level. The monograph contains a critical review of cases of diabetic gangrene reported in literature, and also a report of the author's experimental investigations concerning the action of bacteria on diabetic tissues.

LETTER-, WORD-, AND MIND-BLINDNESS. By JAMES HINSHELWOOD, M.A., M.D., Surgeon to the Glasgow Eye Infirmary. London: H. K. Lewis. 1900.

THE subject-matter here presented is largely made up of papers published by the author in *The Lancet*, and covers a field which has hitherto had not very much attention in English literature. There are five chapters. The First, "Visual Memory," is strictly new. A case is given of partial mind-blindness with dyslexia—a peculiar form of word-blindness. Word- without letter-blindness, and letter- without word-blindness are also considered.

LEADERS IN TYPHOID FEVER. By E. B. NASH, M.D., author of "Leaders in Homœopathic Therapeutics." Philadelphia: Boericke & Tafel. 1900.

IN this little monograph of one hundred and thirty-five pages, are given, without the description, merely the leading indications in treatment. The remedies are grouped according to stages of the disease. The author believes that no hemorrhage should occur under proper treatment; he has seen but one case in fifteen years, since he has learned how to use the remedies. He thinks hunting after something better than the "superb homœopathic therapeutics" for typhoid is time wasted. The type is large, so that the amount of reading matter is quite limited.

HEALTHY EXERCISE. By ROBERT H. GREENE, M.D. New York: Harper & Brothers. 1900.

THIS is an excellent little manual for the laity, setting forth the necessity of exercise as a means of preserving health. It is divided into three parts—the first dealing in a general way with the theory of exercise and bathing, the second discussing the choice of an exercise according to the age and physical condition of the person, and the third describing briefly the manner of carrying out the different forms of exercise. The description of the respiratory and abdominal exercises in Part III. is supplemented by some useful outline sketches. The book is full of sound advice, and the general adoption of the author's suggestions would go far to reduce the physician's income.

DISEASES OF WOMEN: A TREATISE ON THE PRINCIPLES AND PRACTISE OF GYNÆCOLOGY. For Students and Practitioners. By E. C. DUDLEY, A.M., M.D., Professor of Gynæcology, Northwestern University Medical School; Gynæcologist to St. Luke's Hospital, Chicago, etc. Second edition, revised and enlarged. With 453 illustrations, of which 47 are in colors, and 8 full-page plates in colors and monochrome. Pp. 719. Philadelphia and New York: Lea Brothers & Co.

THE appearance of a second edition of this work within a little over a year after the first is a proof both of the successful reception it has met, and of the energy and progressiveness of the author. As we have already pointed out the many excellent features of the book, we need only indicate the changes which have been made. Part VI., including four chapters, is new. It includes the disorders of menstruation and sterility, which the author, though properly regarding them as symptoms, has seen fit to consider under separate headings—to the detriment of the book in our opinion. The same grouping of subjects, "not by the more common regional method, but so far as possible from the standpoint of pathological and etiological sequence," is still maintained. Apropos of this we may add that not a few practical teachers have not found it such a decided advance on the old "regional method." Certainly there seems no sufficient reason for the close juxtaposition of tumors, tubal pregnancy, and malformations in Part III. We had rather hoped that the subject of inflammation of the uterus might have been retouched and rendered a little less confusing. We are less pleased with the author's handling of Part II. than with any other portion of the book. Since he is an avowed exponent of the school of gynæcology represented by the Woman's Hospital, it would be unfair to comment too severely on the unusual amount of space devoted to plastic operations on the cervix, as compared with others which would seem to the ordinary reader to be equally if not more important. Dr. Dudley is a loyal follower of Dr. Emmet, as well as a brilliant alumnus of the institution which he adorns. A table of illustrations is much to be desired, if for no other purpose than to call attention to the numerous original drawings, of which we would mention especially figures 412 to 416, representing the various steps of the author's ingenious operation for anteflexion. In dwelling upon a few minor defects of this excellent work, we seek only to emphasize the fact that, while original, it is not yet a perfect text-book for the student. That it is a distinct addition to the literature of gynæcology no one can deny. We heartily congratulate Dr. Dudley on its continued popularity.

THE PRINCIPLES OF TREATMENT AND THEIR APPLICATION IN PRACTICAL MEDICINE. By J. MITCHELL BRUCE, M.A., M.D., F.R.C.P., Physician and Lecturer on the Principles and Practice of Medicine, Charing Cross Hospital; Consulting Physician to the Hospital for Consumption, Brompton; Examiner in Medicine, University of Cambridge. Adapted to the United States Pharmacopœia by E. QUIN THORNTON, M.D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica, Jefferson Medical College, Philadelphia. Philadelphia and New York: Lea Brothers & Co. 1900.

THERE are two distinct parts to this work, which may be called the theoretical and the practical. The first part deals with the general indications for treatment, based upon the etiology, pathology, and symptomatology of the disease, and modified by the age and sex of the patient, and also with the means and art of treatment. In the second part the author furnishes special illustrations of the principles of treatment, previously outlined, applied to diseases of the circulatory, respiratory, and digestive systems (the latter including the urinary), to a few cerebral affections, neuritis, and typhoid fever. The first part should be read through and pondered especially by young physicians just starting on their life work, with a good supply of knowledge but a lack of ability to apply it; the second part will serve as a work of reference and a guide, for older practitioners as well as the young, to the management of any of the maladies here discussed. The work is one that can be commended without reservation to young practitioners especially, and it may also be read with interest and profit by those of long and varied experience.

A SYSTEM OF MEDICINE, BY MANY WRITERS. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., D.S.C., F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physic in the University of Cambridge, Fellow of Gonville and Caius College, Honorary Fellow Royal College of Physicians of Ireland. Volume IX. New York: The Macmillan Company. 1900.

THIS, the final volume of Allbutt's excellent System, contains a presentation of mental diseases and the dermatoses, together with the concluding portion of diseases of the nervous system, and an appendix to malarial fever showing the part played by the mosquito in the spread of this affection. There is also a general index to the entire work, which will probably provoke to more profanity than anything of the kind attempted in the past century. We have repeatedly noted the confusion of volumes in this work, the number of the volume on the book seldom agreeing with that on the title-page. The same confusion is carried through the general index. This volume is called ix., both on the back and on the title-page, yet all the references in the general index to the articles in it are to volume viii.—and so with the references to all the other volumes. The index is, furthermore, wretchedly incomplete. One's fault-finding must, however, cease with the index, for the two treatises on diseases of the skin and mental maladies are deserving of naught but praise. The list of writers contains the names of nearly all the best known dermatologists and alienists in Great Britain and Ireland, and almost without exception they have handled their subjects in a most acceptable manner. The supplementary article on malaria is written by Dr. Patrick Manson.

A Case of Flat Condyloma of the Vocal Cords.—Domenico Tanturri Fu Vincenzo reports a case, a study of which justifies the following conclusions: Among the manifestations of syphilis of the larynx may be included flat condyloma; this may be the first manifestation of the second stage. Its structure is the same as that of condyloma of the mucous membrane of the upper passages. The affection most likely to obscure the diagnosis is primary laryngeal tuberculosis. Specific treatment is valuable in clearing the diagnosis. The symptoms of the lesion are a constant dysphonia, and sometimes a laryngeal stenosis. The prognosis is good, these growths usually yielding to antisyphilitic treatment.—*Giornale Internazionale delle Scienze Mediche*, February 28th.

Surgical Suggestions.

Perforating Typhoid Ulcer.—The incision should be made on the right side, the ulcer inverted without cutting away its edges, the abdomen flushed, and a drain inserted.—J. E. Platt.

Cancer of the Rectum.—Do not operate radically if the patient is very weak; if there are metastases; if the mass is firmly anchored in the pelvis; if glandular infection passes beyond the reach of the finger; and if acute obstruction arises.—Hochenegg.

Adhesive Perigastritis of the pyloric region with symptoms of ulcerative stenosis was successfully treated by gastro-enterostomy. This is the rational method in the vast majority of cases.—Westphalen and Fick, *Deutsche med. Wochensch.*, No. 52, 1899.

Neuralgia.—Successful resection of the perineal branch of the internal pudic nerve for severe urethro-cystitis, is accomplished by cutting down upon the internal pudic at its point of passage through the small sacro-sciatic notch.—Rochet, Report of French Association of Urology.

Anthrax.—Make a ring of dough about the pustule about 4 cm. deep, and fill the centre with lye made from equal parts of wood ashes and lime; leave on for four hours. The best results are obtained by early and complete excision, but this is not always possible to carry out.—Andreu y Pahi, *Gaceta Med. Catalana.*

Post-Puerperal Psoitis is to be thought of after severe labor when fever is associated with marked pain in the iliac fossa, especially on extending the leg, and a tumor is made out. It must not be confounded with renal affection, perinephritic phlegmon, abscess by congestion, and especially appendicitis with abscess. The best possible drainage is the proper treatment.—Walter C. Wood.

Secondary Hemorrhage will be less likely to occur if just before closing the abdomen the operator carefully inspects all ligatures and raw surfaces and takes a final look at any portion of the omentum which has been adherent or ligated. If the table be lowered to the horizontal position and a clean sponge be introduced into Douglas' pouch for a few minutes, the stain noted after removal will be an index of the amount of oozing.—M. A. Crockett, "Gynæcology."

Operation in Gastric Ulcer should be done (1) in all cases of perforation at the very earliest possible moment—also in subphrenic abscess; (2) in cases of hemorrhage (*a*) when there is continual oozing of blood, especially if the stomach be dilated, and (*b*) in cases of repeated severe hemorrhage; (3) in cases in which there is severe pain and vomiting unaffected by treatment, and which is producing progressive emaciation; (4) in case of dilatation of the stomach from contraction within or from adhesions outside the stomach.—Bidwell.

Operations for Ascites.—In the ascites of cirrhosis the liver may be exposed by an abdominal incision and the adjacent surfaces of the liver and diaphragm scraped by means of the finger or a sponge.—Drummond.

A ligature may be passed through the edge of the liver, the omentum, and the cut parietal peritoneum. The omentum can be brought up between the liver and diaphragm by tying the three sutures together.—Rolleston.

Suprapubic drainage is necessary when there is a large amount of fluid present and when there has been a rapid reaccumulation of fluid after tapping.—Swain, *Bristol Medico-Chirurgical Journal*, March.

Carbuncles are best treated by extirpation, which is no more painful than incision.—Rushton Parker.

Pylorectomy will give better results as time goes on, especially if performed early when the patient's strength is retained.—Richardson.

Stammering in a boy aged thirteen years was cured by temporary craniectomy for depression due to lack of cranial development.—Jonnesco.

Before Operating it should be discovered whether the patient gives any history of malaria. This may save anxiety when the temperature suddenly goes up afterward.

Cancer of the Tongue.—The danger of sepsis, which is the chief cause of mortality after operation, can be lessened by thoroughly cleansing the mouth and teeth for several days before operation.—Cheyne.

Chancroids should be washed twice a day for fifteen minutes with a two-per-cent. creolin solution at a temperature of 100° to 108° F.; after drying they should be dusted with salol and a bandage applied.—Grimeperte.

Needles are best kept in a saturated solution of washing-soda. Lysol is good, but the color hides the needles. Albolene is also a good medium, as is likewise absolute alcohol containing calcium chloride.—Dawbarn.

Cyst of the Breast.—There is little evidence that general cystic disease of the breast degenerates into cancer. The cysts which occasionally develop at the menopause during the process of involution need not be interfered with.—W. T. Bull.

Vaginal Antepartum Douches should be employed only if there is any purulent or putrid discharge, such as caused by gonorrhœa or cancer; and if any operation is to be performed in which the hand or instruments have to be introduced into the uterus.—Jardine.

Laminectomy should not require more than half an hour's time, diminishing shock. Sepsis is the only danger. There should be a single median incision. Operation should not be done till the shock of the accident has passed, and not at all if the cord is known to be completely crushed or divided.—J. C. Munro.

Cancer of the Breast.—The disease is more frequent in the upper and outer quadrant. Medullary cancer is far more apt to recur than scirrhous.—Warren.

The pectoral fascia must invariably be removed, and if the whole great pectoral is not taken away, at least a superficial layer must be dissected off.—Cheyne.

It seems impossible to doubt that in certain instances oöphorectomy causes the cancer to disappear. It may be of value as a palliative operation.—Stanley Boyd.

The supraclavicular region should almost invariably be cleared out.—Halsted.

A mask should be worn by the operator to prevent wound infection from the mouth and nose.—Huebener.

Rubber gloves are the only effective kind for surgeons' use. The hands must be as carefully sterilized as though the gloves were not to be worn.—Lockett.

Society Reports.

THE PRACTITIONERS' SOCIETY.

One Hundred and Fifty-fifth Regular Meeting, Held on Friday, April 6, 1900.

A. Alexander Smith, M.D., President, in the Chair.

Two Cases of Hypertrophy of the Spleen of Difficult Explanation.—These were presented by Dr. Andrew H. Smith.

Case I.—Male, aged twenty-six years, was admitted to the Presbyterian Hospital on November 28. 1899. His family history was negative. When the patient was eleven years old he had an attack of typhoid fever. Ten years ago he had an irregular fever which lasted for ten or twelve days; at that time he had no chills, but he was greatly prostrated with nausea and vomiting. He was treated at a hospital in Savannah, Ga., and cured by the administration of quinine. He had never had a similar attack since. Six years ago he had an attack of rheumatism which lasted two months; during this attack he suffered much from palpitation of the heart and dyspnœa. He was only a moderate user of alcohol, and denied syphilis. About a year ago the patient began to have a sense of oppression over the chest, with slight dyspnœa on exertion. He also had rheumatic pains in the joints. These continued with more or less intensity for four months. He also had some cough and several slight hæmoptyses, and lost considerable strength but no flesh. His appetite was poor; the bowels were regular. He paid a visit to his home in Sweden, and returned to this country two months ago, slightly improved. Examination showed a man of large frame, well nourished but somewhat anæmic. The lungs were normal. The heart's action was regular; the apex impulse was in the fifth intercostal space, three and one-half inches to the left of the median line. Over the third right space was heard a faint systolic and a louder diastolic murmur, the latter being transmitted up and down the sternum and heard loudest over the third right space at the sternal margin. The pulmonary second sound was somewhat accentuated. The liver was percussed from the fifth space to the free margin of the ribs; its edge could not be felt. The spleen was enormously enlarged, being percussed as low as the umbilicus; its surface was distinctly felt, but its edge could not be made out. The pulse was soft and regular. The urine was negative. An examination of the blood on December 5th showed sixty-five per cent. of hæmoglobin; red cells, 4,396,000; leucocytes, 7,000; there was marked relative lymphocytosis. On December 6th a blood culture was made with negative results.

Case II.—J. H——, male, aged twenty-five years; a native of the United States; a cook by occupation. He was admitted to the Presbyterian Hospital on October 17, 1899. His mother had died of cancer of the breast; the other members of his family were alive and well. There was no history of leukæmia. The patient stated that he had always had a sallow, yellowish color, and had never been very robust. As a boy, while living on the Delaware River, he had repeated attacks of chills and fever, recurring every summer until he was seventeen years of age, when he went to sea; this was eight years ago. Fourteen years ago he first knew of any trouble with his spleen. At that time he had an attack of intestinal obstruction, and was very ill for two weeks, recovering without operation. For some time after that his abdomen was increased in size, but gradually it resumed its normal dimensions. Two years later he had typhoid fever and was ill for two months. Three years after that he had a second attack of typhoid fever, which was treated at the German Hospital in this city. The following year he had an attack of what was pronounced to be "typho-malarial fever." Six years ago, while in Australia, he had scurvy; at that time his teeth became so loose that he could easily have pulled them out. He recovered, however, but some months later an ulcer formed on his leg which failed to heal until his return to America, three years ago; recently this ulcer broke out again. Four years ago he had pneumonia at Bellevue Hospital. During the past five or six years, whenever the patient visited his home on the Delaware River he had repeated attacks of chills and fever, the last one about a year ago. The patient denies venereal disease. He had at times used alcohol to excess, but drinks infrequently. He had never had any vomiting to speak of, nor hemorrhages from the mucous membranes; he had never noticed any glandular enlargements. Examination showed the impulse of the apex of the heart to be in the fourth space, two and one-half inches from the median line. The heart's action was regular. There was a blowing systolic murmur, heard at the apex and upward along the left sternal margin to the pulmonic area. There was also a loud systolic murmur heard over the aortic area. The area of cardiac dulness was apparently not increased. The lungs were normal. The liver was percussed from the fifth space to an inch and one-half below the free margin, where its edge was felt. It was tender to the touch. The spleen was very much enlarged, extending about an inch to the right of the umbilicus, and three inches below that point it was distinctly felt. Its surface was smooth, hard, and not tender. The organ was so large that it could be grasped between the two hands. The abdomen was prominent over the splenic region; otherwise it was normal. While the patient was in the hospital he had an attack of acute pleurisy, without effusion, from which he made an uneventful recovery. A blood count, made on October 24th, showed 3,056,000 red cells and 17,000 leucocytes, with thirty-eight per cent. of hæmoglobin. The blood was carefully examined for malarial organisms, but none was found. The urine was negative throughout. On February 14, 1900, the patient was readmitted to the hospital for an attack of lobar pneumonia. Three days later an examination of his blood showed 4,120,000 red cells, 17,000 leucocytes, and forty-five per cent. of hæmoglobin. He made an uneventful recovery from his pneumonia.

In both of the preceding cases, Dr. Smith said, the point to which he desired to direct particular attention was the enormous chronic enlargement of the spleen, to which no adequate cause could be assigned.

Dr. George L. Peabody said that in the second case shown by Dr. Smith the enlarged spleen was probably attributable to chronic malarial infection, of which disease the patient gave a history dating back many years. He also gave a history of having had three attacks of typhoid fever, and it was possible that one or more of these were really malaria instead of typhoid.

Dr. E. G. Janeway said he thought the second patient shown by Dr. Smith could be put down as one of the old-fashioned ague cases. In the first case he did not care to venture a positive opinion as to the cause of the enlarged spleen. There was possibly some obstruction to the portal circulation, without dropsy. The possibility of a cirrhosis of the liver, with irregular manifestations, should always be borne in mind, and further developments awaited. The speaker said he had frequently seen cases of supposed pseudo-leukæmia at Bellevue Hospital turn out to be cases of cirrhosis of the liver, in spite of the fact that the patients absolutely denied an alcoholic habit.

Dr. Beverley Robinson expressed the opinion that the use of the microscope could not be relied upon in the diagnosis of chronic malaria, nor, in many instances, could the usual anti-malarial remedies be depended upon.

A Case of Heart Disease with Some Unusual Features.—This case was presented by Dr. J. W. Brannan. A. J——, a colored boy, aged sixteen years, was admitted to Bellevue Hospital on March 21, 1900. His father died of pneumonia; his mother was alive and well. His sister and grandmother had suffered from rheumatism. According to the statement made by the boy's aunt, he had been a healthy baby, but at the age of five years he had had an attack of acute articular rheumatism, and again two years later. In both of these attacks his heart was affected, and since his second attack he had always suffered more or less from dyspnœa, with cardiac pain and palpitation. Five years ago he had an attack of dizziness and fell to the floor, but did not lose consciousness. He was put to bed and remained there for five weeks. His present illness began about March 1st. He had a severe cough, with muco-purulent expectoration and pains in the chest. No blood was raised. His ankles and knees became swollen, painful, and tender, and he was unable to walk. His dyspnœa at times became so severe that he could not breathe comfortably in the recumbent position. No ascites was found. On examination the heart apex was difficult to locate. Its impulse was made out with the greatest distinctness in the fifth space in the nipple line, two and three-quarter inches from the mid-line of the sternum. It varied in force. The impulse at the base was stronger than at the apex. Over the whole precordium there was a systolic thrill, with its maximum intensity in the second left intercostal space. Over this same area was also heard a loud, long, rough systolic murmur, with its maximum intensity in the second left space, close to the sternum. The murmur was heard with great distinctness over the entire chest in front and behind, most distinctly on the left side. The heart's action was rapid and irregular. The second aortic sound was absent and the second pulmonic accentuated. The left border of the heart was three inches outside the median line; its upper border was at the third rib; the right border was three-quarters of an inch to the right of the edge of the sternum. Examination on April 1st showed the apex impulse to be fairly well localized in the fifth space, two and three-quarter inches from the median line. The heart's action was more regular and the dyspnœa had disappeared. The murmur was heard as at the first examination, with its maximum intensity in the second space to the left of the sternum. There were marked pulsation coincident with the murmur and thrills in the second and third left spaces. The murmur was heard loudest posteriorly higher up than usual, about the level of the spine of the scapula. It was also apparently transmitted into the great vessels of the neck and axilla. The patient had been up and about the ward during the past few days doing light work. Dr. Brannan said he was in doubt as to the nature of the cardiac lesion in this case. The possibility of a pulmonary lesion had been considered, but in the absence of any signs of venous congestion and the fact that the patient had not been a "blue baby," that diagnosis was rather doubtful. On the other hand, it was the right side of the heart that was mostly enlarged. The aortic second sound was lost, or at all events was very indistinct. The pulmonary second sound was markedly accentuated. There was nothing abnormal in the sphygmographic tracings. They certainly did not indicate stenosis of the aortic orifice. There was no change in the murmur when the patient was in a recumbent position, nor when the lung was inflated and fixed or held in the position of complete expiration. The possibility of aneurism of the descending portion of the arch of the aorta and pressing upon the pulmonary artery had been suggested. The similarity of the sphygmographic tracings in the two radials was opposed to this diagnosis.

Dr. Peabody said the case presented by Dr. Brannan was certainly an unusual one. The murmur was a very loud one, with its point of maximum intensity over the pulmonary area. The fact should be borne in mind that the loudness of a murmur was not always an indication of its seriousness. Dr. Peabody said he was inclined to think that the murmur in this case was a mitral one. The absence of certain symptoms which one would expect to find in a pulmonary cardiac lesion should be taken into consideration in making the diagnosis.

Dr. Janeway said that a case of this kind would require repeated examinations before a definite opinion as to the nature of the cardiac lesion could be arrived at. The right ventricle did not appear to be particularly enlarged. Mitral stenosis, in rare instances, gave rise to some of the phenomena observed in this case, or possibly its unusual features were due to some anatomical abnormality. The speaker said that some years ago he saw a boy who had a loud heart murmur which was abnormally situated. At the autopsy it was found that the aorta sprang from the right ventricle and the pulmonary artery from the left. He said he did not think the case shown by Dr. Brannan was one of mitral insufficiency, because the murmur was so loud above and less distinct in the area where it was usually heard when the mitral valves were insufficient.

Dr. Andrew H. Smith said he agreed with Dr. Janeway that Dr. Brannan's case required more prolonged study before an explanation of its unusual phenomena could be given. The speaker said he was struck by the fact that the murmur could be heard very distinctly posteriorly and along the dorsal spine. He was inclined to believe that the case was one of mitral regurgitation, and that the thrill and the unusual location of the sounds were the result of some abnormality existing in the auricle by which the backward current from the ventricle was made to form an eddy.

Dr. Robinson said that, in considering a case of this kind, the symptoms and general condition of the patient should be borne in mind. The diagnosis probably lay between mitral stenosis and mitral regurgitation, as it was highly improbable that a pulmonary lesion was the cause of the murmur. That the location of the bruit would not always enable us to distinguish positively between a mitral stenosis and regurgitation was proven by the late Dr. J. West Roosevelt in a paper on this subject which was based upon the post-mortem records at Roosevelt Hospital. In obscure cases like the one shown by Dr. Brannan, repeated examinations might perhaps enable us to make out the cause of the trouble, but our diagnosis could only be verified on the post-mortem table.

A Case of Bullet-Wound of the Brain.—This case was presented by Dr. Robert Abbe. The patient was a man forty years old, who was shot in the head sixteen years ago. The missile, which was a small rifle bullet, entered the forehead near the hair-line an inch to the left of the centre, and became embedded in the brain. The bullet gave rise to no trouble until four years ago, when the man had an epileptic convulsion which was repeated in six months and gradually came more frequently. Now it recurred every two weeks. An *x*-ray picture was taken, which located the bullet in the brain, about one-third the distance between the frontal and occipital bones, and about an inch and one-quarter below the vertex. Dr. Abbe said he intended to operate on this patient, as the convulsions were possibly due to pressure from an indurated scar or to the presence of bony spicules. The bullet was a small one and probably could be removed.

Dr. Charles L. Dana said he had seen a number of cases like the one shown by Dr. Abbe, and in one instance he had had an opportunity to examine the brain after death. It was not particularly rare to have epilepsy develop some years after the receipt of an injury of the brain. In the case which the speaker had in mind the patient developed generalized epileptic attacks and subsequently died of alcoholism. The brain showed a certain amount of cortical cellular degeneration, such as was seen in degenerative epilepsy. This cellular degeneration was usually at the bottom of the epilepsy, and it continued whether operation was done or not. In the case shown by Dr. Abbe the convulsions set in so long after the accident that an operation could hardly be expected to do much good. At the same time, it could be done with comparative safety.

Dr. Janeway said the man admitted having had syphilis twenty years ago.

Dr. H. M. Biggs said that some time ago he performed an autopsy on a man who had committed suicide. In addition to the bullet which had caused his death, an old, encysted bullet was found in the frontal lobe of the brain, and it was afterward learned from the man's relatives that he had made an attempt at suicide by shooting himself in the head ten years before. The bullet had apparently remained embedded there for ten years without giving rise to any symptoms.

Dr. Abbe said that if any improvement would result from the operation in the case he had shown, he thought it would be due more to the removal of scar tissue, cortical adhesions, or cyst, or, probably, of osteophytes, than from the removal of the bullet itself. The speaker recited cases of severe epilepsy which he had relieved for varying periods by the release of adhesions.

Remarks on Some of the Conditions Simulating Appendicitis and Peri-Appendicular Inflammation. —This paper was read by Dr. E. G. Janeway (see p. 897).

Dr. Robert F. Weir said that surgeons were well aware of the difficulties occasionally encountered in the diagnosis of appendicitis. Many of the rarer conditions simulating this disease could be recognized only after much study and observation, and not infrequently an exploratory incision was necessary in order to clear up the diagnosis. Probably three of the most common conditions which were mistaken for appendicitis were those associated with a displaced kidney, or with perforation of the gall bladder, or with perforation of the stomach or duodenum. The speaker said he had recently collected fifty-one cases of duodenal perforation, three-fourths of which had been regarded as cases of appendicitis and operated on as such.

Dr. Joseph D. Bryant said that a mistaken diagnosis of appendicitis was probably often due to the fact that the anatomical relationship of the appendix to other contiguous organs was an uncertain one: it was not always found in one particular region. Hence, any derangement of that appendage might easily be confounded with a diseased condition of the ovary, or kidney, or gall bladder, and *vice versa.* The speaker recalled the case of a man who suffered from neuralgia, associated with symptoms of gastric and intestinal trouble due to the excessive use of alcohol; his neuralgic pain simulated appendicitis, and he was twice operated on under the supposition that he was suffering from that disease, and subsequently he was refused operation at two hospitals where he applied for relief from the same trouble. Dr. Bryant said that another case which came under his observation was that of a girl aged seventeen years, with an hysterical tendency, who complained of excessive pain in the region of the appendix. There was a slight increase of temperature and a small tumor could be made out. An operation cured her, but it also revealed the fact that she had no appendix at all, the usual site of the appendix being occupied by a small elevation, scarcely half an inch in height. He said he had seen cases of perforation of the stomach and duodenum which were regarded as examples of appendicitis. In one instance of the former there was a perforation, and the escape into the peritoneal cavity of gastric contents had set up an extensive circumscribed peritonitis, which after much suffering gave rise to the formation of an abscess pointing to the left of the median line and just above the umbilicus, when the patient came to his attention. A free incision at that point permitted the discharge of the collection and established a diagnosis through the presence of gastric juice a few hours later. This patient made a prompt and complete recovery. A perforation at the posterior surface of the duodenum, complicating a pronounced and long-extended alcoholic debauch, was mistaken for an attack of acute appendicitis with perforation, in an instance coming beneath his observation. Another source of error in the diagnosis of pathological conditions in the appendicular region lay in confounding the fibrous exudation of chronic appendicitis with malignant disease of the cæcum. Such a case was recently reported at the New York Surgical Society. A similar one not long since came under the speaker's observation. The patient was supposed to have appendicitis. The surgeon upon opening the abdomen found a large mass which he then regarded as inoperable sarcoma of the cæcum, whereupon he abandoned the operation and closed the wound. Subsequently the patient came under the speaker's care, who found a large, compact tumor composed of fibrous exudate, from the centre of which the appendix was removed and submitted to Dr. Dunham for microscopical examination. The walls of the appendix were greatly thickened from chronic inflammation. No evidence of perforation or ulceration was noted. After removal of the appendix, the exudation was rapidly and completely absorbed, and the patient had remained entirely well since the operation. Another case, presumptively of the same character, had lately come to his attention. There was slight elevation of temperature, attended with the presence of a large fibrinous deposit involving the cæcum, and other manifestations indicative of chronic fibrous appendicitis. The abdomen was opened and revealed peritoneal surfaces which were perfectly smooth, presenting no evidence of any inflammatory action except at one point about the size of a head of a pin, to which omentum was adherent; also numerous enlarged mesenteric glands were found. The new formation was extensive and fixed to the deep underlying bony tissues. It was highly vascular, presenting other physical characteristics of inoperable sarcoma, which the tumor was considered to be, and the wound was closed. Subsequently the growth began to diminish in size and finally disappeared entirely. Not infrequently in the current medical literature of the day apparently similar examples were noted, for which excision of the cæcum was practised, when possibly the removal of the appendix might have sufficed.

Dr. Walter B. James said he had often been impressed with the fact that although in the majority of cases of appendicitis the diagnosis was easy, yet in a certain number of cases the true state of affairs remained in doubt in spite of the most careful observation. In some instances an absolute diagnosis was impossible. Such an example recently came under his observation. The patient was a physician, the house surgeon in one of the hospitals in this city, who developed an agonizing pain in the right iliac region. He had a sharp chill, followed by a rising temperature, and in the course of a few hours there was intense tenderness over the lower abdomen. The symptoms were typical of a ruptured gangrenous appendix, with the rapid effusion of serum into the lower peritoneal cavity. He was operated on four or five hours later; the appendix was found to be inflamed, but there were no evidences of peritonitis, no rupture, and no fluid in the peritoneal cavity.

Dr. William T. Bull said that he could recall quite a number of instances in which a wrong diagnosis of appendicitis had been made by both physician and surgeon—cases of right-sided pleurisy and pneumonia and inflammations of the gall bladder. In order to avoid such errors, one or two factors should be borne in mind. In arriving at a diagnosis of appendicitis, considerable weight should be attached to the presence of an actual inflammatory exudate in the appendical region. If this could not be detected, and there was simply local tenderness in the iliac region, with some fever, Dr. Bull said he was rather disposed to wait. In certain doubtful cases, the use of an anæsthetic was of the greatest service, both to the physician and to the surgeon, in order to overcome the muscular rigidity which often existed. In more than one instance this had helped him to clear up the diagnosis. With reference to chronic cases of appendicitis, Dr. Bull said he had no doubt that many errors had been made. Still, the fact should be borne in mind that in operating for chronic appendicitis an appendix might be removed which was apparently perfectly healthy, and which still might have been the seat of disease. Many such attacks cleared up and left a fairly normal appendix; yet its removal might be desirable on account of the repeated attacks which it had given rise to. The recognition of chronic appendicitis by palpation, Dr. Bull said, seemed to him a rather uncertain procedure, in spite of the fact that some surgeons had made the assertion that they could feel such an appendix distinctly. The speaker said he had often found that what he supposed to be the thickened appendix proved, upon operation, to be the edge of the psoas muscle, or a thickened mesentery or wall of the colon. The diagnosis of chronic appendicitis by palpation had been strongly insisted upon by some rather persistent writers on this subject, and one writer had found the condition very frequently associated with floating kidney. Dr. Bull said he had good reason to believe that in many of these cases the diagnosis rested upon a false bottom. He had seen a number of cases in which small neoplasms of the ileocæcal region were confused with appendicitis; such were very difficult to recognize. This was also true of cases in which peritonitis had already set in. It might be due to a perforating appendicitis, or to a perforation of the stomach, duodenum, or gall bladder, and an exploratory incision was necessary to reveal its starting-point.

Dr. Peabody said he did not think that cases of abdominal neuralgia, to which reference had been made, were often confused with appendicitis. The intermittence of the symptoms in neuralgia was far more marked than in cases of appendicitis; besides, the thermometer would help clear up the diagnosis. Dr. Peabody said he had seen a number of cases of typhoid fever which had been operated on for supposed appendicitis. In those cases, the wound interfered materially with the hydrotherapeutic treatment of the fever. In one case, the speaker said, he mistook a ruptured gall bladder, with tenderness, pain, and fever, for appendicitis. An operation revealed the true state of affairs. In any case of supposed acute appendicitis, in which an exudate or some foreign mass could be felt, we were not likely to go far astray by advising an exploratory operation.

Dr. Robinson said he had seen a certain number of cases of supposed appendicitis, both in children and adults, with localized pain in the appendical region, with a certain amount of fever, and perhaps more or less resistance in that region, in which the patients recovered without operative interference, and the true nature of the lesion was therefore left in doubt. On the other hand, there were undoubted cases of appendicitis which resulted in recovery without operation, and the general practitioner was often placed in a very uncertain state of mind as to whether the gravity of the case demanded the aid of a surgeon or not.

Dr. Abbe said that his most troublesome cases of doubtful appendicitis had been in women, in whom the question of ovarian or tubal trouble became a factor. In a number of such cases in which he had operated, he found that the inflamed appendix had attached itself to the pelvic organs, and thus helped to confuse the diagnosis. He said he had very rarely been able to palpate the appendix in cases of chronic appendicitis. What he regarded as the appendix had usually proved to be the border of the external oblique muscle. Although the gross appearance of the appendix in cases of chronic latent appendicitis might be fairly normal, its interior would almost invariably be found to be diseased. This, the speaker said, he had proved by distending and hardening hundreds of such specimens in alcohol, and then, upon section, the diseased condition of the interior could be plainly made out (see Medical Record, July 10, 1897). After a very severe, or even a fairly severe, attack of appendicitis, the lumen of the tube might become entirely obliterated by the hypertrophy of the mucosa, and adhesion of its inflamed and denuded lining. No future attacks would occur. This explained the occasional spontaneous cures after one severe attack. It was so rare to have this occur, however, that much stress should not be laid upon it.

Dr. Peabody said that on one occasion, at a meeting of this society, during a discussion of this subject, the late Dr. —— related at length the history of a very severe attack of what was probably appendicitis—although it occurred long before that name was given to the disease—which he passed through while a student at Harvard twenty years previously. After his death Dr. Peabody made an autopsy and failed to find any trace of the appendix, not even a fibrous cord. It had probably been destroyed by the inflammatory process years before.

Dr. Biggs said that one was impressed very much by the frequency with which evidence of disease in the appendix was met with at autopsy. Sometimes very extensive changes in the appendix were observed in cases in which the patient had given no history of ever having had trouble in that region.

Dr. A. H. Smith said he recently saw a patient with right-sided pneumonia, who complained of a great deal of pain and tenderness in the region of the appendix, although his trouble was clearly confined to the lungs. He also recalled a similar case which he saw some years ago. That patient complained of pain in the right side of the abdomen, and gave a history of having eaten a heavy, indigestible meal and afterward exposed himself to the cold: all the symptoms pointed to the abdomen as the seat of the trouble, but shortly afterward he developed a right-sided pneumonia which proved fatal. It was a recognized fact, Dr. Smith said, that the pain of pneumonia might be referred to a region distant from the seat of the trouble.

Dr. Weir said he wished to corroborate the statements made by Drs. Bull and Abbe with reference to the unreliability of palpating the appendix in cases of chronic appendicitis. When the appendix was enlarged it could at times be felt, but an appendix of the ordinary size could not always be palpated satisfactorily; at least that had been his experience.

Dr. Bryant said he wished to add his evidence to the confirmation of the statement just made by Dr. Weir. The speaker said that in probably one-half the cases in which he had been called upon to operate he had been unable to locate the appendix correctly, as proved by the operation. In many cases in which he thought he had located the organ, it proved to be something else that he had felt; in one case it was the psoas muscle.

Dr. F. P. Kinnicutt expressed the belief that oftentimes in these cases the induration which was palpable, and which was regarded as an inflammatory exudate, was in reality the resistance due to the rigidity of the muscles. The speaker said he entirely agreed with the previous speakers regarding the unreliability of palpating the appendix in cases of chronic appendicitis. The case reported by Dr. James was supposed to be one of chronic appendicitis, the patient having had six or seven attacks during the past two years: in spite of this, frequent examinations made during this period failed to elicit any positive signs of an enlarged appendix. Operation demonstrated the existence of a chronic appendicitis.

Dr. Janeway, in closing, said it had not been his intention, in his paper, to speak of all the conditions which might be or which had been mistaken for appendicitis. He mainly wished to emphasize the fact that the diagnosis of appendicitis was often jumped at too quickly, and too much import placed upon the pain, tenderness, and muscular rigidity. He said he agreed with the previous speakers that, as a rule, the appendix was not palpable with certainty in chronic appendicitis.

Medical Items.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended May 19, 1900:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
Alabama, Mobile	May 5th to 12th	2	
Indiana, Evansville	May 5th to 12th	2	
Kansas, Wichita	May 5th to 12th	4	
Kentucky, Covington	May 5th to 12th	2	
Louisiana, New Orleans	May 5th to 12th	87	14
Maine, Portland	May 5th to 12th	1	1
Massachusetts, Chicopee	May 5th to 12th	..	1
Michigan, Detroit	May 5th to 12th	2	
Nebraska. Omaha	May 5th to 12th	6	
Ohio, Cleveland	May 5th to 12th	19	1
Pennsylvania, Pittsburg	May 5th to 12th	2	
South Carolina, Greenville	May 5th to 12th	3	
Utah, Salt Lake City	May 5th to 12th	2	
Washington, Tacoma	April 28th to May 5th	1	
Wyoming, Sweet Water Co.	May 4th	6	
Uintah Co.	May 4th	4	

SMALLPOX—FOREIGN.

		Cases.	Deaths.
Austria, Prague	April 22d to 28th	16	
Belgium. Antwerp	April 22d to 28th	1	1
Canada, Manitoba	April 1st to 30th	8	
Winnipeg	April 28th to May 12th	3	1
Quebec, Bonaventure Co.	May 4th to 11th	5	
China, Hong Kong	March 24th to April 7th	6	3
England, Liverpool	April 22d to 28th	9	4
London	April 22d to 28th	6	1
Southampton	April 28th to May 5th	5	
France, Lyons	April 14th to 21st	..	2
Gibraltar	April 22d to 29th	1	1
Greece, Athens	April 22d to 28th	8	2
India, Bombay	April 10th to 17th	..	72
Calcutta	March 25th	..	39
Kurrachee	April 8th to 15th	12	9
Italy, Rome	March 22d to April 7th	..	2
Venice	April 14th to 21st	..	1
Japan, Formosa, Tamsui	March 24th to 31st	134	2
Mexico, Chihuahua	April 28th to May 5th	..	1
Mexico	April 1st to 29th	57	42
Vera Cruz	April 28th to May 5th	..	8
Spain, Corunna	April 22d to 28th	..	1
Russia, Moscow	April 7th to 21st	..	5
Odessa	April 22d to 28th		2
St. Petersburg	April 14th to 21st	31	9
Warsaw	April 14th to 21st	..	2
Scotland, Glasgow	April 22d to 28th	19	2
Spain, Valencia	April 22d to 28th	1	

YELLOW FEVER.

		Cases.	Deaths.
Cuba, Havana	May 7th	1	
Mexico, Vera Cruz	April 28th to May 5th	..	10

CHOLERA.

		Cases.	Deaths.
Arabia, Oman	March 10th	Present.	
India, Bombay	April 10th to 17th	..	26
Calcutta	March 18th to 24th	..	101

PLAGUE.

		Cases.	Deaths.
Egypt, Alexandria	May 9th	Reported.	
India, Bombay	April 10th to 17th	..	533
Calcutta	March 18th to 24th.	..	878
Kurrachee	April 8th to 15th	480	402
Japan, Formosa, Tamsui	March 24th to 31st	106	74
Osaka	April 13th	..	1
New Caledonia, Noumea	December 17th to April 4th	123	77

Books Received.

While the Medical Record *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

Traité de Médecine. Vol. IV. By A. Ruault, A. Mathieu, Courtois-Suffit. Illustrated. 8vo, 676 pages. Masson et Cie.

New, Old, and Forgotten Remedies. Edited by E. P. Anshutz. 8vo, 386 pages. Boericke & Tafel, Philadelphia.

The Refraction of the Eye. By Gustavus Hartridge, F.R.C.S. 12mo, 269 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia.

Disease of the Stomach. By Dr. John C. Hemmeter. 8vo, 898 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia.

Injuries to the Eye in their Medico-Legal Aspect. By S. Baudry, M.D. 12mo, 161 pages. The F. A. Davis Company, New York, Chicago, and Philadelphia.

Diseases of the Genito-Urinary System. By Eugene Fuller, M.D. 8vo, 774 pages. The Macmillan Company, New York.

Canine and Feline Surgery. By Frederick T. G. Hobday, F.R.C.V.S. 12mo, 152 pages. Illustrated. W. & A. K. Johnston, Edinburgh and London.

The Medical Diseases of Childhood. By Dr. Nathan Oppenheim. 8vo, 653 pages. Illustrated. The Macmillan Company, New York.

Contagious Ophthalmia. By Sydney Stephenson, F.R.C.S. 12mo, 84 pages. Illustrated. Bailliere, Tindall & Cox, London.

Plea for a Simpler Life. By Dr. George S. Keith. 12mo, 173 pages. Adam and Charles Black, London.

A Handbook for Nurses. By J. K. Watson, M.D. American edition by A. A. Stevens, A.M., M.D. 8vo, 413 pages. Illustrated. W. B. Saunders, Philadelphia.

A Digest of External Therapeutics. By Egbert Guernsey Rankin, A.M., M.D. 8vo, 754 pages. Boericke & Runyon Company, New York.

Transactions of American Laryngological Association, 1899. 8vo, 232 pages. Illustrated. D. Appleton & Co., New York.

The Pathology and Surgical Treatment of Tumors. By N. Senn, M.D. 8vo, 718 pages. Illustrated. W. B. Saunders, Philadelphia.

Indigestion, Its Cause and Cure. By John H. Clarke, M.D. American edition, from fifth English edition. 12mo, 147 pages. Boericke & Tafel, Philadelphia.

Essentials of Diagnosis. By Solomon Solis-Cohen, M.D., and Augustus A. Eshner, M.D. 12mo, 417 pages. Illustrated. W. B. Saunders, Philadelphia.

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Original Articles.

RADICAL CURE OF EPITHELIAL CANCER BY ARSENIC.

BY C. TRUNEČEK, M.D.,

PRAGUE, AUSTRIA.

ARSENIOUS acid is one of the oldest remedies used in the treatment of epithelial cancer. This fact alone would not justify the conclusion that it is a specific in this disease, for nearly the whole materia medica has been used at various times, and often with apparent success, in its treatment. But considering the ease with which certain kinds of cancer are cured by arsenic, it is almost certain that some cases of epithelioma have been cured by arsenious acid. As it is not within the scope of this article to enter into the history of this department of medicine and surgery, it will suffice to say that arsenic has been repeatedly recommended for this special disease. Various have been the reasons why it has failed of universal adoption, and has fallen into disuse. In some cases the diagnosis of cancer cured by arsenical treatment was not convincing, and in other cases there was a prejudice against the treatment, more or less justified by its many failures. A third reason appears to consist in the fact that the different varieties of epithelial cancer have not been sufficiently taken into account. For although the arsenical preparations, such as the paste made by the Brothers Côme, contained many useless substances and altogether too much arsenic, still they did cure some varieties of cancer. They also destroyed normal tissue, a disadvantage which they shared with all methods.

Within the past ten years experiments have again been made with arsenic as a remedy against cancer. Lassar claims a rapid cure in several cases of cancerous ulcers by the internal administration of Fowler's solution, but they were merely small ulcers which had never been operated upon. Since in other analogous cases this method was a total failure, it cannot be said to have greatly enriched our knowledge of the therapeutics of cancer. A real step in advance, however, was made by Hue, who injected an aqueous solution of arsenic into the midst of the cancerous masses (0.20 gm. arsenious acid, 100 gm. distilled water [gr. iii$\frac{1}{3}$ to fl. ℥ iii$\frac{2}{5}$]). His method, however, has not become widely known, partly because he brought forward no proof of its value, and partly because it is of such difficult application. Von Esmarch used arsenious acid in the treatment of cancer some time before the authors mentioned above, and according to Momburg[1] he used a mixture of 0.25 gm. (gr. iv$\frac{1}{6}$), 0.25 gm. morphine, 2 gm. (gr. xxx.) calomel, 12 gm. (ʒ iii.) gum arabic; the result is not given. The treatment of Félix* consists in the application of a paste, one-half zinc chloride, the other half mostly of indifferent substances, but containing arsenic. This method is a combination of ancient arsenical treatment and of treatment by simple caustics, that is to say, chemical agents capable of destroying any part of the body, whether normal or diseased. It scarcely deserves mention, since the same effects are more rapidly and easily attained by operation, but the author claims that in his experience relapses do not occur.

With the exception of the above-mentioned rare modes of treatment, which never became general, arsenic fell into absolute disuse as a remedy against cancer. It was, however, given internally to improve the general condition of patients suffering from cancer. The experiments of Billroth and von Esmarch in this line are well known, yet these authorities state that they have never seen a single case of cancer cured by arsenic.

In 1897, together with my collaborator, Dr. S. Cerny, I published a work[2] in which I tried to show that under certain conditions arsenious acid gives a constant reaction with cancerous tissue, and that by its aid we may radically cure some varieties of epithelioma. Since that time the method has been tried in several clinics and hospitals, and with good success to judge by the reports published.[3, 4]

I will first give a detailed description of the method itself, and then the indications, and, after having described two typical cases in which a cure was obtained, will briefly describe the mechanism of the cure of cancer by means of arsenious acid.

I.

℞ Acid. arsenios. pulver....... 1 gm. (gr. xv.)
Alcohol. ethyl. absol.,
Aq. destillat ....āā 75 gm. (℥ ii. ʒ ivss.)
M. S. For external use.

The remedy as prescribed in the works quoted above is a mixture of arsenious acid (As_2O_3) and of 75 gm. of ethylic alcohol (C_2H_6O) with an equal amount of distilled water. It is applied as follows: The ulcer is cleansed and dried; we must not be afraid of causing a slight flow of blood; indeed, it may even be necessary to scrape and denude a portion of the neoplastic tissue. The arsenical mixture is then stirred and spread with a brush over the whole surface of the tumor. Without covering it, it is left to dry, and if at the end of five minutes the patient feels no pain, another layer of the mixture may be spread over the cancer. No dressing is placed upon it.

The patient sometimes has pain after the application, but not of an unbearable nature. The next day, or perhaps not until the day after that, the neoplasm will be found to be covered with an eschar (especially in the denuded or scraped portions), which is not removed, but treated daily with the preparation of arsenic. Acute œdema of surrounding parts may be caused by the application, in which case the treatment is suspended until the œdema has completely disappeared, after which the remedy is used in lessened amount. The crust, thin and yellowish at first, becomes gradually brown, and finally black. The first day its base is firmly adherent to the subjacent tissue, and its removal would bring away a large amount of cancer substance. By degrees it thickens and invades the whole surface of the neoplasm. After a while its edges become less adherent and begin to be detached; the fissure thus formed becomes daily more marked, and a greenish fluid oozes out from the edges of the ulcer. Treatment is continued regularly until the eschar is freely movable, non-adherent to the subjacent tissue, and is easily removed, or falls of itself. This eschar is of variable thickness, is hard in consistency, and is essentially formed of cancerous tissue which has mortified under the influence of arsenic. The scab being removed, another application of the arsenical mixture is made to the bottom of the ulcer, but only once. If by the next day I find merely a yellowish crust which can be easily removed without causing any hemorrhage, I may be sure that no cancerous tissue remains in the wound. If, on the other hand, there is a dark crust adherent to the subjacent tissue, the treatment is continued until the last cancerous cell has disappeared.

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* "Des caustiques dans le traitement du cancer." Brussels, 1892, Manceaux, publisher.

During the course of the treatment, as the eschar thickens, the amount of arsenic should be increased. Instead of the 1 : 150 solution used in the beginning, a 1 : 100 or even a 1 : 80 is used, according to this formula:

℞ Acid. arsenios. pulver.......... 1 gm. (gr. xv.)
Alcohol. æthyl. abs.,
Aq. destill....................āā 40 gm. (℥ i. ʒ ii¾)
M. S. For external use.

When no vestige of cancerous tissue remains, the neoplastic ulcer is transformed into a granulating wound, covered with a fine whitish membrane, and possessing no induration anywhere. It should now be treated as an ordinary suppurating surface which is beginning to be covered with granulations. For the stimulation of the regenerating tissues an ointment consisting of one part boric acid to ten parts vaseline should be applied, especially to the edges of the wound. Even when every vestige of cancer seems to have disappeared, it is well to make assurance doubly sure by occasionally making a light application of the 1 : 150 mixture until a cure is attained. When the neoplasm has been entirely destroyed, the applications no longer produce a black, adherent crust, and the alcohol contained in the remedy merely helps to cleanse the wound.

For superficial, non-ulcerating cancers, in which mere surface applications give no result because the remedy does not destroy normal epithelial and epidermal cells, we should proceed as follows: if the integument is very thin and adherent to the tumor, it will usually be all-sufficient to scarify slightly the adherent portion, and to apply the remedy in such a way that some of the arsenic will penetrate to the cancerous tissue. If the skin has not yet been invaded by the neoplasm, it will be found best to excise a small cutaneous flap with the scissors, and then to make an application of the remedy, leaving it as usual without dressing. The applications are repeated daily, and after three or four of them we see the tumor diminish in size and become dried. Treatment is continued up to complete cicatrization. The same method of procedure is indicated in the case of the cancerous nodules sometimes found under the adjacent skin during treatment or subsequent to the cure of a neoplastic ulcer.

Instead of using a brush, we may, if we prefer, fix a pledget of wadding on forceps, or wrap cotton around a probe, as I did in an undoubted case of cancer of the larynx, in which cure was obtained and has been maintained for two years. However, although the use of hair brushes is not in strict accordance with the laws of modern surgery and of asepsis, it must be acknowledged that a brush distributes the solution more regularly than anything else and possesses the advantage of not irritating the granulating tissue.

II.

The curability of cancer by the above-described method depends in part upon the stage of development of the neoplasm, and in part upon its location. In regard to the first, a necessary condition is that the ganglia be not indurated; in regard to the second, the tumor must be where it can be reached by the medicament. This can be done in the case of all non-relapsing cancers of the skin, no matter what their extent; cancers of the external auditory meatus, of the lips and the buccal mucous membrane wherever it can be reached, and cancerous lesions of the larynx in an early stage.

In order to specify more exactly the indications for this treatment we will compare the results which it has given with those given by operation.

With the exception of incurable cancers, such as those of the pancreas for instance, we may from a therapeutic point of view divide malignant neoplasms into three groups: The first, and by far the largest, those in which an operation constitutes the only method of relieving the patient, although in truth a permanent cure is the exception rather than the rule (for instance, cancers of the stomach, and all cancerous lesions accompanied by infiltrations of the ganglia); the second, those in which the method described above is the only one applicable,[5] as, for example, large cancers of the skin whose extirpation would leave an enormous wound, some neoplastic lesions of the head where a bloody operation would necessitate too extensive impairment and might even risk the patient's life; finally the third, those in which either method might be used with probable success, and in which the choice may be left to the patient or to the physician. This last group is worthy of a closer study.

In cases in which either procedure is capable of giving good results, and in which we are certain that there is no induration of the ganglia, the method under discussion seems preferable for the following reasons: during the course of treatment we can always ascertain whether any cancerous tissue remains in the wound, a thing which is almost impossible during surgical intervention, owing to the fact that the operative field is hidden by the flow of blood; again, auto-inoculation, which is of easy occurrence during operation, cannot take place when we apply the arsenical mixture, and finally, the latter does not destroy neighboring healthy tissues, whereas operative intervention always does to some extent. This method should be used, whenever possible, in the treatment of cancer of the face, especially of the eyelids, nose, ears, lips, in which surgical measures, even when successful, usually cause frightful deformity. I must not be understood as saying that it is not indicated for other parts of the body, for the prognosis does not seem to be less favorable than in regard to lesions of the lower lip. The great advantage of this procedure, as I have already said, consists in the fact that it destroys every vestige of cancerous tissue without injury to normal tissues. Moreover, in no case have I ever been obliged to apply a ligature, for the cancer was always eliminated without loss of blood, although several of the patients before treatment had had hemorrhages that were difficult to arrest. This is certainly an important advantage.

Cancers of the nipple can be successfully treated by arsenic, and the cure, according to my experience, is permanent. The same may be said for some cases of cancer of the mammary gland, but at present I am unable to give exact statistics. As to neoplasms of the internal organs and of all those accompanied by induration of the ganglia, they are best treated by surgical measures. The same statement applies to relapsed cancers, which I have often succeeded in curing, as we shall see later in the report of a case, yet in regard to which I have not had a sufficient number of cases to establish absolute conclusions.

As to the action of arsenious acid upon the organism, it has been *nil*, even when the lesion was situated in the mouth, and when treatment extended over several months. It may therefore be used in all cases and for as long a time as necessary, without fear of arsenical intoxication. All investigators have recognized this advantage possessed by this treatment.

From what has been said, it is evident that the procedure is especially indicated in the treatment of cancer in its early stages. The therapeutic value of the method may appear to be somewhat limited, but I would call attention to the fact that every cancer has an early stage, and that uncertain diagnosis, and, more frequently still, fear of operation, are what usually aggravate the lesion and cause it to become inveterate. With the possession of a harmless method of treatment, it is to be hoped that cancers with indurated ganglia (that might have been cured in the early stages) will become rare exceptions. Taken in the beginning, a cancer is amenable to treatment by arsenic, and when we find an ulcer we need no longer resort to expectant treatment, as was the case when an operation was the only treatment possible to recommend. This is one reason why the argument that a radical cure can be more quickly obtained by operation falls to the ground. This would be an incontestable fact if the physician was able to make a positive diagnosis at once, or if the patient was willing to submit immediately to an operation. But very frequently even surgeons advise patients having a small ulcer on the lower lip, for instance, to wait awhile, and should the ulcer not heal after some simple antiseptic treatment to have it removed. But by the proper application of our remedy we are enabled to ascertain at once whether we have to do with cancer or not, and in the time usually devoted to expectant treatment, before operation is resolved on, we have cured the cancer by arsenic. If, on the other hand, we are dealing simply with a non-cancerous ulcer, no characteristic eschar is formed, and the ulcer heals of itself.

This method is the only one possible in patients suffering from diabetes, hæmophilia, etc., in whom even a slight operation might cause dangerous or even fatal hemorrhage.

As to the duration of treatment, it would appear that the greater the ulceration the more rapidly the remedy acts. Moreover, in cases in which the cancerous tissue has the characteristics of embryonal tissue, its action is more prompt than in cancroids, in which the cells are corneous. This is the reason why the remedy sometimes acts very slowly upon the superficial layers of a tumor, but when the first eschar, composed of horny cells, has been detached, acts more quickly upon the layers formed of young cells. Small cancerous ulcers which have not been operated upon require three or four weeks for a complete cure, while extensive cancers take much longer; but the physician as a rule does not need to see the patient more than twice or even once a week. On the other days the patient himself applies the solution, and goes on with the daily routine of life as usual. The cure of cancers situated in parts of the body where subcutaneously there is a hard base is much easier, for bone and cartilage are so resistant to the invasion of cancerous granulations that the process extends superficially rather than deeply, which permits of thorough applications of the remedy, even in inveterate cases. In some cases no opinion can be given as to the probable duration of treatment, unless we can tell the depth to which the neoplasm penetrates, for the deeper it goes the more difficult the treatment, and the longer will it last.

This method is, moreover, of value in cases in which the patient absolutely refuses operation, in spite of the fact that it would undoubtedly effect a cure; examples of this condition are described by Hermet and Couraux, in which non-operative treatment, no matter what its duration, was preferred to surgical measures.

III.

Having described the method of application of the medicament, and the indications for its use, I will, to make the treatment more comprehensible, give the history of two cases in which it effected a cure. The first case was one of relatively benign cancer of the face, which had never been operated upon; the second, one of cancer of the lower lip, which had returned after a radical operation, and in which the cancerous masses were found deeply situated in the lip, having either penetrated it in the form of bundles and, finding little resistance in the soft tissues, having grown there with rapidity, or begun there after autoinoculation in the depths of the wound, following operation.

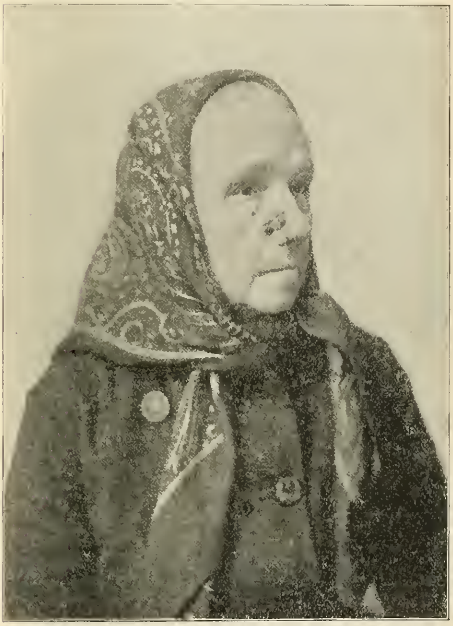

Fig. 1.

The patient, a woman seventy-seven years old, had never been seriously ill, and had never had syphilis. Until the present illness she had never observed any abnormality in the part of the face where the cancer is situated. Eleven years ago a small pimple appeared on the cheek and increased progressively until it had reached the dimensions seen in Fig. 1, from a photograph taken before treatment. Microscopical examination showed cancroid.

On March 6, 1898, I began treatment. I cleansed the ulcer with boric acid, freshened a small portion, applied the mixture 1 : 150, and left it without dressing. The next day a black crust appeared on the scraped portion, and was painted over with the mixture daily. After the third application œdema of the neighboring parts obliged me to suspend treatment for two days. Ten days later moderate pressure on the crust forced out a purulent fluid from the edges, a sign that it was beginning to be detached; on the fourth day thereafter detachment was complete. In the wound, which was treated every other day with the

1:150 solution, another eschar formed and was detached in three weeks, leaving only the débris of cancerous tissue. These having been destroyed by arsenic, the wound was treated as an ordinary granulating surface, but treatment in general was prolonged because of my finding three nodules in the vicinity of the lesion. I pierced these with a pincette à hameaux, and applied the mixture. After three treatments they were dried and transformed into an eschar which healed in the usual way.

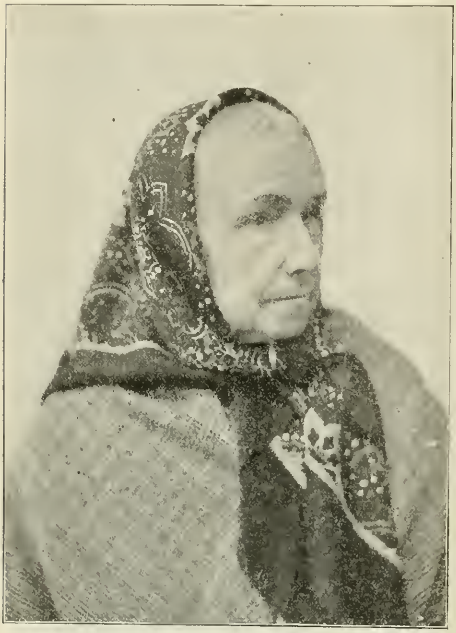

FIG. 2.

The treatment lasted more than three months, partly because toward the last I saw the patient only once a week. As we can see by the photograph of the patient taken after treatment, it is impossible even to tell where the cancer was situated. The result of a successful bloody operation would not have been so good, for there would have remained a deformity of the nose. The patient is cured, and no change has occurred in the cicatrized portion of the face. It is eighteen months since the treatment ended.

Similar cancers in other parts of the body where bone or cartilage form a hard base are more easily cured, and the prognosis is good even in moderate cases. We must always ascertain whether there is any induration in the vicinity of the ulcer, and moreover the granulating wound itself should often be treated with the arsenic so that not the smallest cancerous tissue may remain within it. European medical literature[8-22] contains many reports of cancers cured by this method, and there is a consensus of opinion that it is the best form of treatment for cancer of the face.

The second case is that of a man aged forty-nine years, who has never been ill, and has never had syphilis; until the beginning of the present trouble he never noticed anything abnormal on his lower lip. Three years ago a fissure on the lip was followed by a small excrescence, which kept increasing in size; to get rid of it he had it removed in the Bohemian surgical clinic of Prof. Mayde in Prague. Judging from the cicatrix, which is still visible, a cuneiform excision was made, and in addition the right submaxillary ganglia were removed. A year ago a new excrescence formed, the growth of which was more rapid than the first, and which gradually invaded the whole middle third of the lip. In this condition he came under my care the 18th of December, 1898. In the inside of the lip were indurations connected with the tumor. The lymphatic ganglia were not indurated. Microscopical examination showed carcinoma simplex (not cancroid).

On December 18th I began treatment. The tumor was nowhere ulcerated, and I had to freshen it, which I did, removing a small portion of the epithelium with the forceps. The day after the arsenic was applied, the characteristic eschar was formed, and I removed a portion of it to use in the microscopical examinations which I describe below. Under daily treatments the eschar grew to such an extent that on one side it overlapped the tumor. This phenomenon frequently occurs, especially in cancers in which there is much stroma, and physicians who have not had much experience in this method are easily deceived by it and think that the tumor has increased in size under the influence of the treatment. This is seen in a work published from the clinic of Prof. Bruns,[23] of Tübingen. After the spontaneous detachment of the eschar, which occurred after eight days of treatment, there was found a dark red tissue, which upon contact with the air became black; the following day it had the aspect of the characteristic eschar, and under daily treatment with the 1:80 solution grew to the extent shown in the photograph (Fig. 4). It was firmly adherent by its base to the subjacent tissues, and five weeks later it began to become detached. It was only three weeks after this, however, that it could be removed, and even then not entirely, a small, pimple-shaped, adherent portion having to be left *in situ*. Antiseptic treatment of the wound and arsenic applications to the débris of the eschar succeeded in five days more in

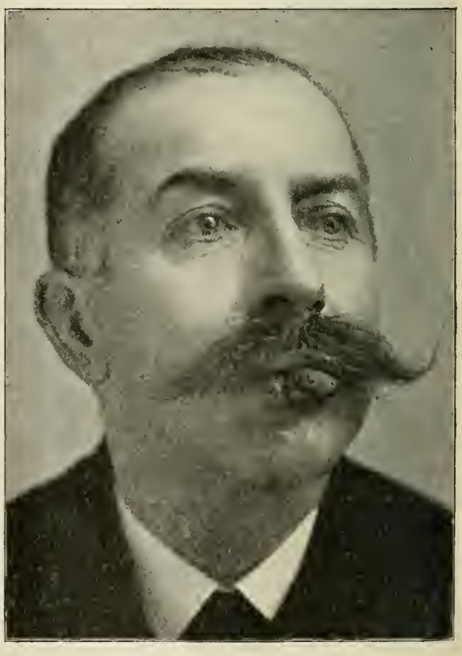

FIG. 3.

completely loosening the eschar, and cicatrization was perfect on March 20, 1899. As we can see in the illustration (Fig. 5) the cure is more complete than would have been the case after a bloody operation, for although a third of the lip was affected both superficially and deeply, scarcely a trace remains.

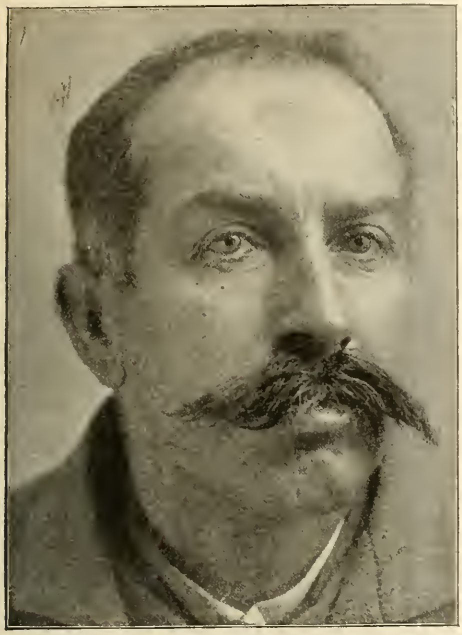

Fig. 4

In cases like this it is of the greatest importance to leave the eschar in place until it is entirely detached; even when it is of large size, only the free portions must be removed, and while this is being done, care must be taken not to pull or tear the parts adherent to the crust, for if the crust is pulled off forcibly, portions of the cancer usually remain in the depths of the wound and grow there, it being especially difficult to apply the treatment to them. Those beginning to use this treatment would best commence with cases of the first class, in which a slight mistake would not be dangerous to the patient.

In the medical literature of the subject I have been able to find only two cases of cancer of the lower lip cured by this method. The first, in which the cure has been maintained for more than a year, was seen in the surgical clinic of Professor Eslar of the faculty of Montpellier,[24] and the second in the surgical clinic of Toulouse.[25] I would add that for relief of the pain which is occasionally caused by the application of the remedy, some have recommended the addition of orthoform to the original prescription,[26] while others combine the treatment with the internal administration of Fowler's solution of arsenic.[27] This I do only in cases in which the cancer is situated in some part of the body where arsenic might be absorbed, and I administer it for a few days before beginning treatment. By this means the organism gradually becomes accustomed to arsenic, and its absorption later will not injure the patient.

IV.

The mechanism of the cure of cancer by the above-described method remains to be explained. The chief agent is the arsenious acid, which constitutes the essential element of the remedy. The presence of alcohol is not absolutely necessary, for I have cured a case of cancroid by a simple mixture of water and arsenious acid. The pain following the application was less than when the alcoholic mixture was used. In the case of encephaloid (medullary) cancer, alcohol plays an important part by determining dehydration of the neoplastic tissues, and it would therefore be a mistake to leave it out.

The first symptom after application of the remedy is the flow of a liquid so irritating to the surrounding parts that if it is very abundant these will have to be protected by means of borated vaseline. In the encephaloid forms this flow may last for several days, and when it stops reddish or purplish spots appear on the surface treated; when they come in contact with the air, they are changed to a black crust. For the arsenic to act it appears to be necessary that the cancerous tissue should lose some of its water. The water remaining in the mortified tissue simply evaporates as from dead matter in which arsenic prevents putrefaction, and a true mummification is the result. A microscopical examination of the crusts which have separated of themselves shows merely a necrosis of cancerous cells; we see a granular mass in the midst of which may still be distinguished infiltration and thrombosis of the vessels, with hemorrhages; we also see in the midst of this débris nuclei similar to those of cancer cells.

For a better study of the processes I cut out small fragments of crusts which had formed as the result of several applications of the remedy, and which had not yet become detached. The preparations, of which I present drawings, are from a fragment of the cancer of the lower lip which I have described in detail—a fragment removed after the first arsenical application; and from a crust produced by four applications in another case of cancer of the lower lip which I cured fif-

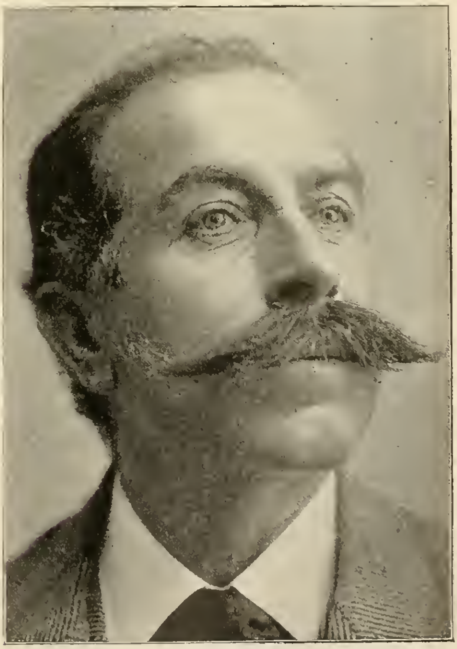

Fig. 5.

teen months ago, and in which there has been no relapse.

The preparation made from the crust caused by one application of arsenic upon the cancer previously described, will be seen to be torn. This is due partly to a mechanical cause, partly to lesions of the cancerous stroma, especially its increase in size. The cells have the appearance of being in hyaline degeneration. They are increased in size, their outlines are pale, and the nuclei present no visible alteration. There are, moreover, lacunæ between the cells of the stroma, near which is found a small-cell infiltration and even hemorrhages infiltrating the cancerous tissue. These cells, and more especially their nuclei, have undergone no change.

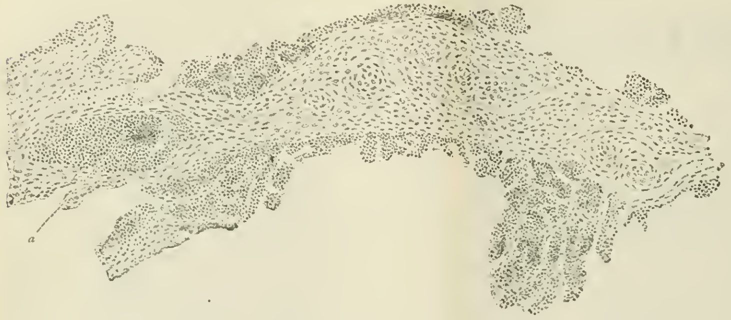

FIG. 6.—Section of Scab, after four applications of arsenic on epithelioma of the lower leg. *a*, Lymphatic infiltration pushing through the scab.

An examination of the crust from cancer of the lower lip, produced by four applications of the remedy, shows that this crust consists of a lamella covered with a thin layer of lymphatic exudate, and that it is composed exclusively of cancer cells possessing the same characteristics as those in an actively developing neoplasm. These cells show no sign of degeneration; their nuclei appear to be normal, and stain as usual. In one portion of the preparation the crust is torn by the lymphatic infiltrate. In the interior part of the crust the cells are either isolated or disposed in rows, but always interrupted by lacunæ filled with the lymphatic infiltrate and a few red corpuscles. Here the cancer cells show various degrees of necrosis. As a rule the nucleus becomes paler, swells, and finally disappears, so that we find here and there a mass of cells with well-marked outlines but without nuclei. Farther along outlines of the cells have also disappeared, and there remains merely a granular mass formed not only of cancerous tissue but of the exudate and blood as well.

It was not possible to ascertain when the arsenic had become fixed in the tissues, because there is no characteristic arsenic reaction that can be seen under the microscope; with our ordinary chemical methods the red blood cells give nearly the same reaction as arsenic.

From all these microscopical examinations we find that the cancer cells are directly mortified by the arsenic without the production of any visible phenomenon, while the action upon the stroma causes degeneration of its cells and a small-celled infiltration in its vicinity. Gaston and Haury, who have especially studied this question, state that the more abundant the infiltration, the better the action of the remedy and the more prompt the cure.

In order to understand the mechanism of the action of arsenious acid, I have made a number of experiments, applying the remedy to various wounds, to epithelium of the mouth and nose, and to suppurating surfaces. But in no case have I been able to cause the formation of the characteristic adherent crust, even when the mixture contained ten times the amount of arsenic, and was made with absolute alcohol. Violent inflammation of the tissues has followed, but not the black, adherent eschar. This is in harmony with the results obtained by Binz, who has never yet succeeded in causing a combination of albumin with arsenious acid. Such also has been my experience with albumin, or rather with the protoplasm of normal cells, whether of epithelial or connective tissue. As to cancer, everything leads us to believe that arsenic enters into combination with some substance contained in the protoplasm. At least, in all cases in which the application of arsenic caused an inflammation of normal tissues, the same application caused in cancer the formation of a black and adherent crust. Moreover, this crust cannot be removed from the rest of the cancerous tissue without causing a wound and abundant hemorrhage, while it separates of itself from normal tissue without hemorrhage. The formation of crusts always ceases after a certain time, no matter whether the applications are continued or not. Finally, the application to the surface of the arsenic which is contained in the remedy as a powder determines mortification of the cancerous tissue, even to the depth of 2 to 3 cm. (0.8 to 1.2 inches), which proves that arsenious acid penetrates into the cancerous tissue probably in the form of a soluble combination. If repeated applications are made to one special portion of an ulcer, the mortification of the whole cancer follows; as was shown in the description of treatment of cancer of the lower lip, given above. But on account of the absence of direct proof, the theory that arsenic enters into combination with one or several substances of the cancerous protoplasm remains an hypothesis awaiting confirmation.

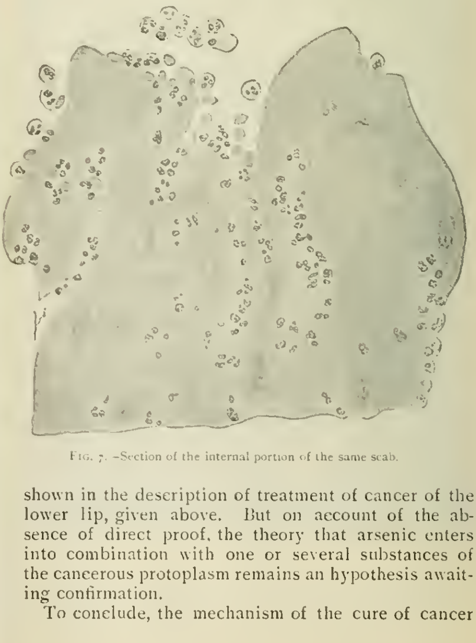

FIG. 7.—Section of the internal portion of the same scab.

To conclude, the mechanism of the cure of cancer by the application of the hydro-alcoholic mixture of arsenious acid may be explained as follows:

1. The cancer cells are first of all dehydrated by the alcohol, and then their protoplasm coagulates in the presence of arsenic.

2. The cells of cancerous connective tissue—cancerous stroma—degenerate, and provoke a serous exudation, which in its turn determines alterations in the cells mummified by the arsenic.

3. In the surrounding healthy tissues a circumscribed inflammation is set up by the remedy, which always goes on to suppuration, and by means of which the neoplasm is first cut off from the circulation, and is finally eliminated from the organism as a foreign body.

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CYSTIC TUMORS OF THE TESTIS AND EPIDIDYMIS.[1]

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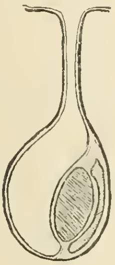
Cysts of this character are usually spoken of as encysted hydroceles; but the above classification is believed to be more correct and therefore preferable.

Before coming to the subject proper of this paper it will be useful to review briefly the various forms of hydrocele with the help of the accompanying diagrams.

It will be borne in mind that the testis at an early period of fœtal life is placed at the back part of the abdominal cavity behind the peritoneum, in front of and a little below the kidney. Its descent into the scrotum takes place gradually during the progress of fœtal growth through the agency of the gubernaculum testis, reaching the scrotum in ordinary development by the eighth month. The pouch of peritoneum extending from the peritoneum proper into the bottom of the scrotum is termed the processus vaginalis; this is blind at its lower extremity, open and continuous at its upper extremity with the parietal peritoneum of the abdominal cavity. The testicle finally comes to occupy a position at the lower and back part of the scrotum, the epididymis being placed to its outer side and the vas deferens to the inner side. It will be borne in mind that the testicle is not completely invested by the peritoneal coat of the processus vaginalis, but that it lies really outside of the peritoneal prolongation, and is only partially invested by it, just as the kidney lies behind the peritoneum and is only partially covered by it. Just before birth the upper part of the pouch, the processus vaginalis, usually becomes closed, and this obliteration extends ordinarily from the site of the internal ring to within a short distance of the testis. The peritoneal process surrounding the testis is in this way entirely cut off from the general peritoneal cavity and is termed the tunica vaginalis.



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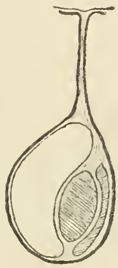

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The ordinary form of hydrocele consists in the distention with serous fluid of this space enclosed by the tunica vaginalis, and represented by Fig. 2. It is contended by some authors that it is incorrect to speak of the cavity of the tunica vaginalis, or of the pleural cavity, or of the peritoneal cavity, as these cavities do not exist, the serous surfaces normally lying in contact. Such contention, however, seems somewhat hypercritical; certainly for purposes of convenience it is desirable to speak of all three as cavities. We know that a rubber bag with a capacity of four quarts has its walls lying against each other in apposition when empty, and it might be just as fairly contended that it would be improper to speak of the cavity of a four-quart rubber bag.

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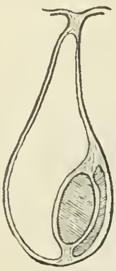
[1] Read before the Falls City Medical Society, Louisville, Ky., in March, 1900.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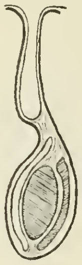
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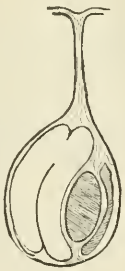
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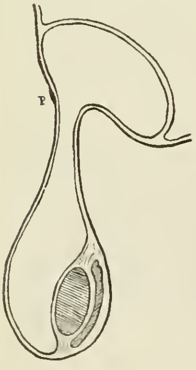
In Fig. 4, the cavity of the tunica vaginalis is seen in its normal relation to the testis and epididymis, its serous lining membrane being indicated by the single light line. Throughout these diagrams the single light line will indicate the tunica vaginalis on the one hand and the abdominal parietal peritoneum on the other. We observe, therefore, that the ordinary hydrocele is a simple distention of the cavity of the tunica vaginalis with serous fluid.

Fig. 1 represents the congenital variety of hydrocele. The cavity of the tunica vaginalis is again distended with serous fluid, but it connects with the general abdominal cavity through failure to close of the funicular process, which is that portion of the processus vaginalis lying between the testicle and the internal abdominal ring. This communicating opening is here represented as very wide, but in reality it is usually very small, from the size of a goose-quill to a straw.

The infantile variety of hydrocele is represented by Fig. 3. It will be observed that the cavity of the tunica vaginalis is distended with fluid and connects with the open funicular process, the latter being closed off at its upper end from the abdominal cavity. This closure generally is at the external abdominal ring, although it may be at the internal abdominal ring, or between these two.



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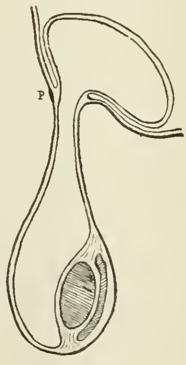

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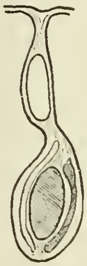
Fig. 4 represents the converse of this condition. The funicular process is closed at its lower end toward the testis, but remains open above in communication with the abdominal cavity. This condition is termed by some authors congenital hydrocele of the cord, or congenital funicular hydrocele, and is the form which not infrequently accompanies undescended testicle.

Fig. 5 represents the rare form of hydrocele known as bilocular. It will be observed that there is a second cavity communicating by means of a small opening with the cavity of the tunica vaginalis, and that both of these cavities are lined with the serous membrane characteristic of the tunica vaginalis. This second cavity may occupy the position of the funicular hydrocele. In still rarer instances the bilocular form of hydrocele may be intra-abdominal; in such event the second arm may be either intra-peritoneal or extra-peritoneal.

Fig. 7 shows the first of these varieties. The tunica vaginalis and funicular process are distended and connect through the internal abdominal ring with the intra-abdominal arm. The peritoneum covers this pouch in the same way that it is carried ahead of and covers an advancing inguinal hernia, so that if an incision were made above Poupart's ligament into this pouch two layers of peritoneum would have to be divided before the pouch could be reached.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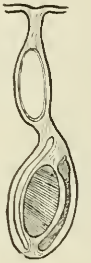
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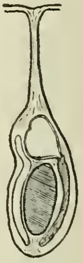
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Fig. 6 represents the intra-abdominal and extraperitoneal variety. The advancing arm of the hydrocele has pushed the peritoneum before it and bears about the same relation to it as the urinary bladder does.

This brings us to the consideration of the subject proper of this paper, namely, encysted hydrocele, or, more properly, cystic tumors of the testis and epididymis.

Encysted hydrocele of the cord will occupy us only for a moment. Fig. 8 represents an encysted hydrocele of the cord due to the distention with fluid of an unobliterated portion of the funicular process. It will be observed that it is lined with the same serous coat which lines the tunica vaginalis.

Fig. 9 represents another variety of encysted funicular hydrocele which has had its origin in another way, either as the result of the extravasation of blood into the cellular tissue of the cord after a strain, the resulting fluid afterward becoming encysted and its coloring matter absorbed; or it is possible for a funicular hydrocele situated low down to have its origin by the distention of a tubule of the organ of Giraldés, of which we will have occasion to speak further along.

The cystic tumors having their origin in or near the epididymis are of much greater frequency, and hence much more importance, than the cystic tumors of the testis proper. These latter are in fact very rare; in them the fluid is described as "encysted between the tunica albuginea and the inner surface of the visceral tunica vaginalis."[1] The language of this description would apparently indicate that such cysts have no wall or sac proper, but consist of really free fluid lying between the tunica albuginea and the visceral tunica vaginalis, these two tunics supplying the cyst walls in the same way that the visceral and parietal pleura furnish the enclosing walls of an encysted empyema. On the other hand, some of these testicular cysts certainly lie beneath the tunica albuginea, as shown in the illustration in Jacobson, p. 202, and represented by diagram 13. The cyst here was supposed to have resulted from an interstitial hemorrhage into the tunica albuginea as a result of puncture of the testis by tapping with a needle some years before. The testicular cysts are usually situated in front of the testicle, are small in size, and are very hard in consistence, owing to the intra-cystic tension due to the resistance of their surroundings. This peculiarity of these cysts would seem to indicate that most of them, at least, have more than the tunica vaginalis as a wall on one side. This tunica yields readily, as is attested by the large size which the ordinary form of the hydrocele attains; and further by the ease with which the tunica vaginalis can be displaced and pushed to one side by the cystic tumors of the epididymis. If this tunic ordinarily formed part of the wall of such cysts, therefore, it would scarcely be expected that the cystic contents would exist under such pressure; and there would further be no reason, in so far as limitation by pressure is concerned, why such cysts might not attain a respectably large size, instead of remaining very small, as they practically always do. The conclusion is therefore reached that cysts in this situation in all probability have other coverings and are not, properly speaking, encysted collections of fluid.

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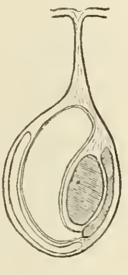
[1] Jacobson, and White and Martin.

Cysts of the épididymis are much more important clinically, on account both of their greater frequency and greater size. All such tumors are provided with proper walls of their own, and therefore are not properly described as "encysted hydroceles." According to Jacobson, they are conveniently divided into two classes: (1) Small subserous cysts, usually appearing external to the epididymis, unimportant clinically, and very rarely containing spermatozoa. After the age of forty about two-thirds of the testicles examined have shown these small cysts from the size of a pin's head to that of a pea, projecting upon the convex free surface of the head of the epididymis, and more rarely upon its body or near its tail. They are usually multiple, four or five in number; sometimes they are pedunculated and may become one source of the loose bodies sometimes found in the tunica vaginalis. The contained fluid is usually clear and limpid, sometimes turbid; it rarely contains spermatozoa. They possibly develop from remnants of fœtal structures, but more probably are involution cysts originating in the tissue of the epididymis but becoming subserous. (2) Larger cysts, originating within the tissue of the epididymis, and therefore important clinically and often containing spermatozoa.

These cysts are usually single, but may be multiple or multilocular. The contained fluid may be perfectly clear, but is frequently milky from the spermatozoa contained. In size they vary from that of a hazelnut to that of a goose egg, or even an ostrich egg, containing on an average not more than two or three ounces of fluid. They are represented diagrammatically by Figs. 10, 11, and 12. Fig. 10 shows the tumor originating about the head of the epididymis, small and extra-vaginal. As the cyst grew and developed the vaginal tunic was pushed before it, and it remained outside of it. I possess a pathological specimen of such a cyst. It was removed by Dr. W. C. Dugan, and kindly entrusted to me for preservation. In its removal the operation was made entirely outside of the tunica vaginalis, which was accidentally opened, however, in one place. Fig. 11 represents a similar extra-vaginal cyst having its origin near the tail of the epididymis and pushing its way between the testicle and the tunica vaginalis. Another pathological specimen in my possession is of this nature. It was removed by the writer from a man at the City Hospital during last summer's service. It is much larger than the other specimen, about the size of a goose egg. These two cases illustrated very well the different relations which these cysts can bear to the testicle proper. In the ordinary intra-vaginal hydrocele the testicle is situated at the lower and back part of the tumor. In the ordinary epididymal cysts the testicle is immediately beneath the cyst, the cyst being unmistakably superimposed on the testicle. This was the case with the smaller of the specimens. But if the cyst has its growth from the tail of the epididymis, and attains a large size, almost the exact relations of ordinary hydrocele are presented; the testicle appears at the lower and postérior aspect of the tumor, and the latter may assume the even, pyriform shape and appearance characteristic of intravaginal hydrocele. Such was the case with the larger specimen. Indeed, the diagnosis was not made until the incision showed that the fluid was contained in a sac outside of the tunica vaginalis. Unquestionably cysts of this kind have often been operated on as ordinary hydroceles, the true condition never being recognized.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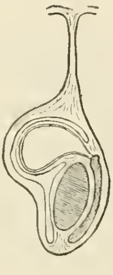
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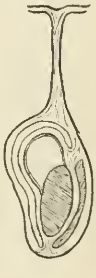
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Fig. 12 represents another possible relation of these cysts to the tunica vaginalis. The cyst has its own proper wall but projects into the cavity of the tunica vaginalis.

These larger cysts are believed to originate in several ways: (1) as a retention cyst due to dilatation of a seminal tubule, and the final severance of connection of the dilated portion, just as other retention cysts are formed. (2) Morris[1] states they may also occur as a new formation in the connective tissue consequent upon the rupture of a seminal tubule and the escape of some drops of seminal fluid. (3) The cyst may originate in certain fœtal relics, as follows: (*a*) The parepididymis, or organ of Giraldés, a little body which lies in front of the cord immediately above the head of the epididymis, and beneath the upper part of the tunica vaginalis. The tubules constituting this organ are the relics of the urinary part of the Wolffian body, as the tubules of the parovarium, or organ of Rosenmueller in the female, are of the sexual part. Cysts having this origin, therefore, would be analogous to the parovarian cysts of the female. It will be remembered that parovarian cysts in the female usually contain a clear and limpid fluid of low specific gravity. (*b*) Vestiges of the duct of Mueller. In the female this duct forms the Fallopian tube, the uterus, and vagina. Abortive in the male, its remains are to be found constantly in the hydatid of Morgagni, and sometimes it can be traced from the globus major between the testis and epididymis to the globus minor, reappearing again as the sinus pocularis in the prostatic urethra. The hydatid of Morgagni is normally cystic, and by its growth may develop into a good-sized cyst. Owing to its pedunculation it would be of the variety represented by Fig. 8 of the diagrams. (*c*) The vas aberrans of Haller, which is a diverticulum of, or a convoluted cæcal tube opening into, the vas deferens close to the tail of the epididymis. This structure, usually single, is a part of the remains of one of the tubes of the Wolffian body, still connecting with the representative of the excretory duct of that body, the vas deferens. This is the probable origin of the larger of these cysts above mentioned, which had its chief attachment, and hence origin, in the tail of the epididymis.

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[1] White and Martin, p. 926.

As has been stated, in a large proportion of these larger cysts spermatozoa are found in the fluid. Several theories have been advanced to explain their presence. A communication may remain unobliterated between the fœtal remains and the seminal tubule, as has been proven to exist between the vas aberrans and the vas deferens.

The fact that seminal fluid is generally not found in these cysts when they are small suggests the probability that the semen gains entrance by the rupture of a seminal tubule as a result of the distention from the larger growths.

These cystic tumors are very slow in developing. What has been said of their characteristics and illustrated by these diagrams gives the clew to diagnosis. The small cysts in any event are recognized with difficulty; and in some of the largest cysts the differentiation from ordinary hydrocele will scarcely be made without incision or puncture. If the trocar is used the character of the fluid may be determinative.

Many of these cysts cause so little discomfort that relief is scarcely demanded. Simple evacuation may produce a cure; or evacuation with injection of iodine or carbolic acid may be practised. But, best of all, the scrotum should be opened and the cyst dissected out.

HEALTH CONDITIONS IN THE HAWAIIAN ISLANDS.

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THE Hawaiian islands are in an ideal location, being just inside the tropics. There is never danger of frost (except upon the mountain tops), and as they lie in the line of the trade winds extremes of heat are unknown; although the humidity, at times, is quite unbearable.

The group consists of eight inhabited and four uninhabited islands, lying between parallels 18° 50′ and 23° 5′ north latitude, and meridians 154° 40′ and 161° 50′ west from Greenwich. A straight line drawn, connecting the two most distant points on the islands, would measure about four hundred miles. Honolulu, the chief seaport town, is situated twenty-one hundred miles from San Francisco and forty-eight hundred miles from Hong Kong.

	Area in flat sq. miles.	Acres.	Height in feet.
Hawaii	4,210	2,000,000	13,800
Maui	760	400,000	10,032
Oahu	600	360,000	4.030
Kauai	590	350,000	4.800
Molokai	270	200,000	3,000
Lauai	150	100,000	3,000
Niihau	97	70,000	800
Kahoolaue	63	30,000	1,450
Total	6,740	3,510,000	

The accompanying table gives the area and highest elevation of the eight inhabited islands. The four others are small and unimportant. All these islands are of volcanic and coral origin. Upon the largest of the group, Hawaii, stands Mauna Loa, the greatest active volcano in the world. Upon the island of Oahu, where is situated Honolulu, the United States troops were, and still are, located at Camp McKinley. Here are to be found no less than seven extinct craters. The city lies at the foot of one crater (Punch Bowl), and the camp at the base of another (Diamond Head), and are four miles apart. These craters are distinctly defined. The cones have been built up of successive layers of lava. Eruptions occurring at intervals give to the sides of these mountains a stratified appearance, which is easily confounded with a like appearance produced by water.

None of the seven craters on Oahu has been active within the memory of man. Upon the island of Hawaii, Mauna Loa, or Great Mountain, is at present active, and a few weeks ago threatened, in its immense flow of lava, to destroy much valuable coffee and sugar land on the "koua" or southwest side.

The soil of the islands is very fertile, and is composed of volcanic lava, disintegrated by atmospheric agencies. The climate and rank vegetation favor the decomposition of lava and rapid formation of soil. The "coral insect" or animal—Professor Agassiz calls it a species of jelly fish—by its industry has added acres to the territory that fringes the shores of these islands.

The mountainous character of this country gives a great variety of temperature. Torrid heat can be found at times in some spots sheltered from the trade winds; frost and snow exist upon the tops of the highest mountains. The invalid in search of a change of climate has but to travel a few miles to find any temperature the physician may prescribe. The air, coming over so many thousand miles of sea, is remarkably pure. The average temperature is about 74° F. In observations made by Prof. A. B. Lyons from 6 A.M. to 2 P.M. and 9 P.M. each day throughout the year, for seven years, the minimum in Honolulu has been 54°, the maximum 90°. These islands lie in the track of the Japanese gulf stream called "Kuroshiwo," which has much to do in preventing extremes of heat and cold. The contrast between the windward and leeward sides of the island is very marked. The eastern sides are windy, rainy, and heavily wooded, while the western coast possesses a warm, dry climate, with scanty vegetation.

Trade winds blow constantly from the northeast for nine months of the year, and have an average velocity of twenty miles an hour, keeping the temperature cool and invigorating. During the rainy season, the wind often shifts to the south, bringing intense humidity. The natives call this the "koua" or sick wind; it often lasts twelve or fourteen days and is very unhealthful and depressing, also blighting temporarily the vegetation near the shores.

The ethnological problem exhibited in these group of islands, though a complex one, has never, from the first, been difficult of solution. It is but another demonstration of the old hypothesis, "the survival of the fittest," where the unconquered Anglo-Saxon rules every other people with whom he mingles. The accompanying census enumeration shows, for the year 1896, a total population of 109,020 souls, made up from the representatives of ten different people, and no less than six different races: native Hawaiians, 31,019; part native, 8,485; Hawaiian-born foreigners, 13,733; Americans, 2,266; British, 1,538; German, 912; French, 75; Portuguese, 8,232; Norwegians, 216; Chinese, 19,382; Japanese, 22,329; Polynesian, 409; other nationalities, 424; total, 109,020.

Added to this already cosmopolitan population is found a combination, or mixture of white and dark blood, which, of frequent occurrence, is found to possess in the offspring in a marked degree the color of the dark parent, with the tastes, ambition, and often the refinement of the white parent. Of this cosmopolitan population, it is especially to be noticed that only 3,804 persons can properly be classed as Anglo-Saxons, and that the curious fact exists, explained only by the indomitable courage and persistence of the race, that these 3,804 Anglo-Saxons, constituting as they do but a small fraction of the population, have taken in their hands the control of affairs, political and governmental. That this should be the racial condition that would finally be established has never been a question of much speculation, since the time that the great natural resources of the islands became known and tempted with the promise of wealth the adventurous Briton and the practical American.

The preceding enumeration shows a large population of Chinese and Japanese. This element never has, and probably never will, seriously figure in the political history of these islands, since nearly all were brought here from their native countries by the Anglo-Saxon, who had already acquired possession of the richest portions of the islands. They were brought, too, under the contract labor system, by which they were little better than the white man's slave, whose lot it is to bear the heat and burden of the day.

The Portuguese, of whom there are more than eight thousand, are a quiet, unobtrusive people, content to live simply and work industriously for their day's wage. Very few Portuguese are progressive and independent enough to establish their own business. They segregate in the parts of the city that are given up almost exclusively to them. They marry young (seldom outside their own people), raise large families, and are not, to any marked degree, assimilated by any other race. The native Hawaiian is undoubtedly of Malay-Polynesian origin. This philologists have established through a study of the language, which they declare to be directly derived from that spoken by the Polynesians. They probably emigrated to these islands in canoes via Samoa. Their skin is dark, resembling that of a half-white in the States. Their hair is raven black, very luxuriant, and straight or slightly waving. Their faces are broad, noses rather flat, and lips thick. They are of moderate height.

When in 1778 Captain Cook discovered, explored, and named the islands after an Englishman, the Earl of Sandwich, he estimated the population at 400,000, which, most likely, was too great. In 1828, when the missionaries arrived, 120,000 was the estimate. To-day the natives number about 31,000. They are becoming extinct as a race, and a few more generations will see the last of them and of the Hawaiian language. However, no small fraction is by inter-marriage becoming assimilated by the white races, especially the Anglo-Saxon, that have settled here. Under the rule of Kamehameha I., who consolidated all the petty chiefs of the eight islands under one monarchical government, they were warlike and prosperous. But with the advent of the white man the extinction began. They are immoral, and because of improper medical attention (a necessity which they do not understand) they are diseased. Syphilis and leprosy have made sad inroads on their general health and fertility. The missionaries reduced their language to a written form, which was gratefully received and quickly acquired. Many of the natives show an aptitude for languages, and usually acquire English, and often Japanese and Chinese, in addition to their own. An interesting item to notice is, that there is no word for virtue—and for their omission the people are paying the penalty.

The health problem in the Hawaiian islands is almost as serious a question for the United States to deal with as it is in Cuba or Porto Rico. In some respects it is greater, in proportion to the population; the conditions existing in the two large cities (Honolulu and Hilo) are identical with that which confronted the military commanders of Santiago and Havana. If, added to the general unsanitary condition of these two cities, there should be placed in them a certain number of reconcentrados, starving and afflicted with all kinds of diseases, the problem here presented would be the same. That some radical action must be taken at once is most apparent to any one who has had anything to do with matters pertaining to public health, or who has given the subject a moment's consideration.

Honolulu offers the best example of life in these islands from a health point of view, because it is the largest city, and said by the inhabitants to be the healthiest. It is located, as mentioned above, on the island of Oahu, which is about thirty miles long, with many hills and mountains, rising to the height of several thousand feet, between which are many fertile vales and plains. But, owing to its general formation, the coast lines are most available for habitation and cultivation. It is on one of the level tracts of land, between the mountains and the sea, that Honolulu is situated. In early days the plain was the remnant of a lava-flow, or perhaps the bottom of an extinct crater, with the side fallen out. It is within the memory of the earliest inhabitants when it was nothing but beach sand and lava-dust. The subsoil is black sand, very porous, and quickly absorbs all fluids cast upon it. The general drainage is bad, because of the fact that the hills rise somewhat abruptly from the sea, leaving a great tract of land but a few feet above sea-level.

The transformation of Honolulu from grass huts and cocoa-palms to modern houses, parks, and streets has been very rapid. Good roadways of coral blocks have been laid; palaces and fine public buildings have been constructed, also mansions large and small, elegant detached houses, modern schools, churches, and museums. Tram-cars, water-works, and electric lights are enjoyed. Parks filled with beautiful tropical foliage dot the city here and there. Streets and driveways are nicely shaded with royal and cocoanut palms. And yet, with all this seeming love and beauty and show of intelligence and refinement, Honolulu might almost be considered filthy, and a spot full of danger to its inhabitants. In what might otherwise be the garden city of the world, certain classes have disregarded the laws of nature and hygiene, and actually defiled their own habitations.

The chief part of the city trade is carried on in a space of about half a mile square, closely built, densely populated, and largely made up of one- and two-story houses, the sort usually found in tropical countries. Of late years, modern stone and brick structures are taking their places. In this part of the city, Chinese, Japanese, and some natives are found in great numbers; they generally live and sleep in one room, and the small yards in the rear of their houses are entirely taken up with cesspool and vault. On one or two of the principal streets it is impossible for pedestrians to travel without being met everywhere by the most obnoxious odors. No part of this city has had a sewerage system until the present time, when one is being constructed through the main thoroughfares. If the history of other cities repeats itself here, it will be some years before this comes into general use. At present, all refuse matter is disposed of in cesspools. In many cases they are properly built and regularly pumped out by scavengers, but in the majority of cases they consist of holes in the ground, with wooden boxes sunk into them. In many cases refuse is cast upon the ground to decay and rot in the tropical sun.

This condition of affairs has continued for the past fifty years. The city is honeycombed with cesspools and privy vaults. The outlying districts, which are not so closely built, have added to this the pestilential nuisance of rice, taro, and banana patches which are constantly flooded with water. Interspersed here and there will be seen duck-ponds and pig-styes; so that from any height overlooking the city the picture is not unlike Venice with its many canals. These pools of stagnant water, added to the lakes and lagoons in the public parks, are favorable breeding-grounds for all kinds of disease, especially in this climate. We are told by those who make the subject a study, that a waterlogged tract of land, between mountain and sea, is the best place for the propagation of malaria. Add to these conditions lava-dust, of which the atmosphere is full and which at times covers everything in clouds, and is so fine that it penetrates one's clothing; a water supply which is partly artesian, and partly collected from mountain streams, (admittedly so full of decomposed vegetable matter that it is the rule to boil it before it is drunk); an even temperature which seldom falls below 72° F., with sunshine and rain almost daily during the winter or wet season; with very little attempt at street cleaning—and we have the conditions which are bound to breed disease wherever they exist.

In this city of thirty thousand inhabitants of mixed races, the death rate is thirty-five per thousand, or thereabouts. Typhoid fever has been constantly on the increase, and is always endemic. Pernicious tropical malaria is a common complaint, while rheumatism, catarrh, and bronchitis are very prevalent. The climatic conditions are especially bad for those suffering from rheumatism or lung diseases. The death rate is steadily increasing, as the incomplete records of the board of health show. The causes of death have not been carefully recorded, and, until the last few months, interments were made without permits. The mortality is greatest among the natives. Venereal diseases in the worst forms prevail among the lower classes.

One cannot better illustrate the effect of the conditions in Honolulu, than to recall the recent epidemic of typhoid fever and malaria which prevailed among the United States troops stationed there. To be sure, they lived in tents, and had to contend with the hardships of camp-life, but had not the disease been there they would not have been so afflicted. Now that these islands have been annexed, the people who live there should look at these conditions as they exist, fairly and squarely, and let the United States government know just how badly they need some active health work done.

The island government is doing all it can to improve the sanitary conditions, but necessarily has many local influences to contend with, as well as native prejudice, which leads the inhabitants to conceal their sickness. Late reports from Honolulu show the above statement to be true among the Chinese, who evade the authorities, and will not report cases of bubonic plague, fearing cremation.

The question of leprosy alone is international, now that we have adopted twelve hundred lepers in these islands, with many more in Porto Rico and the Philippines. Some national health legislation must be the result, and this disease must be properly segregated and treated in a more complete way. New schools, workhouses, and hospitals should be constructed on the island of Molokai, for these afflicted people to live, work, and be treated in. At present no attempt at classification of cases and treatment on Molokai is made. To be sure the Hawaiian government, through the board of health, with Mr. W. O. Smith, its efficient president, has gone further than any other in the segregation of lepers, and much credit is due them, but this disease being now more than ever a possible factor in the diseases of the United States, it becomes a national question, and one of the greatest importance. A local government will take years to do, in a health and sanitary way, what a proper health commission, not of the country, could accomplish in much less time.

For Honolulu I should heartily recommend the completion, as soon as possible, of the sewerage system, the filling of all stagnant pools, rice, taro, and banana patches; putting an end to the breeding of ducks and pigs in the city limits. Then with the sea-bathing and many natural advantages it would become the garden city of the world.

In conclusion, I should like to add a word in favor of a national health department, with a representative in the Cabinet. I am led to believe that medical societies throughout the United States will make a strong effort in this direction, as the necessity for such a department is daily growing more apparent.

THE ASSOCIATION OF CHRONIC APPENDICITIS WITH DISEASE OF THE RIGHT ADNEXA.

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Considerable has already been written upon the differential diagnosis between appendicitis in women and disease of the right adnexa. The writer himself, in a short paper in the Medical Record, December 21, 1896, drew attention to the close similarity in the clinical picture between acute catarrhal salpingitis and acute catarrhal appendicitis, and related some cases in which the differentiation was wellnigh impossible. But in this communication he desires to draw attention to the not infrequent association of the two diseases in the same patient.

Every operator who has to deal with abdominal and pelvic lesions encounters every now and then in cases of marked disease of the right adnexa a thickened and inflamed appendix adherent to the pelvic mass. Such appendices usually show unmistakable signs that they have become involved secondarily to the tubal disease. They are as a rule considerably enlarged through thickening of the wall of the peritoneal covering, with thickening also of the meso-appendix. They usually lie in the midst of an exudate covering the pyosalpinx, or an ovarian abscess, or ruptured tubal sac. Such a complication seldom gives rise to any characteristic sign or symptom by which it may be suspected prior to operation. It derives its importance chiefly from a technical consideration when, as is the custom nowadays with many operators, to attack tubal and ovarian diseases through the vaginal route. In such a procedure of course the secondarily affected appendix would probably be overlooked, and doubtless would interfere with a satisfactory return to good health.

Within the past few years in my laparotomy cases I must have met with over a dozen presenting the foregoing complication, and of course removed the diseased appendix together with the diseased pelvic structures.

One case[1] last summer was particularly instructive in this connection. The woman had a large pelvic hæmatocele as a result of a ruptured tubal sac some weeks previous. As the collection of blood was very accessible through an incision in the posterior vaginal vault, the temptation was strong to adopt that plan of procedure. But the case presented some features which it was thought demanded an abdominal incision. These proved to be an intraligamentous cyst of the left ovary independent of the hæmatocele. Lying buried in a deep exudate in the upper surface of the hæmatocele was found a very much thickened appendix, the size of one's thumb. Both it and the intraligamentous cyst were removed. The hæmatocele was then evacuated by a free incision in the posterior vaginal vault. The patient made a good recovery from the operation, and has enjoyed the very best health since. Further comment is unnecessary.

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[1] Published in full in The American Gynæcological and Obstetrical Journal, January, 1900.

The object of this paper, however, is not to dwell at any length upon those cases just referred to, in which, in the presence of marked right adnexal disease, there is a secondarily diseased appendix lying in contiguity to the former; it is rather to call attention to those puzzling cases in which the patient suffers from symptoms vaguely referred to the right lower half of the abdomen, and in which the diagnosis vacillates between chronic catarrhal appendicitis and a mild form of salpingo-oöphoritis. These cases in reality show an association of the two affections in the same patient. The operation will disclose a thickened, inflamed right tube, with some inflammatory changes in the ovary, and an appendix showing more or less disease. At one time the changes will be most marked in the appendix, at another they will be found most pronounced in the right tube or right ovary. It is not always easy to trace the causal relation of the two infections. In many of the cases I have operated upon the distance between the appendix and the tube was too great to assume an extension by contiguity of the inflammatory process from one to the other. In some cases, however, there was general relaxation of the abdominal supports, so that the right kidney was found moderately prolapsed and the uterus in more or less retroversion, with the adnexa hanging rather low in the pelvic cavity. Whether the prolapsed kidney and the appendicitis stood in the relation of cause and effect, as maintained by Edebohls,[1] I am unable to say. I am rather inclined to the view that the same factor—relaxation of the abdominal supports—must be looked upon as contributing equally to the changes in the different organs in the abdominal and pelvic cavities. The subject, however, requires for its elucidation much more extensive investigation than has as yet been accorded to it. The profession owes a debt of gratitude to Edebohls for having called attention to it, and for having stimulated observation and thought in this direction by his publications.

As already hinted, the symptoms from which these patients suffer are rather vague. But there is one feature which stands out rather prominently, and that is, the subjective symptoms and general debility are out of all proportion to the physical signs found. There may be and there usually is indefinite tenderness over the appendicular region, but I must confess that I have seldom been able to determine by palpation the slight changes that are usually found in these forms of chronic appendicitis. I have relied more upon tenderness and pain than upon my ability to detect by palpation a constriction of the appendix or moderate adhesions or an inflammation of the peritoneal covering. On bimanual examination the right tube is found decidedly tender and more or less thickened, and the ovary is usually slightly enlarged and moderately prolapsed. The symptoms usually set in insidiously. The patient cannot tell just when she began to suffer from pain in the right side of the lower abdomen. During the subsequent course of her ailment she may or may not have had one or more acute attacks which at one time may have been diagnosticated as appendicitis, at another as right-side salpingitis or oöphoritis or as pelvic peritonitis. In other cases again there may be an entire absence of any acute attacks. Pain and ill health may be the only prominent symptoms present, and at no time will there have been observed any elevation of temperature or any marked change in the pulse rate.

These patients are sometimes operated upon for supposed appendicitis, and the removed appendix shows some slight lesion. But the pain continues, and a second laparotomy reveals a diseased right tube or ovary, which is excised and the patient is cured.[1] Such an experience must cause the operator very much chagrin, to say nothing of the mental agony and physical suffering which a patient endures who has to undergo a second laparotomy shortly after having been subjected to the first. To avoid such a pitfall one should adopt the rule always to investigate the condition of the right adnexa when operating for appendicitis in female subjects, be they married or single.[2] The youth of the patient should not throw us off our guard, as the following case will illustrate:

Case I.—Chronic catarrhal appendicitis, adherent tube and ovary; operation; recovery. Miss S., aged sixteen years. The menses were established in her twelfth year; they were regular and attended with only moderate pain. She had been well until a year ago, when she had an acute attack of pain in the right side of the abdomen which kept her in bed for a day or two. She had another attack of a more severe nature while in the country during the past summer. The physician there diagnosticated right-sided oöphoritis. The pain, with variable severity, continued until her return to the city, when she consulted her family physician, who made the diagnosis of appendicitis. He kindly referred her to me, and on examination I found decided tenderness over the appendicular region, but could not with certainty palpate the appendix. Bimanual examination was made with a finger in the rectum. Considerable tenderness was detected over the right adnexa, and they seemed adherent. She was operated upon November 30, 1898, by an oblique incision over the usual appendicular site. The appendix was found after considerable search behind the cæcum and pointing downward into the pelvic cavity. It was very firmly and extensively adherent, the distal end lying in a sheath of exudate. After excising the appendix, I introduced two fingers through the incision and explored the right side of the pelvic cavity. The right ovary was found moderately enlarged and adherent. The adhesions were gently broken up and the ovary brought up into its normal position. The abdominal wound was closed with tier sutures. Recovery was uneventful. The patient has remained free from pain since the operation.

In the majority of cases presenting the complex phenomena outlined in this paper, the more desirable and prudent course to pursue is to open the abdomen in the median line, when the appendix, uterus and its adnexa can be treated surgically if their condition requires it. No better illustration can be offered of the wisdom of such a plan of procedure than is presented by the following case:

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[1] Centralblatt für Gynäkologie, 1898, pp. 1084–1090; Medical Record, 1899, pp. 341–345.

[1] See case reported by Dr. R. F. Weir, in a paper entitled, "An Improved Operation for Acute Appendicitis," in the Medical News, February 17, 1900.

[2] I learned this lesson from an unpleasant experience some five years ago. I had operated upon a woman twenty-four years of age, for acute appendicitis. The appendix was swollen and contained pus. The operation passed off smoothly and the patient made an apparently good recovery. She was up out of bed at the end of two weeks. A couple of days after getting up she was seized with pelvic pain and developed fever. A small pelvic abscess was detected, and being incised through the vagina, convalescence was soon established which now was permanent. I had no doubt afterward that at the time of operation the patient had some trouble with the right adnexa which should have been investigated then.

Case II.—Median laparotomy; excision of appendix; suture of round ligaments to abdominal wall; excision and puncture of cysts in both ovaries. Mrs. W——, twenty-five years of age, married eighteen months, gave birth to a child eight and a half months ago. She has been ailing ever since the confinement, which seemed to be perfectly normal. Before this she had enjoyed excellent health. She resides in a Western town. The physician who attended her last writes that she consulted him November 18, 1899: "She was suffering from pain in the right side of the abdomen, backache, dragging pelvic pains, and from profuse leucorrhœa. I found the cæcal, ascending colon, right inguinal and hypogastric regions extremely tender, almost painful. The epigastric region was tender to painfulness on percussion. The endometrium was exquisitely tender. Temperature was normal. I gave her three local treatments, and advised recumbent position and hot douches. On December 15th she aborted. The products of conception were less than two months (not over). After this accident she kept her bed eight days and her distress almost disappeared. After being on her feet distress returned, disabling her almost." Her husband took her then to a large city in the vicinity and consulted two of the most prominent operators there. One diagnosticated appendicitis, the other inflammation of the right ovary. Both urged immediate operation. The diametrically opposed opinion of these two surgeons unsettled the man's confidence and placed him in a quandary. He then came on here with his wife and was referred to me. She is a tall, slender, delicate-looking woman, with rather pale mucous membranes. She complains of constant backache, pain across the hypogastrium and over the abdomen in general. The pain is most severe in the right inguinal region and extends down the right thigh, which, she says, feels numb. She suffers from general debility, loss of flesh (having lost fifteen pounds in weight since the birth of her child), loss of appetite, constipation, and sleeplessness. For weeks past she tells me she has been unable to go to sleep without an opiate. The abdomen is very lax. There is marked tenderness over the cæcal region and along the course of the ascending and transverse colon. The appendix is readily palpated, is markedly tender, but no decided thickening is detected. The kidneys are not found prolapsed. The uterus is large, succulent, tender, and in fair position. A thick, tenacious discharge fills the cervical canal. The right ovary is considerably enlarged, prolapsed, and very tender. The left ovary does not seem to be enlarged. Urine withdrawn by catheter showed a moderate amount of albumin, but no casts. I learned she was excreting it in very small quantity. I declined to express an opinion as yet, and advised her entering a private sanatorium to be under observation and treatment. Under suitable regimen the kidneys soon acted normally. On the first day she passed only 700 c.c. urine, on the second 1,100 c.c., on the third day 1,450 c.c., and from this on the amount and quality were normal.

At my second examination the uterus was found in complete retroversion, in which position it was found at every subsequent daily examination during the week prior to the operation. The abdominal pain and tenderness persisted in spite of rest in bed and appropriate treatment. I concluded I had to deal with a case of chronic appendicitis, associated with subinvolution and retroversion of the uterus and cystic degeneration of the right ovary.

On February 4, 1900, I performed median laparotomy, having first dilated and curetted the uterus. The right ovary contained a cyst the size of an almond, which was excised and the wound in the ovary sutured with catgut. A similar-sized cyst was found in the left ovary, which was treated in the same way. The uterus lay in complete retroversion. It was brought forward and held in position by suturing the round ligaments to the fascia of the rectus muscle. A search was now made for the appendix. It was readily found in the usual position, covered with a few membranous adhesions, and the peritoneal covering was highly infected. Appendectomy was done in the customary manner. The appendix on being slit open presented an erosion, the size of a five-cent piece, of the mucosa. The abdominal wound was closed with tier sutures. Recovery from the operation was perfectly normal. The patient is making a rapid and satisfactory convalescence. She is free from pain, has a good appetite, sleeps well, and has gained three and one-half pounds in the first week after getting up from bed.

It may be argued that the appendix would be difficult of access by a median laparotomy, especially when it was extensively and firmly adherent. Such, however, has not been my experience in the class of cases under consideration. As a rule the appendices in these cases are but slightly adherent, and are very easily reached by a median incision. Still, if on examination prior to operation a firm adhesion of the appendix is suspected, then the Battle-Kammerer incision through the sheath of the right rectus muscle, with traction of the muscle toward the median line, may be adopted. This incision gives ready access to most of the situations which a diseased appendix may adopt, while it permits at the same time with moderate ease the examination and surgical treatment of the right adnexa. I have at times been able to investigate through it the condition of the uterus, and even of the left adnexa. When I am morally certain beforehand that disease of the appendix exists, I usually adopt this incision. It seems to me to be preferable to the rather complicated incisions recently recommended[1] to accomplish the purpose of investigating the condition of the right adnexa when operating for appendicitis in female subjects.

Of course cases of appendicitis are sometimes encountered in which neither of the two foregoing incisions will be applicable. I merely make this statement so as not to be understood as advocating certain incisions for all varieties of appendicitis. A few weeks ago I operated upon a woman in whom I could feel an enlarged appendix lying firmly attached to the side of the ileum. I made an oblique incision directly over the mass, and found the appendix firmly adherent to the iliac wall, lying to the outer part and behind the cæcum. It was embedded in a mass in the centre of which was about two ounces of pus. After having located the position of the appendix, and before attempting its removal, I enlarged the incision downward so as to bring within reach the right adnexa. I found the right ovary converted into a cyst the size of a hen's egg, and removed it. Then after walling off the intestines as well as possible, I proceeded with the removal of the appendix. While enucleating it from its bed of exudate some pus (about two ounces) appeared, which was quickly mopped up. The abdomen was closed with tier sutures save a small area where a gauze strip passed down to the abscess cavity. This was removed in three days, and the patient made a perfectly normal recovery, leaving for her home in a neighboring town fifteen days after the operation.

Nowadays the question is frequently asked, When doing a laparotomy for pelvic lesions, do you always search for the appendix and remove it, be it diseased or not? The question no doubt would be differently answered by different gynæcologists. My own practice is based on the principle never to remove a tissue unless its removal is indicated by disease. Whenever it is feasible in the performance of a laparotomy for other conditions than appendicitis, I search for the appendix for the purpose of investigation, but do not excise it unless it shows some pathological change. Personally I do not feel justified in subjecting my patient to the additional risk, be it never so slight, of removing a healthy appendix for the reason that at some future date it may become diseased. Of course, this is a matter of mere personal sentiment. I have said when it is feasible, for no operator, I take it, would be so foolhardy as to waste any time over the search for the appendix unless there were good reasons for so doing, after a very difficult and tedious operation on the pelvic viscera. Moreover, in these cases such a search is as a rule unnecessary, for if the appendix is at all involved it is generally found adherent to the diseased pelvic structures, and comes under the operator's hands without his having to look for it.

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[1] See papers by Dr. Robert F. Weir (The Medical News, February 17, 1900), Dr. Willy Meyer (The Journal of the American Medical Association, February 17, 1900), and Dr. George R. Fowler (The Medical News, March 3, 1900).

Two Unusual Cases of Annular Syphilides in Negroes.—T. Caspar Gilchrist's first case had ringed and gyrate lesions over the face, axillary region, and inner surfaces of the thighs. Near the chin were three rings one within another. In the second case the face and neck were chiefly affected. The chancre had existed six months previously. In doubtful cases ringworm and erythema multiforme have to be excluded. In the latter the backs of the hands will be coincidently affected and the margin will not be raised, firm, or indurated. Annular syphilis may occur as late as the third or fourth year. In one case mentioned it was as late as the tenth year. This form seems much more prevalent in the negro race. The writer agrees with Crocker that it belongs in the papulosquamous group. An article on the "Anomalies of Syphilis," in the current number of the *American Journal of Dermatology and Genito-Urinary Diseases*, shows illustrations of an almost identical case.—*Maryland Medical Journal*, April, 1900.

The Effect of Strong Heat in Pruritus.—Edmund Andrews recommends applications as hot as can be borne for the relief of obstinate itching, especially pruritus of the anus and adjoining regions—perineum and scrotum or vulva. Hot water has been used in anal pruritus, but with imperfect success, because of the difficulty of applying strong heat thoroughly to the deep sulcus in which the anus lies. The water must be as hot as can be borne without blistering. A large dish of it must be at hand, and two or three compresses placed in it. The patient taking a crouching position picks up one compress and instantly presses it against the anus. In a moment or two it will be partly cooled. He then drops it into the dish and immediately uses another, thus keeping up a constant and very strong heat until the itching ceases. One such treatment, the author says, will often make the patient perfectly comfortable for twelve or twenty-four hours.—*The Clinical Review*, May, 1900.

Nearly Complete Occlusion of the Trachea by a Tumor Originating in the Cicatrix of an Old Tracheotomy.—Bayer's patient was tracheotomized in his fourth year for croup. In his twenty-third year he contracted an initial specific lesion, and in the next few years received irregular treatment. At the age of thirty years he suffered from difficult breathing, which became noisy in both inspiration and expiration. Examination showed the subglottic space obstructed by a sort of membranous diaphragm, perforated a little to the right side of the median line by a small orifice. Closer examination showed that the supposed diaphragm was in reality a mass of granulation tissue. Surgical intervention was refused, but the patient was placed on appropriate treatment, and massage was given both internally and externally over the site corresponding to the tumor. The tracheal occlusion gradually disappeared, and a complete cure resulted. Tracheal occlusions in general arise from a tumor in the trachea proper, from deformities in its walls, from cicatrices or pressure by neighboring organs, or from the presence of horizontal fibrous partitions inserted on the inside of the normal wall of the tube and developing their surface in a plane at right angles to its axis.—*Revue Hebdomadaire de Laryngologie, etc.*, March 10, 1900.

Acute Serous Meningitis and Sero-Purulent Meningitis due to Streptococci.—P. Nobécourt and M. Delestre note two cases which were seen in an epidemic of broncho-pneumonia, and which were both fatal. The first patient, a boy three and one-half years old, was brought to the hospital for diarrhœa and for cough. Nine days after the appearance of meningitic symptoms he died. Liquid from cerebro-spinal puncture gave pure cultures of streptococcus. The lungs showed the ravages of broncho-pneumonia. There was a diffuse œdematous congestion of the meninges of the convexity of the hemispheres. No tuberculosis was present. The cerebro-spinal liquid was clear and limpid. The second case also showed the lesions of broncho-pneumonia. The cranial meninges were distended by a cloudy liquid, rich in leucocytes. Bacteriological examination of the cerebro-spinal liquid showed the streptococcus analogous to that seen in the first case. So the same micro-organism can sometimes cause a serous, sometimes a sero-purulent, inflammation in the meninges.—*Annales de Médecine et de Chirurgie Infantiles*, April 15, 1900.

On the Relationships between Anæsthetics and Insanity.—G. H. Savage states that an anæsthetic may cause insanity. As to the advantage of one anæsthetic over another, the writer has had no experience of special danger from any one. Various forms of insanity have been observed in this connection. An anæsthetic may relieve for a time in a few maniacal cases. It may be given to the insane with impunity, as a rule, when operations or examinations are necessary. But there is danger that it may lead to a fresh attack of insanity if it is given to patients who have had previous attacks of insanity, and to those who are subject to recurrent insanity of any form.—*The Clinical Journal*, April 11, 1900.

A Plea for Examination of the Male Genitalia in Obscure Cases.—Ferd. C. Valentine says that whenever a woman with manifestations of nervous disease comes to the general practitioner or the neurologist, the latter at once proceeds to establish or eliminate the presence of a genital affection as a possible cause of the ailment for which advice is desired. The same rule does not hold in the case of a male patient, but the author thinks it might do so with great benefit in many cases. The symptoms may not at all point to the genito-urinary apparatus, and yet the cause of them may well reside in that part. There are many pains and symptoms simulating disturbances of the gastric, motor, sensory, and circulatory systems which are evolved and maintained solely by a genito-urinary disease. As regards exploration for urethral stricture, which is only one of the many affections of the genito-urinary system that may find expression in symptoms in distant parts, Valentine cautions against the giving of an opinion after the simple passage of a metal sound or even of a metal bougie-à-boule. He advises the use of a soft-rubber bougie-à-boule, even two numbers smaller than the rigid instrument employed, and says that only when this is whipped out of the urethra and encounters none of the characteristic impingement, can the urethra be pronounced clear. Besides instrumental and visual exploration of the urethra, and tactile interrogation of its adnexa, an examination of the urine will oftentimes give important clews not only to the character but also to the site of a urethral disease.—*The Cleveland Medical Gazette*, May, 1900.

Functional Relation between the Thyroid and the Parathyroid Glands.—Gustav Lusena thus sums up the results of his experimentation: While in some cases the theory that the removal of the thyroid and parathyroid apparatus accelerates the process of nutritive exchange, and increases the gravity and rapid course of the cachexia is quite true, the theory cannot be upheld which would attribute all the symptoms which occur after parathyroidectomy and thyro-parathyroidectomy to an increased or diminished rapidity in the metabolic processes.—*La Riforma Medica*, March 28 and 29, 1900.

The Bacteriology of Influenza.—Arnaldo Cantani believes it to be highly improbable that the bacillus of influenza should be met with in the mouths of healthy individuals. Even in those suffering from chronic catarrh it is found only after a superadded acute and typical attack of influenza. Once introduced, its persistence is remarkable, and is shown in frequent relapses. The specific nature of the bacillus is indisputable. As a result of experimentation, it would appear that the intoxication produced by this disease is due to a poison contained in the bodies of the micro-organism. There are clinical affections which exactly simulate influenza, but are due to other bacteria. These and the typical bacteria are best found in the sputum and in the nasal secretions.—*La Riforma Medica*, April 6, 7, 9, 1900.

Malarial Neuritis.—E. Sacquépée and Charles Dopter give a description of twenty-two cases culled from medical literature and three from their own practice, of polyneuritides absolutely referable to malarial infection and to no other cause. In one case the sensory nerves of the legs and arms were affected, the pain being of an excruciating nature. The patient died, and the cubital and external popliteal nerves were subjected to a minute examination. Not a single fibre was found in a normal condition; the chief lesion was a breaking up of the myelin into small droplets, with a varicose and moniliform condition. The fibres were, in fact, almost totally destroyed. In a second case, lancinating pains of the thigh, and finally of the whole leg and the arms, returned at intervals, but were benefited and finally cured by quinine, electricity, massage, and tepid douches. In the third case paralytic, painful, and trophic phenomena occurred from time to time; quinine, antipyrin, faradization, and occasionally morphine, were given in treatment, and the patient's condition was greatly improved. Some muscular atrophy remained.—*Revue de Médecine*, April 10, 1900.

Epilepsy: Artificial Trepanning.—G. Jacquin reports the following case of a man thirty-seven years old: The patient never had convulsions in childhood. There was no history of alcoholism or syphilis; no venereal excess. The patient had an attack of typhoid fever when eighteen years of age; it was severe and attended by delirium, and lasted four months. Three months later the first convulsions appeared. In October, 1897, he fell into the fire and received a severe burn on the head which amounted to a veritable trepanning. A sequestrum was formed and thrown off. For a time after the accident the epileptic attacks were less frequent, but gradually the frequency increased till they occurred as often as before the accident. This case goes to prove with other examples that trepanning sometimes secures a temporary amelioration, but never a perfect cure of the affection.—*Archives de Neurologie*, April, 1900.

Cutaneous Grafts: Strips Taken from an Amputated Leg and Grafted with Success Nine Hours after Amputation.—Alfred L. Dupraz cites the case of a man suffering from an extensive wound of the hand. On this wound, which had been protected with adhesive plaster since the day before, the writer grafted, according to Thiersch's method, strips of skin taken from a leg amputated nine hours previously. The strips of skin had been preserved in sterilized serum. The grafts took with great success.—*Archives Provinciales de Chirurgie*, April 1, 1900.

Note on the Etiology of Subscapular Friction; Role of Pleurisy.—M. Péré declares that physiological subscapular friction does not exist. Subscapular friction is the result of the approach of the two osseous surfaces—subscapular and costal. This condition can take place in the event of an exostosis, in callus following a fracture, in an exaggerated protrusion in front of the spinal border and of the inferior angle of the scapula, in the denudation of the osseous parts following atrophy of the scapular muscles, or in an abnormal projection following pleurisy, scoliosis, etc. In these conditions, when the movements of the scapula on the thorax are too extensive or too frequent, a serous bursa may be interposed between the two bones and by its inflammation reproduce the friction by substituting its rugous walls for the two bony surfaces.—*Archives Provinciales de Chirurgie*, April 1, 1900.

The Diazo Reaction in Consumptives Applying for Sanatorium Treatment.—Hermann Lorentz proposes the use of the diazo reaction in order to determine whether a given individual with pulmonary tuberculosis will probably be benefited by sanatorium treatment. During the past year he has applied this test several times in the case of each of the patients in one division of the Halila Sanatorium, and presents a table of the results obtained in the fifty-four examinations. The only deaths that occurred were among those who presented the diazo reaction. All those who did not present this reaction on admission, with the exception of three, were improved during their stay in the sanatorium. Of the three exceptions, in two the diazo reaction subsequently appeared, and the third patient left the institution. The appearance of this reaction in marked degree was always followed by a rapid destruction of the lungs, but it was independent of the number of bacilli and of the presence of fever. The writer regards the diazo reaction as a valuable aid to prognosis, its presence being of bad omen; but its absence does not indicate an absolutely favorable course, as the condition may grow worse after a time, and then the diazo reaction will probably appear.—*Finska Läkaresällskapets Handlingar*, March, 1900.

The Treatment of the Stump of the Umbilical Cord.—F. Ahlfeld protests against the statement of Martin, that the successful treatment of the stump of the umbilical cord is as yet "a consummation devoutly to be wished," and refers to the method (fully described in the second edition of his "Text-Book") that has been employed with most favorable result in far over a thousand cases treated at the "Marburger Anstalt." He gives a brief description of the method, and states that they have not had a single case of umbilical disease since a number of years. He does not approve of the methods suggested by Martin.—*Centralblatt für Gynäkologie*, March 31, 1900.

A Case of Congenital Hemeralopia.—W. Koster reports a case of congenital perinuclear cataract in which the opacity was so even and so nearly transparent that the patient had almost normal acuity of vision in a strong light, but at dusk, or when the illumination was dim, was nearly completely blind.—*Weekblad van het Nederlandsch Tijdschrift voor Geneeskunde*, March 31, 1900.

Pregnancy and Birth after Hysterocolpocleisis.—Menge cites an instance in which pregnancy occurred after hysterocolpocleisis had been performed on a woman, aged thirty-five years, who had borne seven children. Examination upon her admission to the "Universitäts-Frauenklinik," Leipsic, revealed the presence of a large vesico-cervico-vaginal fistula. She stood the operations well, but less than three years later again became pregnant. Menge gives a very complete report of the case, which is certainly quite interesting.—*Centralblatt fur Gynäkologie*, March 31, 1900.

Contribution to the Knowledge of the Neutralization of Poisons.—Ernst v. Czyhlarz and Julius Donath, in their researches regarding the power of some organs to neutralize poison, found, among others, that by tightly bandaging the hind-legs of guinea-pigs as far above the knee as possible, they could with impunity inject into the leg thus ligated quantities of strychnine sufficiently large to have caused certain death within two to five minutes in other animals of the same weight. They conclude from this that the poison was neutralized by the subcutaneous cellular tissue, the musculature, and the blood and lymphatic fluid contained in the same.—*Centralblatt für innere Medicin*, March 31, 1900.

Treatment of Ozæna with Normal Horse Serum.—Pedro Borrás y Torres reports the results of hypodermic injections of normal horse serum in eight cases of ozæna. The results were of three kinds: (1) General symptoms, fever, joint pains, etc., such as commonly follow injections of the various therapeutic sera and organic extracts; (2) local symptoms at the site of injection, pain, swelling, and sometimes a morbilliform eruption; (3) symptoms on the part of the nasal mucous membrane, greater circulatory activity marked by turgescence and an increased secretion. After four or five injections the crusts were expelled and the odor was no longer perceptible, either objectively or subjectively. This amelioration, however, continued only so long as the injections were repeated at regular intervals, and the dose was not reduced. No change at all was produced in the atrophied mucous membrane by this increased secretion. The initial dose of the serum was 5 c.c., gradually increased to 15 c.c. The injections were repeated every other day, or twice a week, according to the individual tolerance.—*Gaceta Médica Catalana*, March 31, 1900.

Variety in the Diet of Typhoid Fever.—Andrew H. Smith states that considerable experience has shown him that quite a variety of fluid and semi-fluid food may be given in cases of typhoid, even in the earliest stage, not only without danger, but with decided benefit. The aim should be to give the minimum of food that will sustain the patient, not the maximum amount that he can take. "Starvation fever" is often abolished by administration of a more nutritious semi-solid food. A good diet list is: Milk, broths, soft-boiled eggs, junket, custard, the soft part of raw oysters, milk toast, scraped chicken, scraped beef, chicken and rice boiled to a jelly, sago, tapioca, cornstarch, animal jellies. The effect should be carefully watched.—*International Medical Magazine*, April, 1900.

Hysterogenous Tympanum.—M. Ricard reports a case of pain and partial deafness in the left ear of a young girl aged seventeen. The instillation of a few drops of cocaine caused an hysterical attack, taking the form of suffocation, vertigo, and loss of consciousness. Water used in the place of cocaine produced the same effect. Repeated applications of warm water finally brought about a cure.—*Revue Hebdomadaire de Laryngologie*, April 15, 1900.

Intestinal Antisepsis in Typhoid Fever.—James M. Anders believes that the principal indication for the use of intestinal antiseptics is the meteorism which owes its origin to decomposable material in the prima via. They have a mitigating sphere of usefulness. They exercise a mitigating influence upon the diarrhœa when present. The bowel antiseptic employed by the writer is salol. The powdered form is best. Turpentine is to be preferred when marked distention of the bowel is present. When intestinal irrigation is used, the writer employs salicylic acid or mercuric chloride.—*International Medical Magazine*, April, 1900.

On Carcinoma in Cattle.—Leo Loeb sums up the results of observations on this subject as follows: (1) In 1899 one case of carcinoma in fifty thousand was found in cattle. (2) The most frequent place for its occurrence is at the inner canthus of the eye. (3) The female sex predominated. All cows with carcinoma were, however, from six to fifteen years old, while the majority of steers are usually killed when young. This fact must be taken into consideration in this connection. (4) All animals with carcinoma were much emaciated. (5) There was constant absence of metastases in the deeper lymph glands or other organs, although the metastases in the retromaxillary lymph gland very often attain a great size.—*Medicine*, April, 1900.

The Plantar or Toe Reflex.—Horatio C. Wood, in the examination of a number of adult sufferers from various diseases involving the pyramidal motor tract, has not been able to verify Collier's statements in regard to the plantar reflex, *i.e.*, that there are two distinct forms, one in the normal adult, the other in children, and that in certain diseases in the adult there is a reversion of the form, so that it is possible to make a diagnosis as to the seat, or even within certain limits the nature, of the disease by studying the toe reflex. In children the author has several times found the adult reflex. In short, the result of his study has been to indicate that the condition of the toe reflexes cannot be relied upon as a basis of diagnosis.—*University Medical Magazine*, April, 1900.

Meteorismus in Abdominal Typhus and its Treatment.—W. E. Tschernow bases a report upon one hundred and twenty-eight cases. When meteorism is pronounced, the bowel must be emptied. Injections with water, or water and glycerin, or glycerin alone, may be employed, or a mixture of asafetida water and turpentine oil. When the diaphragm is elevated by meteorism and the lungs are pressed upon and the heart is displaced, we may be forced to puncture the abdomen in patients who present lung complications. This procedure is not difficult when the stomach or large intestine is to be punctured, but in meteorismus of the small intestine puncture succeeds only when the distended loop of gut is prominent behind the abdominal walls. Meteorismus is produced by an increased gas production in the intestine, or caused by atony and paresis of the intestinal walls from local auto-intoxication of the neuro-motor apparatus of the intestine by products of abnormal fermentation.—*Klinisch-therapeutische Wochenschrift*, April 15 and 22, 1900.

Traumatism in the Pathogenesis of Syringomyelia.—Vincenzo Cito quotes a number of cases of this disease following injuries received by falls, blows, etc. He believes that the traumatism is the chief etiological factor, and that it produces hemorrhagic foci which Minor divides into two varieties, local and localized, the former situated at the seat of the lesion and distinctly circumscribed, the latter characterized by an accumulation of pure blood in the form of a central hæmatomyelia or simply by central softening with or without blood. In the majority of cases these foci are the starting-point for the formation of the cavities, surrounded by a ring of newly formed nerve tissue.—*Gl' Incurabili*, March, 1900.

The Treatment of Infantile Spastic Paralysis.—A. Codevilla reports a number of cases in which transplantation and plastic operations on tendons have succeeded in overcoming spastic contractions of hands or feet. In the majority of cases of infantile spinal paralysis, the vicious position and the deformity are chiefly due to the lack of equilibrium between the forces which move the articulation. Some muscles are paralyzed and others relatively normal, so that with each voluntary or reflex movement some muscles contract while their antagonists are inert. This gives rise to the vicious position or the deformity, and it is only rational to suppose that a cure may be obtained by a better distribution of force. This can be done by musculo-tendinous transplantation, with stretching or shortening of certain tendons in order to obtain a passive equilibrium in the normal position. No rules can be given as to the operation, for the conditions vary in each case.—*Rivista Critica di Clinica Medica*, April 21, 1900.

The Diagnosis of Chlorosis and Chloro-Anæmia.—Alfred Stengel says that the prominence of certain symptoms, as cardiac palpitation, or cough due to vascular disturbance, frequently interferes with the diagnosis of chloro-anæmia. More often still mistakes occur when the clinical manifestations are a little obscure. We must not expect to find the greenish pallor of the books in every case. Our tendency nowadays is to pay too much attention to the blood examination; its importance is great, but there is danger in relying too much upon this one method of investigation. We must take into consideration the history and the clinical course of the case. We should be especially careful in pronouncing cases with unusual and atypical symptoms chlorotic. Chloro-anæmia is simply a form of secondary anæmia presenting an unusual blood picture. It is most frequent in the early stages of phthisis, carcinoma, and secondary syphilis, and may be met with very characteristically in post-hemorrhagic anæmia.—*University Medical Magazine*, April, 1900.

Pyelophlebitis and Hepatic Cirrhosis. — Attilio Colpi thus concludes a study of two cases: (1) We may have a cirrhosis secondary to thrombosis of the portal vein. (2) Its characteristics will show that the thrombosis is primary, and not secondary to cirrhosis of the liver. (3) The thrombus is of gradual, not sudden, formation. (4) The formation of interacinous connective tissue is secondary to thrombosis of the portal vein. As a result of the gradual diminution of the blood supply to the liver, the function of the hepatic cells is abolished, and we have atrophy and destruction of the cells, the compensatory circulation in the internal branches of the portal vein not being sufficiently powerful to nourish them. (5) The pressure of the congested blood further contributes to destruction of the hepatic cells.—*La Riforma Medica*, April 10, 11, 12, and 13, 1900.

The Rudimentary Ophthalmoscopic Stigmata of Acquired Syphilis.—A. Antonelli writes of the frequent presence of vestiges of neuritis of the optic nerve, retinitis, chorio-retinitis, or simple chorio-retinal pigmentary dystrophy in the eyes of syphilitics, in addition to the classical lesions of the fundus of the eye. These stigmata are essentially the same in acquired and in congenital syphilis, but in the former they are usually associated with a true papillitis or lesions of the fundus, which is not the case in hereditary syphilis. An ophthalmoscopic examination may sometimes clear a doubtful diagnosis in general paralysis or tabes or other diseases in which syphilis is the unrecognized cause.—*Gl' Incurabili*, March, 1900.

Appendicular Pleurisy.—M. Dieulafoy describes this affection, which is secondary to appendicitis, the pleura becoming infected by propagation through the adhesions and lymphatics. The infective agents may or may not perforate the diaphragm. The pleurisy occurs a few days after the onset of the appendicitis, at about the time when the symptoms of the latter are beginning to subside, and is almost without exception a pleurisy of the right side. There may be very slight dry pleurisy, or pleurisy with effusion, but as a rule there is extensive effusion, the fluid being fetid and putrid. Prognosis is bad. Surgical intervention should be prompt, and when peritoneum and pleura are both infected may have to consist of the operation for empyema and laparotomy. Prophylaxis is the only rational treatment, and will consist of early appendectomy.—*Bulletin de l'Académie de Médecine*, April 10, 1900.

Yellow Fever is a Preventable Disease.—Antonio Matienzo says that, although the situation and climate of Tampico offer the most favorable conditions for the reproduction and development of the germ of yellow fever, and although there have been visitations there at various times, yet the disease has not become endemic. He reports briefly the nine cases occurring in that city from April 10 to October 13, 1899, and recounts the sanitary measures taken in each case to prevent the spread of the disease. From his study of these cases he concludes that yellow fever, like smallpox, diphtheria, scarlatina, etc., is an avoidable disease. The prophylactic hygiene of the affection consists in isolation and the most thorough and scientific disinfection in addition to general sanitary measures, such as a pure water supply, subsoil drainage, sewerage, the drying up of pools and marshes, and the protection of river lands from overflow.—*Boletin del Consejo Superior de Salubridad* (Mexico), No. 8, 1900.

Prevention and Treatment of Pelvic Inflammatory Diseases in the Female by the General Practitioner.—R. R. Kime believes that fifty per cent. of pelvic inflammations are due to infection after abortion or labor, twenty-five per cent. to gonorrhœal infection, and the remainder to various causes, such as rheumatic diathesis, chilling during menstruation, venereal excesses, and uncleanliness in minor gynæcological manipulations. He makes a plea for greater cleanliness in what are ordinarily considered matters of minor importance, and gives minute directions for the various emergencies of the puerperal period, post-abortion week, etc. He lays the greatest possible stress upon the necessity of uterine and alimentary drainage.—*Annals of Gynecology and Pediatry*, April, 1900.

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THE CARE OF THE CONSUMPTIVE POOR.

THE opinion is rapidly gaining ground in this and in other countries that steps should be taken to provide proper accommodation and treatment for those persons suffering from pulmonary tuberculosis whose means will not allow them to live under the conditions best calculated to cure or arrest the progress of that disease. Attention is also being drawn to the fact that the consumptive individual is a source of more or less danger to those in the immediate neighborhood, and that therefore his isolation will be to the best interests of the community at large and the only effectual method of successfully preventing the spread of the malady. In order to bring this much-to-be-desired state of affairs to pass, sanatoria on a very large scale must be erected within a convenient distance of cities. However, much money will be required for the accomplishment of the scheme, which will certainly not be forthcoming in sufficient quantities from private or public charity. Consequently it is argued that it is incumbent on the State to act *in loco parentis*, and that the people should be taxed for the benefit of their poor brethren.

Dr. Howard S. Anders read a paper on this subject at the joint meeting of the Philadelphia County Medical Society and the Pennsylvania Society for the Prevention of Tuberculosis, held on January 10, 1900, in which he said: "In the evolution of the care of consumptives, State aid is truly an opportune, just, and consummate factor. First the private pay sanatorium; then the hospital for poor consumptives maintained by voluntary contributions; and now the public hospitals and sanatoria for advanced and incipient cases respectively. England has accommodation for about five thousand poor cases supported by charity only, leaving about seventy thousand cases more unprovided for. Germany has about fifty sanatoria, but mostly for pay cases of tuberculosis, although many more for the poor are in process of installation by the government and by private enterprise separately and co-operatively. The Swedish parliament recently voted 850,000 kroner for a sanatorium for South Sweden; and 2,200,000 kroner given by the people to King Oscar has been turned over by him for sanatoria in northern and central Sweden."

The striking success of the sanatorium treatment of consumption has been so decisively demonstrated that it would be needless to dwell upon that part of the question. There can be also no doubt that the indigent require this description of treatment to a much greater extent than the well-to-do, and have the right to expect it. Dr. Edward O. Otis, in a paper read at the meeting referred to above, said: "If it is the duty of the city, as most cities so consider it, to provide for the care and treatment of its injured and sick poor suffering from other diseases, it is equally its duty to provide for the equally worthy poor consumptive. It is his misfortune to have this fearful disease, not his crime or personal election. He sees a neighbor with appendicitis taken to a perfectly appointed hospital and operated upon by the most skilful surgeon, or another with pneumonia receiving like care and skill; but for him the city neither will nor ought to open the doors of its general hospitals, and he must either drag out his life in wretchedness, or as a last resort go to the almshouse. And further, there is the added reason why he should be provided for, because his disease is a communicable one and he is endangering others."

The question of treating the poor consumptive in a manner satisfactory to himself and to others is one beset with difficulties on all sides. It is manifest that the matter is too large to be undertaken by individual effort, and that if anything is to be done the State must take it in hand. It has been pointed out in the MEDICAL RECORD many times that the inroads of consumption might be very greatly checked in cities by municipalities insisting that the poor are housed in sanitary healthy dwellings. By all means build sanatoria for the poor consumptives, but at the same time strike at the root of the evil. The following words, written by Dr. Clifford Allbutt, in *The Practitioner*, January, 1899, are very much to the point: "Are we to hope that consumption, like smallpox, may become a tale of the past? If so, like smallpox it must be banished by preventive means. Is there any prospect of such a consummation? Undoubtedly there is, and while we are perfecting our means of cure, let us not rest until these perfect means are no longer wanted. Tuberculosis has fallen into the class of infectious diseases, and must be resisted by the methods applicable to infectious diseases. These are to seek for an antidote and to abolish the immediate cause."

REPORT OF THE CHIEF SURGEON OF THE DEPARTMENT OF MATANZAS AND SANTA CLARA.

THE fact that Cuba, and particularly its towns, at the time of the American invasion were in the most deplorable sanitary condition is a well-worn story. The first portion of the report referred to above gives a detailed account of the successful efforts made by the medical department in Matanzas to place the military camps in that province in a satisfactory hygienic state. It is stated that yellow fever would appear to be practically abolished among the troops, and the only diseases that occasioned any anxiety were the venereal affections. In a total strength of 1,121 at the time of the publication of the report there were in

Matanzas 150 sick, or a percentage of 13.3; of these 70 were venereal in character, or a percentage of 6.2, leaving a sick report of 7.1 per cent. of other diseases.

The most serious problem affecting the commissary department, according to the chief surgeon, is that relating to the supply of ice for troops serving in the tropics. It is pointed out that civilization and sanitation have demonstrated that ice has long since ceased to be a luxury and become a necessity, consequently in the modern days of ice machines there is no excuse for the absence of this article in all of our garrisons. The present system of purchasing from outside parties, except in transient cases, is expensive, uncertain, and in every way undesirable. Ice plants of sufficient capacity should be located in certain localities which will be distributing-points for the smaller garrisons.

The public charitable institutions, which in this department, as in the other provinces of the island, were found to be in an incredibly filthy condition, were placed under the supervision of the medical department, and were thoroughly cleansed and reorganized, greatly to the benefit of their inmates. The latter portion of the report is chiefly devoted to a consideration of the work of the sanitary department, and demonstrates the good effect of prompt and vigorous measures. The statement is made that the sanitary condition of Matanzas and Santa Clara—when the report was issued—was excellent. The death rate had decreased and starvation and yellow fever were absent. Nevertheless attention is drawn to the fact that the present methods of sanitation are but the forerunners of what remains to be done, and that unless a permanent, scientific, economic, and efficient system be established, the work already done will in great part bear little more than temporary fruit.

Chief Surgeon Ives concludes his report: "I would state that since my association with this command, which dated from December 3, 1898, the health of the troops has been excellent. Prior to embarking for Cuba the sanitary conditions in all camps of the division with which I had the good fortune to serve were everything that could be expected, thereby resulting in as healthy and fine appearing a body of men as then existed in the army. It would not be inappropriate to state that the condition of almost perfect health in this command and its freedom from typhoid is the natural sequence of military sanitation, systematically and thoroughly applied. . . . The health of the command compares favorably with that of any in the division. All medical and line officers seem keenly alive to the importance of the sanitary situation, and are working diligently to prevent infection, and the fact of the absence of all traces of such indicates that up to the present time at least their efforts have been eminently successful."

All evidence points to a hopeful anticipation that, under the vigorous leadership of Governor Wood, aided by the earnest co-operation of the medical and sanitary departments, Cuba, instead of as in times past being a hotbed of disease and looked upon as the white man's grave of this part of the globe, may become an altogether desirable place of residence, possibly a health resort.

News of the Week.

Dr. Harry Warren Lincoln has been appointed gastrologist to the Bushwick and East Brooklyn Dispensary.

Nu Sigma Nu.—The third annual banquet of the XI. Chapter of the Nu Sigma Nu medical fraternity of the University and Bellevue Hospital Medical College was held Thursday evening, May 24, 1900, at the Hotel Belvedere.

American Proctological Society.—The following officers were elected at the meeting of the American Proctological Society at Washington, May 6, 1900: *President*, Dr. James P. Tuttle, of New York; *Vice-President*, Dr. Thomas Charles Martin, of Cleveland, Ohio; *Secretary*, Dr. William M. Beach, of Pittsburg, Pa.; *Executive Council*, Drs. S. T. Earle, Jr., of Baltimore, Md., A. B. Cooke, of Nashville, Tenn., and J. R. Pennington, of Chicago, Ill.

The Fifteenth Annual Conference of State and Provincial Boards of Health of North America was held at the Hotel Dennis, Atlantic City, N. J., on June 1 and 2, 1900. The set discussion was on school hygiene. The officers of the conference for 1900 are: *President*, Dr. U. O. B. Wingate, of Milwaukee, Wis.; *Vice-President*, Dr. Charles O. Probst, of Columbus, Ohio; *Treasurer*, Dr. J. A. Egan, of Springfield, Ill.; *Secretary*, Dr. J. N. Hurty, of Indianapolis, Ind.

National Confederation of State Medical Examining and Licensing Boards.—The tenth annual meeting of this confederation will be held in the Hotel Traymore, Atlantic City, N. J., on Monday, June 4, 1900. Members and ex-members of State medical examining-boards, physicians, and educators who are interested in the cause of higher medical education are invited to attend. Every State or Territorial board whose duty it is to examine or license physicians intending to practise in the jurisdiction of the board, by whatsoever name it may be called, is urged to affiliate with the National Confederation, if it has not already done so. The officers for 1899–1900 are: *President*, Dr. J. N. McCormack, of Bowling Green, Ky.; *Vice-Presidents*, Drs. N. R. Coleman, of Columbus, Ohio, and B. F. Crummer, of Omaha, Neb.; *Secretary-Treasurer*, Dr. A. Walter Suiter, of Herkimer, N. Y.

The Roentgen Society of the United States.—There has been organized a Roentgen Society of the United States, with the *American X-Ray Journal*, St. Louis, Mo., as the official organ. This society is the only one of its kind in America. It is national in character, and is represented by physicians, surgeons, dentists, and radiographers in the several States. The constitution is similar to those of the Roentgen societies in Europe. The annual dues are $5. The first regular meeting will be held in December, 1900, in New York. Many papers have been promised by eminent men abroad and here, and a very successful scientific meeting is looked for. There will be an exhibition of *x*-ray and electro-therapeutic apparatus, radiographs, etc., during the meeting of the society. The chairman of the committee of arrangements is Dr. Monnel, of New York. The society will be represented at the International Congress of Medical Electrology and Radiology, in Paris, France, by Dr. Price, of Cleveland, Ohio. The secretary of the society is J. Rudiš-Jičínský, of Cedar Rapids, Iowa. The president is Dr. Heber Robarts, of St. Louis.

The Delaware County (Pa.) Medical Society celebrated its fiftieth anniversary at Media on May 27th, and the event was made the occasion of a gift to Dr. William B. Ulrich of a silver loving-cup in recognition of his fifty years spent in the practice of medicine.

Asociated Health Authorities of Pennsylvania.—At the meeting held at Mechanicsburg on May 23d and 24th, Prof. A. J. Beitzel, of Mechanicsburg, read a paper on "School Hygiene." Miss Dora Keen, of Philadelphia, presented a communication on "The Medical Inspection of Schools." Dr. Benjamin Lee, of Philadelphia, read a paper entitled "Recent State Legislation for the Protection of the Health and Lives of School Children." Mr. C. Herbert Obreiter, of Lancaster Township, presented a communication entitled "The Rural Director as a Health-Officer." Dr. A. C. Abbott, of Philadelphia, read a paper on "General Hygiene." Mr. Moritz G. Lippert, of Phœnixville, advocated State inspection of commercial dairies and herds. Dr. H. B. Bashore read a paper on "Rural Hygiene." Dr. R. S. Maison, of Chester, spoke upon "Township Supervision." Mr. W. H. Allen, of Philadelphia, discussed measures calculated to render State health protection effective.

Pathological Society of Philadelphia.—At a stated meeting held May 24th, Dr. A. A. Eshner presented the heart and the brain from a case of rupture of an aortic leaflet and cerebral hemorrhage, with right hemiplegia and aphasia, and he pointed out the difficulty of diagnosis especially from cerebral embolism. Dr. L. Pearson and M. P. Ravenel reported a case of pneumonomycosis due to the aspergillus fumigatus. The specimens were obtained from a calf thought possibly to be tuberculous, but not reacting to tuberculin, and the lungs presented an appearance of mixed emphysema and condensation, with peculiar hemorrhage-like lesions of varying size. Cover-slip preparations disclosed a fungous growth, which culture proved to be the aspergillus fumigatus. Dr. Joseph McFarland exhibited cultures and tissue preparations showing plague bacilli. Dr. A. O. J. Kelly presented a communication on "Papillomatous Epithelioma of the Pelvis of the Kidney," adding the report of one case to the few already on record. Dr. Simon Flexner made some remarks on "The Nature of the New Tissue in Cirrhosis of the Liver and its Distribution," detailing the employment of various stains, showing that all of the connective tissues take part in the hyperplasia. Drs. E. P. Davis and H. F. Harris reported a case of chorio-epithelioma without uterine lesion, the patient having been a multiparous woman in the third month of pregnancy, in whom it became necessary to empty the uterus for the relief of pernicious vomiting. The woman failed, however, to recover, and post-mortem examination disclosed neoplasms in the brain, liver, kidney, lungs, and elsewhere, which on histological examination were found to be chorio-epitheliomata. The uterus was free from disease.

A Long Hospital Service.—Dr. John Cameron, who lately resigned, on account of advanced age, his position of physician to the Royal Southern Hospital, Liverpool, had been actively connected with the institution for fifty-two years.

The University of Edinburgh.—Dr. John Wyllie has been appointed to the chair of practice of physic in the University of Edinburgh, rendered vacant by the death of Sir Thomas Grainger Stewart. Dr. Wyllie is fifty-six years of age, and has been a member of the medical profession for thirty-five years.

Smallpox in Hudson River Towns.—Several cases of smallpox have recently been discovered in North Tarrytown and other places in that vicinity. The houses where the disease exists have been quarantined, and all the children in the school at North Tarrytown have been revaccinated.

Havana Temporarily Free from Yellow Fever.—A report to the surgeon-general of the army from Major W. C. Gorgas, chief sanitary officer of Havana, states that there were no deaths from yellow fever in that city during April. This was the first month without a death from the disease since May, 1899, and the only one during the last ten years, with two exceptions, February and May, 1899. The total number of deaths during the month was four hundred and eighty-two.

Philadelphia County Medical Society.—At a stated meeting held May 23d, Dr. L. J. Hammond exhibited a new growth of undetermined nature removed from the abdominal wall of a woman. Dr. H. W. Cattell made a demonstration of lantern slides prepared from fresh specimens, with an exhibition of some pathological specimens preserved by Kayserling's method. Dr. J. P. Crozer Griffith read a paper entitled "Percentage and Laboratory Feeding of Infants in Health and Disease," in which he pointed out by means of illustrative cases the great advantage of methods of scientific precision in the artificial nourishment of infants. Dr. Lewis S. Somers presented a communication entitled "The Use of Adrenal Extract in Hay Fever," reporting the results obtained in some twenty cases. Although the drug exhibited marked local effects, little benefit was observed from its administration by the stomach.

The International Congress of the Medical Press will meet in Paris on July 26th, 27th, and 28th. The two chief subjects proposed for discussion are: (1) The advisability of founding an international association of the medical press and the conditions on which such an association should exist; and (2) the application of the principle of the protection of literary property to medical literature. Other questions which have been suggested for discussion are: the unification of medical technical terms; the extension to members of the medical press of certain privileges accorded to members of the political press; a better understanding as to what constitutes a legitimate quotation; the principle which should govern exchanges of papers; the representation of medical papers in foreign countries; and the part of the medical press in the organization and preparation of medical congresses. The committee on organization consists of: President, Professor Cornil; vice-presidents, Drs. Lucas-Championnière and Laborde; treasurer, Dr. Cézilly; and general secretary, Dr. R. Blondel, 8 Rue Castellane. All publishers, proprietors, editors, and members of the staffs of medical journals are eligible for membership in the congress upon the payment of a fee of 25 francs ($5). The families of members and medical men and medical students may also attend as spectators on payment of an entrance fee of 10 francs ($2). They may participate in the fêtes and receptions, but cannot take part in the discussions of the congress, nor can they vote on any question before the meeting.

Dr. John B. Walker has been appointed visiting surgeon to Bellevue Hospital, second division, vice Dr. F. H. Markoe resigned.

New York State Hospital for the Care of Crippled and Deformed Children.—In an editorial note on "Medical Legislation in New York State" in the issue of May 26th, it was inadvertently stated that the bill calling for the establishment of the above-named institution failed to pass. The bill not only passed but was signed by the governor, as was noted in these columns at the time.

Yellow Fever among American Troops.—Five cases of yellow fever have broken out at Santa Clara among men of the Second Cavalry who are married to Cuban women and who live out of the barracks. There are only two cases in the province of Havana, and there is not one in the city.

How to Free a Town from Mosquitos.—At a meeting of the Società Medico-Fisica Universitaria of Sassari, on March 23d, Dr. C. Fermi gave an account of certain experiments made in Sassari, in conjunction with Dr. Lumbau and Dr. Cossu-Rocca, with the object of freeing the town from mosquitos. He was able to discover all their breeding-places in different parts of the city, in drains, cisterns, puddles, etc. The method adopted was the destruction of the larvæ by means of petroleum placed in the breeding-grounds twice a month. The mosquitos were destroyed in shops by means of chlorine, and in houses by means of other culicides, such as a mixture of pyrethrum, chrysanthemum flowers, valerian, and calamus aromaticus, or the "zanjoline" of Celli and Casagrandi. The results obtained were so satisfactory that Dr. Fermi concludes from them that it is always possible to free a town from mosquitos unless the conditions are exceptionally unfavorable—as, if it be situated in the midst of a swamp. He estimates the expense of freeing a town of fifty thousand inhabitants at 1,000 to 1,500 lire ($200 to $300) a year. This includes the wages of the staff required to carry out the measures prescribed.—*British Medical Journal*, May 12, 1900.

A Martial Medical Man.—A troop of Westchester County cavalry has been organized in Mount Vernon, N. Y., and Dr. Edward F. Brush of that city has been elected captain. Dr. Brush, who is a graduate of Bellevue in 1875, was formerly mayor of Mount Vernon.

The Plague is reported again in Brazil, several cases having been discovered during the past week in Rio de Janeiro. A case has occurred at Durban in the person of an East Indian employed in the army transport service.—The first death of a white man at Manila from bubonic plague occurred on May 21st. The victim was a government teamster. Seven natives have died since the outbreak of the plague at Quiapo Market.—In San Francisco the house-to-house inspection of Chinatown was continued by the inspectors of the board of health during the first part of the week, but no case of bubonic plague was discovered. The United States circuit court has issued an order restraining the health officials from inoculating the Chinese. The Colorado State board of health has established a quarantine against California.—In Sydney, N. S. W., there have been two hundred and forty-seven cases of plague since the beginning of the epidemic, eighty-nine of which have resulted fatally.—The disease has appeared again in Osaka, Japan.

Navy Department, Bureau of Medicine of Surgery, Washington, D. C., May 12, 1900.—Changes in the medical corps of the United States navy for the week ending May 26, 1900. May 21st.—Medical Director T. C. Walton detached from duty at the naval laboratory, Brooklyn, N. Y., and from other duty May 20th, and ordered home to wait orders and retirement May 31st, at sixty-two years of age. Passed Assistant Surgeon W. C. Braisted, orders to the *Mayflower* revoked; when the *Detroit* is placed out of commission detached and ordered home and directed to hold himself in readiness for orders to sea. Passed Assistant Surgeon G. T. Smith detached from the naval laboratory and department of instruction, Brooklyn, N. Y., June 14th, and ordered to the *Mayflower*, June 15th. May 22d.—Passed Assistant Surgeon G. D. Costigan detached from the Boston navy yard May 29th, and ordered to temporary duty on the *Pensacola*, and then to the Asiatic station via the *Gaelic*. Assistant Surgeon E. Davis detached from the naval hospital, Brooklyn, N. Y., May 29th, and ordered to temporary duty on the *Pensacola*, and then to the Asiatic station via the *Gaelic*. Assistant Surgeon J. T. Kennedy detached from the *Independence* June 4th, and ordered to the Asiatic station via the *Gaelic*. May 24th.—Assistant Surgeon T. M. Lippett detached from the *Oregon* and ordered to the *Newark*. May 21st.—Pharmacist S. W. Douglas detached from the *Wabash* and ordered to the Key West naval station for such duty as may be assigned as relief of Pharmacist I. N. Hurd. Pharmacist I. N. Hurd, upon reporting of relief, detached from the Key West naval station and ordered to the *Wabash*.

Obituary Notes.—Dr. J. S. R. Hazzard, of Springfield, Ohio, died suddenly on May 26th, at the age of seventy-four years. He was one of the foremost men in the State for years, and a raiser of fine stock. Delaware was his native State. He was a graduate of the medical department of the Western Reserve University.

Dr. John MacDonald, a surgeon in the employ of the American Line, died at Philadelphia on May 21st from pneumonia. He was born in India of Scotch parents in 1835, and studied medicine in London. For the past eighteen years he had been a steamship surgeon, and for four years was on the *Waesland*, on which vessel he died.

Dr. John L. Leprohon, of Montreal, died in that city on May 23d. He was a veteran of the Civil War and a founder of Hancock Post, G.A.R. He was a graduate in medicine of McGill University in 1843.

Dr. Horace B. Scott, United States navy, retired, died at Wallingford, Conn., May 29th, aged forty-three years. He was graduated at Trinity College in 1878, and later from the Jefferson Medical School. For several years he was a surgeon in the United States navy until his health failed, when he was retired.

Obituary.

FESSENDEN NOTT OTIS, M.D., NEW YORK.

Dr. Fessenden N. Otis died on Thursday, May 24th, in New Orleans, at the age of seventy-five years. He was born in Ballston Spa, N. Y., on March 6, 1825, and was graduated in arts from Union College. His medical degree was conferred by the New York Medical College in 1852, and in 1876 he received the honorary M.D. from the College of Physicians and Surgeons in this city. After serving a year at Blackwell's Island Hospital he passed some years as surgeon on vessels of the United States and Pacific Mail steamship companies, and was later superintending surgeon on shore of the Pacific Mail Company. In 1862 he was appointed a police surgeon, and was president of the medical board of the police department for several years. In 1862 he was appointed lecturer on diseases of the genito-urinary organs at the College of Physicians and Surgeons, and clinical professor in the same branch in 1871. He was also connected at various times with many dispensaries and hospitals in New York City.

Early in his medical career Dr. Otis turned his attention to diseases of the genito-urinary system, and his labors and teachings contributed much to the advancement of this specialty. His views regarding the normal calibre of the male urethra were thought extravagant at the time they were first propounded, and he was obliged to defend them stoutly in many rather heated discussions before medical societies and in the medical press. He was the inventor of many urethral instruments, especially dilating instruments, and was the author of many papers and works on genito-urinary diseases and syphilis. He also wrote several works on the tropics and the Panama Railroad, and before graduating in medicine published a book of instruction in drawing.

Ten years ago Dr. Otis resigned his medical positions and retired from practice, travelling for a long time in Japan and the Far East. He never lost his interest in medicine, however, and used frequently, while in New Orleans, to attend the clinical lectures at the Charity Hospital in that city.

Progress of Medical Science.

New York Medical Journal, May 26, 1900.

Report of a Case of Hæmaturia due to Renal Carcinoma; with Endovesical Photographs.—F. Beirhoff reports the case of a woman, aged fifty years, who had passed blood in the urine at intervals for over a year. Cystoscopy showed no changes in the vesical mucosa. The right ureteral orifice was occluded by a blood clot which protruded for about 1 cm. into the bladder. The left ureter was normal, and was seen to discharge clear urine actively. The lower left portion of the bladder was seen to be occupied by a large blood clot, which prevented proper manipulation for ureter catheterism before another irrigation to discharge the clot could be made. In view of the fact that the patient had a second time become comatose, and that catheterization of the ureters was not an absolute necessity here, this procedure was omitted, and a diagnosis of right unilateral hæmaturia of renal origin, probably due to renal tumor, was made. The patient was, in view of her extremely critical condition, at once replaced in bed, and a course of active stimulation continued. Later, nephrectomy was performed by Professor Gebhard, the right kidney and as much of the ureter as could be reached being removed. The kidney was found to be carcinomatous. The subsequent history of the case was uneventful, the urine being for two days slightly tinged with blood, due to the discharge of the vesical and ureteral clots, after which it remained free.

On the Dietetics of the Convalescent Stage of Fevers.—A. Rupp believes that density of food is one of the chief conditions that determine its digestibility. Therefore weak stomachs and lazy intestines should not be burdened with foods that are impervious to the juices of the digestive canal. To quote Hutchinson: "The intestines demand a certain amount of insoluble residue"—and they get it—"to act as ballast and serve as a stimulus to peristalsis." All this does not militate against allowing convalescents puddings and gelatins and creams. The absorption and digestibility of these luxuries can be favored by sipping water, plain or carbonated, as they are eaten. Sometimes, from nervous causes or from the lack of having something to do, the stomach will give rise to insomnia, or to distress and uneasiness and even nausea. Such cases must be studied individually and treated accordingly. A cup of milk, diluted or undiluted, with or without lime-water, or a crust of bread, and even cold water sipped, may give relief.

A Study of the Application of the Galvano-Cautery in the Nose.—B. Douglass believes that the cautery is a destructive element even more powerful than the knife; that it destroys physiological tissue as completely as if it were removed from the body; that its effects extend, unlike those of the knife, to a region beyond its limit of application; that it is subject to all the dangers of surgical accident which come from using the knife, with the single exception of hemorrhage; and that, besides the ordinary surgical dangers, it has special dangers of its own—that is, it may furnish a nutrient pabulum for bacterial growths. Used in the hands of a novice it is capable of producing a subsequent atrophic condition worse than the original disease. Its present method of use by linear cauterization is, to say the least, theoretically incorrect, but in special and selected cases, used by a proper method and in the hands of a careful operator, it will give better results than cutting methods.

The General Characteristics of Ray Fungi and their Relation to Certain Bacteria.—L. Hektoen reviews the literature on this question, stating that Olsen regards most bacteria as adaptation forms and not as true independent species. They are in reality imperfect and imperfectly known fungi. The ray fungi are genuine mycelial fungi which pass by various stages into bacilli, and the tuberculomyces (the name, according to the new view, of the bacillus tuberculosis) is a ray fungus or streptothrix because it has branches. Allusion is also made to the branching of diphtheria, glanders, and other bacilli. An extensive bibliography is appended.

Treatment of Anal Chancroids.—The plan commended by M. A. H. Thelberg consists of the following steps: general anæsthesia, dilatation of the sphincter, cauterization of the chancroid with the Paquelin cautery, rubbing orthoform into the wound, and the insertion into the bowel of a good-sized rubber drainage tube wound about with iodoform gauze and dusted with orthoform. The usual dressing with T-bandage is then applied. The bowels are controlled for three days, then moved with magnesia, an enema of olive oil and castor oil in equal parts being given at the same time. A cleansing enema follows the catharsis, and a ten-per-cent. iodoform suppository is introduced. Results have been excellent in eleven cases.

Physical Training in School and Home.—By H. S. Pettit.

The Instruction of the Hospital Corps of the United States Army.—By W. H. Wilson.

A Summer Plaster-of-Paris Jacket for Pott's Disease.—By R. T. Taylor and S. H. McKim.

Septicæmia among Young Chickens.—By L. F. Rettger.

Journal of American Medical Association, May 26, 1900.

Medicine as a Business Proposition.—G. Frank Lydston discusses the business side of medical practice and shows some of the reasons why the average medical man is not as prosperous financially as he ought to be. Among other drawbacks, he devotes much space to the "inconsistencies and absurdities of ethics," concerning which he says: "There was once a time when it appeared a goodly thing for the chosen few to get together, like the 'three tailors of Tooley Street,' and, after establishing to their own satisfaction the fact that they were indeed 'the people,' formulate rules for the guidance of the many. These rules were called 'ethics.' And the profession has been wrestling with its ethics ever since, trying to determine what it was all about, anyhow. The ethical garment of half a century ago no longer fits—it is frayed and fringed and baggy at the knees; full many a patch has been sewed on it, in individual attempts to make it fit from year to year, until it is now, like the Irishman's hat, respectable by age and sentimental association only. And the public, the ever practical and heartless public, has also wondered what 'twas all about, and exhibits little sympathy for a profession which, while drivelling of ethics, has 'strained at gnats and swallowed camels.'" He says that the present system of ethics is not only hypocritical, but somewhat confusing. "The young man on the threshold of medicine doesn't know 'where he is at.' He is confronted by the unwritten law that only celebrated men and quacks may advertise. Small fry, who haven't the ear of the newspapers nor a chance for a college position, are tacitly ordered to keep their hands off. And the young fellow watches the career of the big man, who hides every other man's light under his own bushel, and marvels much." Other obstacles in the way of success of any but the favored few are the hospital and dispensary evils and the superabundance of medical colleges.

Experiments and Observations in Scarlet Fever. W. K. Jaques discusses the investigations which have been made in Chicago regarding the supposed germ of scarlet fever, and concludes that the "crescent" of Wynkoop and the "diplococcus" of Class are merely different forms of the same germ. He thinks the symptoms in the disease are caused by the multiplication of the germs themselves and their irritating presence, and not, as in diphtheria, by any toxins they may produce. He says in this respect the scarlet-fever germ resembles the typhoid bacillus. He purposes making experiments in the production of artificial immunity after the following method whenever an opportunity presents itself: "Raise a small bleb by means of a fly-blister; with a hypodermic needle inoculate the serum without breaking the blister, if possible. If the patient is susceptible, the germs ought to multiply in this serum, and before passing into the blood they would have to get through the barrier of inflamed capillaries filled with leucocytes. In this manner their entrance would be slow and the blood could gradually take up the products of germ multiplication in the serum, while the cells would be stimulated to the production of a defensive antigermin."

Carcinoma in Early Life.—Walter L. Bierring reports eight cases of cancer occurring in patients aged respectively twenty-three, twenty-six, twenty-seven, twenty-eight, thirty, thirty-two, thirty-four, and thirty-five years. He says the disease in early life is becoming more frequent, though whether it keeps pace with the general increase in carcinoma he thinks it will be difficult to determine. He reviews the several etiological theories of the cause of malignant new growths, but brings forward nothing of importance which might contribute to a solution of the problem.

Chronic Constipation a Symptom Resulting from a Disordered State of the Sympathetic Nervous System; its Cause and Cure.—By Charles E. Stewart.

Report of a Unique Case of Appendicitis, with Some Remarks on Treatment. By James T. Jelks.

Pathology of Criminal Abortion.—By Maximilian Herzog.

Complete Occlusion of the Bowel.—By Dwight E. Cone.

Distilled Water as Food.—By Ephraim Cutter.

Quinine Amblyopia. By M. Caplan.

Philadelphia Medical Journal, May 26, 1900.

Syphilis.—S. H. Friend treats of the special pathology and advocates reclining rest-treatment in the constitutional stage. He concludes: (1) That without regard to the system, organ, or tissues affected, and irrespective of the period of syphilitic infection, all syphilitic lesions begin in the arteries. The truth of this special pathology is demonstrated by a study of the symptomatology of syphilis. There are few symptoms of the disease which cannot be explained by (*a*) an acute change in the arterial wall caused by the infection, (*b*) by a chronic change in the arterial wall or a destruction of the artery, a sequel of the syphilitic infection, (*c*) by a relapse of the syphilitic infection causing changes in the arterial walls and destruction of the artery. A study of the pathological phenomena of the disease shows that almost every phase of those phenomena, including the formation of connective tissue, gumma, and the virulent infectiousness of the blood, is explained by the disease in the walls of the arteries. (2) That (*a*) the special pathology of syphilis is in a disease of the arterial walls; (*b*) that this disease of the arterial walls bears the same relation to syphilis as does the disease of Peyer's glands of the intestine to typhoid fever; the disease of the skin to smallpox; the formation of a false membrane to diphtheria, etc. The foregoing special pathology demands that reclining rest be made a routine treatment during the constitutional stage.

Clinical Notes on a Case of Paranoia.—A. W. Ferris relates an interesting history of a medical man who, having strong neurotic heredity and history of eccentric childhood, after a life of early dissipation became extravagant, acquired exalted and egotistic religious delusions, and claimed to be "the second coming of Christ," carrying out his ideas by producing voluminous "Scriptures," seeking followers, etc. He finally had systematized delusions of persecution, with occasional outcrops of hypochondriasis, and a possible capacity for homicide.

Rickets.—J. L. Morse gives, with pictures, an account of the skeletal changes: rosary thorax, enlargement of the epiphyses, and deformities of the long bones, bow-legs, knock-knees; weakness of the spine, pot-belly, feebleness of leg-muscles, increased nervous irritability; changes in the skin, glandular system, respiratory tract, circulatory system, enlargement of the spleen, etc. He finds the causes to be dietetic and hygienic. The prognosis is good as to life, and treatment must be along the lines of dietetics and hygiene.

Friedrich's Disease, with the Report of a Fatal Case.—F. S. Pearce and J. M. Swan relate the history of a girl, aged nineteen years, first seen in 1895, when knee jerk was still present. Six months later, in 1896, it had entirely disappeared, and nystagmus, at first absent, appeared the following year. At no time were there pains in the joints or muscles, and the athetoid movements first noted in the hands subsequently appeared in the neck. There was no post-mortem obtainable.

The Hospitals for the Insane and Study of Mental Diseases.—By Stewart Paton.

Mütter Lectures of the College of Physicians of Philadelphia.—By J. B. Roberts.

Intestinal Indigestion and its Consequences.—By W. H. Porter.

Boston Medical and Surgical Journal, May 24, 1900.

On Ischæmic Paralysis and Contracture of Muscles.—Augustus Charles Bernays says that the only operation or therapeutic measure that suggests itself to his mind as promising any real benefit in this condition is the excision of a transverse section of the radius and ulna. The piece to be resected should be from 2 to 4 cm. in length, and both long bones would be shortened just that much. The contracted muscles and their tendons could then possibly exert a greater play upon the wrist and fingers. It is clear that the muscular tissue in the forearm would not be increased by this operation, as, indeed, it cannot be by any possible surgical proceeding. The effect of the operation would be to give such remnants of contractile substance as may be in existence a chance to exercise their power to a greater advantage. The functions of the fingers would thus be more or less improved, and the usefulness of the crippled hand increased.

The Ideal Rations for an Army in the Tropics.—By Edward L. Munson.

Some Thoughts on Medical Education.—By Frederick C. Shattuck.

Medical News, May 26, 1900.

Cystitis Papillomatosa.—Frederic Bierhoff reports three cases of this affection, which occurs in women as a form of chronic cystitis, its symptoms being frequency of urination, accompanied by more or less pain and tenesmus, the urine passed being clear or turbid. Its seat is at the trigone, which it usually covers, and it may extend over into the urethra, from which at times it appears to start. Its villi or papillæ spring from an inflamed base, and are discrete. To diagnose the condition, the ureteral cystoscope is armed with a ureter-catheter and inserted into the bladder, so that the window lies directly over and close to the inflamed area; the catheter is then gently laid diagonally upon this surface, or is passed over the surface at an angle. It will at once sink into the mass of papillæ, or pass between them, and the individual papillæ will stand out distinctly as discrete, rosy-red tongues against the deeper color of the catheter.

Organotherapy in Tabes and Other Nervous Diseases.—Martin A. H. Thelberg reports two cases in which the administration of spermin had undoubted beneficial effect where other medication had failed. In the first case, after six injections, incontinence, bladder and rectal pains disappeared, and general tone, well-being, and cheer improved considerably. After twelve injections had been given, ptosis and oculo-motor symptoms were cured. In the second case, one of paralysis agitans, the frequent insomnia, which in this patient seemed to be caused by autointoxication from gastro-intestinal disturbances, is usually relieved by a single injection of 1 c.c. spermin given hypodermically. The stumbling gait is also gratefully affected.

Medicinal and Non-Medicinal Remedies, with Points on Hydrotherapy, Diet, and Massage in Certain Diseases Attended with High Temperature.—By Charles E. Page.

A New Method for Retroperitoneal Drainage of Pyosalpinx, with a Report of Five Cases.—By Leon F. Garrigues.

Inaugural Address.—By Edward D. Fisher.

British Medical Journal, May 12 and 19, 1900.

Remarks on Plague in the Lower Animals.—Frank G. Clemow considers the acquisition of the plague by monkeys under natural and artificial conditions; then, after eliminating mammals and bats, which have never been known to suffer, he takes up the important question of plague in rodents, especially rats, and their sources of infection—from grain, flesh of other animals, rags, insects—the mode of their infection, and the way they transfer it to man. Then the study of rats on shipboard and their infection under artificial conditions is taken up. Infection in mice, squirrels, guinea-pigs, porcupines, marmots, and rabbits is then studied. In conclusion, it may be asserted, the author says, that the following animals are liable to contract plague under natural conditions: monkeys, rats, mice, bandicoots, squirrels, and marmots. Of these, rats suffer far the most frequently, and are, of all animals, the most important agents in the spread of the disease. Mice are less susceptible, but appear, in some instances, to have suffered considerably, and may have been agents in spreading the infection. Monkeys, bandicoots, and squirrels have on rare occasions suffered from plague, but there is nothing to show that they have ever aided to any extent in transmitting the disease to man. Marmots undoubtedly spread a disease allied to plague in Transbaikalia, and possibly in Mongolia. The evidence in regard to cats, dogs, and jackals is far from conclusive, but there is no reason to believe that these animals play any great part in spreading plague. The same is true of pigs, sheep, and goats. Horses and cows do not appear to have ever contracted plague under natural conditions, and may be disregarded as active agents in spreading it. Birds are equally immune to the disease, and there is no evidence to show that either birds or reptiles or fishes have ever aided in multiplying and diffusing the infection. Insects, on the other hand, are probably agents of considerable importance in the spread of plague.

Small-Bore Rifle Bullet Wounds and the "Humanity" of the Present War.—C. T. Dent finds that the great majority of wounds in the present war are inflicted by rifle bullets. Septic wounds, shell and shrapnel wounds, wounds from small-bore arms, skin wounds, injuries of long bones, wounds of joints and of the spinal column are considered. In conclusion he says: "I dread lest the good surgical results be not ascribed fully enough to their proper cause. We know the fearful mortality brought about by overcrowding and by bad hygienic surroundings in the Crimean War, and, for that matter, in the Franco-German, Russo-Turkish, and other later wars. This campaign has already shown that these preventable disasters have been traced to their true source. Air, air, pure sunlight and air, have done more, much more, for our wounded in this war than seems generally to be acknowledged. I dread lest the Army Medical Department, commended and patted on the back as it has been and is, may relax its efforts to improve further. If so, a terrible awakening is in store for us when we next have to face the hideous horrors of war amid unfavorable surroundings. But if we look on our present experience just as an indication that we are working in the right direction, then at least the medical profession may feel that it is doing—not that it has done—its best to contribute to the humanity of war."

Injuries of the Bladder Occurring in the Course of Gynæcological Operations.—J. W. Cousins gives a case in which there was recovery after sloughing of the bladder walls and free discharge of urine through the abdominal wound. In rupture or wound of the bladder, he finds that success of immediate treatment depends (1) upon the complete disinfection of the seat of injury, and (2) upon the accuracy with which the stitches are inserted. It is sometimes an important question to decide whether the abdomen can be safely closed without any provision for drainage. This must be determined by the severity of the injury, the state of the urine, and the condition of the peritoneal cavity. Surely, if other organs can be injured and the abdominal wound closed, there can be no reason why bladder injuries should not admit of the same treatment. In his case, however, it appears highly probable that the introduction of a glass drainage tube was a fortunate precaution, and materially aided in saving the life of the patient by establishing a channel for the direct escape of the urine. On the other hand, if the abdomen had been completely closed at the time of the operation, the rupture would have been followed by the accumulation of septic fluid within the pelvis, which would have very probably terminated in fatal septicæmia.

Herpes Progenitalis from a Diagnostic Point of View.—Arthur Cooper says it must be remembered that herpes is one of the most sensitive of lesions, and that nothing resents ill treatment more promptly or more actively. One of the commonest causes for irregularity is the course of herpes in balanoposthitis. A polycyclic outline of the edge of the ulcer can often be made out with the aid of a lens. A case is cited in which herpes was present at the time of infection with syphilis; a condition in which the latter may readily be overlooked. The following points may be found useful to keep in mind in any doubtful case in which sores are present on or near the genital organs: (1) The chances of irregular herpes should always be considered; (2) the lesion or lesions, and also the inguinal glands, should be closely and repeatedly examined until the diagnosis becomes clear; in the mean time (3) do not apply irritants, and (4) do not give mercury.

An Account of Some Researches into the Nature and Action of Snake Venom.—R. H. Elliot first considers the source of immunity when cobra venom is taken by the mouth, and quotes Professor Fraser's paper, "Filling in Some of the Gaps Suggested." A series of experiments are represented by tables. In a further communication the protective properties of serums and the nature of certain immunities and protections will be taken up.

Case of Suppuration in the Mastoid with Optic Neuritis on the Same Side: Operation: Recovery.—By J. Preston Maxwell.

Abstract of the Report of a Committee on the Medico-Legal Relations of the X-Rays.—By J. William White.

Case of Septic Thrombo-Phlebitis Treated by Injections of Streptococcus Antitoxin.—By R. B. Mahon.

Accidents and Injuries Caused by Lightning.—By Oscar Dunscombe-Honiball.

Removal of a Glass Penholder from the Abdomen.—By T. T. S. Harrison.

Œsophageal Feeding in Bulbar Paralysis.—By H. S. Renshaw.

Haffkine Antiplague Vaccine.—By S. Mallannah.

Notes on Ocular Leprosy.—By Arthur Neve.

Milk Poisoning in Malta.—By T. Zammit.

Beri-beri.—By Francis Clark.

The Lancet, May 12, 1900.

A Case of Ruptured Liver; Successful Operation on a Pulseless Patient.—T. Carwardine reports the case of a man aged twenty-five years, upon whom a heavy case of glass weighing half a ton had fallen, crushing him against a wall. He was operated on about three hours later. Multiple intravenous injection of saline fluid were made. The abdomen was opened above the umbilicus. It was full of blood. There was no free gas or odor; the spleen was intact, but the liver was felt to be lacerated. The right rectus was therefore cut across—it was pale from anæmia and did not bleed—and a large quantity of clot was turned out of the abdominal cavity. The whole hand could now be passed into a laceration of the liver which extended right across the under surface from about the position of the gall-bladder—which was not to be seen—to the posterior part, dividing the liver almost in twain and leaving the upper part of the capsule floating freely on the blood-clot. The remainder of the right lobe appeared to be badly smashed and could not be defined owing to its crushed condition. The clots and fragments were removed. Then, as suturing was quite out of the question, three long pieces of iodoform gauze were packed in the laceration and a fourth piece below, comprising three and three-quarter yards of gauze several folds thick. In addition a sponge-cloth was packed below and to the left of the liver. The abdominal wound was approximated and nearly two pints of saline fluid were poured into the peritoneal cavity. The duration of the operation was very short and the patient had severe dyspnœa afterward and was restless, thirsty, and sick. He remained pulseless for thirty hours, after which the pulse became perceptible and gradually improved, and the dressings were found to be bile-stained. On the following morning the patient was much better and deliberately sat up and asked for the paper to read the war news. Subsequently the discharge was copious, bile-stained, and smelt strongly ammoniacal, like urine. The gauze was removed at the end of a week and a temporary drain was established in the right loin. The patient went to the convalescent home two months after the injury and returned looking fat and strong with the wound securely healed. The author is able to find recorded only three previous successful cases where a primary operation has been done in cases in which the patient was severely injured and collapse followed quickly.

A Study of the Heart Wall in Diphtheria, Rheumatic Fever, and Chorea.—F. J. Poynton states that the poison of diphtheria appears to destroy the muscle fibres far more than does that of rheumatism. This is a warning not to raise dilatation of the heart—a clinical entity so definite and well recognized—into the position of a primary disease, for if this be done it is natural enough to consider that the greater the dilatation the greater the danger. Yet the truth of this, even for any one disease, is only approximate, for all diseases vary in their virulence and individual effects, and those that attack the cardiac wall may damage the muscle fibre at one time far more than at another. A poison acting upon the myocardium with great virulence will, it is clear, cause such an impairment of the heart's force that death must occur before there is marked dilatation, an occurrence not infrequent in diphtheria. It is probable that in rheumatism also this question of greater or less virulence is an important one. Though the extent of the cardiac dilatation must necessarily be a sign of very great significance, it is in these myocardial affections that the paramount importance of the symptoms becomes apparent; for these symptoms are an index of the muscle failure. In this principle probably lies the explanation of some of those more obscure cases of cardiac rheumatism—cases in which, without evidence of valvular or pericardial disease, there remain unaccountable breathlessness, præcordial pain, and other indications of cardiac inadequacy. Finally, from the theoretical standpoint the changes in the cardiac wall and in acute rheumatism are of interest because their nature and complexity are decided evidence in favor of rheumatic fever being due to a microbic infection.

Mastoid Disease, Acute Otitis Media, and Pyæmia Occurring in an Epileptic as a Result of Injury.—R. A. Wilson's patient was a man aged thirty-seven years, who was beaten about the head with an earthenware chamber utensil in the hands of another patient in a frenzy of acute maniacal delirium. For several years after, the patient complained of pain over the right mastoid process, and eventually a discharge made its appearance from that ear. Symptoms gradually ensued as indicated in the title, and death finally resulted. Several circumstances in the case strike one as being peculiar: (1) The fact that the disease commenced in the mastoid portion and spread to the middle ear, instead of vice versâ; (2) the long period of latency during which the only symptoms were deep-seated pain and slight deafness; (3) the rapid progress to a fatal termination when once the process had spread to the tympanum; and (4) the limitation of the disease to the mastoid and tympanic cavity, and the non-implication of the membranes and lateral sinus, although the ultimate cause of death was pyæmia.

Intestinal Obstruction Due to Gall Stones.—A woman aged eighty years, seen by E. W. Palin, was suddenly seized with symptoms of acute intestinal obstruction which persisted in spite of treatment until the sixth day, when complete relief followed the passage of a gall stone measuring a little over one inch in diameter by three-quarters of an inch in thickness, nearly round, and well saturated with fecal material. Several smaller stones were passed but unfortunately they were lost. There had never at any time in the patient's life been any symptoms pointing definitely to any gall-bladder trouble, but she passed through a very similar attack of obstruction some five or six years ago. Though the obstruction was complete for at least six days, her condition never became serious.

Ptosis of the Liver and the Floating Lobe.—Under the foregoing title, F. Treves describes respectively the sinking down of the liver in the abdominal cavity and the projection downward of a portion of the right lobe in the form of a large tongue-like appendage. The condition was first described by Cantani in 1865. Treves describes the mode of prolapse, symptoms, detailing in full methods of abdominal examination, etc. He finds the floating lobe to be commonly associated with a distended gall-bladder containing gall stones. The operative treatment of ptosis consists in fixing the organ in place by various schemes of suturing. For the floating lobe, we may either excise, suture the lobe to the anterior abdominal wall, or treat the associated distention of the gall bladder by cholecystotomy.

Remarks on the Diagnosis and Prognosis in One Hundred Cases of Double Optic Neuritis with Headache.—By R. T. Williamson and F. Roberts.

Summer Diarrhœa with Special Reference to Causation and Prevention.—The first Milroy lecture. By F. J. Waldo.

Note on Simultaneous Excision of Both Mammæ with Axillary Glands for Cancer.—By H. Snow.

A Mishap with Carbolic Acid.—By H. L. Johnston.

Berliner klinische Wochenschrift, May 7, 1900.

The Pathology of Chronic Fibrinous Bronchitis.—H. Strauss narrates the history of a man aged fifty-eight years, whose sputa presented numerous tube-like bodies which under the microscope were found to be made up largely of the so-called Charcot-Leyden crystals. The sputa were brought up with a cough unlike that of bronchial asthma, inasmuch as it lacked the characteristic inspiratory whistling sound, though in the intervals between the coughing spells the man suffered from dyspnœa. The masses containing the crystals were found to be of a fibrinous nature.

The Treatment of Infected Wounds with Hydrogen Peroxide.—Von Bruns believes that the effect of this agent is partly chemical and partly physical. The nascent oxygen has a stimulating effect on the tissues, and the foamy condition produced tends to loosen up all particles of necrotic material. The actual germicidal effect of the remedy is a very weak one.

Resection of the Rectum.—A case of this nature is described by W. Levy, who discusses the general surgical technique under the headings of skin incision and splitting of the sacrum, isolation of the tumor for the removal of which the operation is planned, resection of the bowel, and subsequent suturing and after-treatment.

Observations on the Demonstration by Means of the Roentgen Rays of the Architectural Structure of Bone.—By J. Wolff.

Examination of the Acid Secretion of the Stomach.—By S. Talma.

Il Policlinico, May 1, 1900.

A Case of Diabetes Insipidus in an Infant of Two Months.—Olimpio Cozzolino reports a case in which the amount of urine passed daily was over a litre. There was nothing in the family history to account for the condition. Treatment consisted of an equal mixture of tincture of valerian and ethereal tincture of the chloride of iron, gtt. v.-x. being given three times a day, and a spoonful of coffee in Scott's Emulsion in the morning. The child recovered. Cases of this disease are extremely rare in young children. Heredity is usually a chief etiological factor, and nervous taints, such as hysteria and peripheric neuritis, traumatism, falls, shocks, acute and chronic infective diseases, and gastro-intestinal catarrh, have all been considered to exercise an influence in the production of diabetes insipidus in children. The author agrees with Heidenheim, that in certain cases there is merely exaggerated but still normal activity of the emunctories of water, very little solid matters being excreted.

New Method of Treatment by the Intravenous Injection of Metallic Iodine.—L. M. Spolverini, giving the results of his experimentation upon animals, says that injections of the strong solution of iodine proved entirely innocuous, even 12 c.c. producing no symptoms of poisoning, either immediate or remote, and no symptoms of irritation in the circulating blood. Animals subjected to this treatment all increased in weight. No thrombus was found in the blood-vessels, and blood taken from human veins and directly from an animal's heart showed no tendency to coagulate when mixed with the solutions used in the injections.

Auscultation of the First Heart Sound in Relation to the Tracings of Ventricular Pressure.—By Balderino Bocci and Adamo Moscucci.

Extra-Pulmonary Absorption of Gas.—By C. Bernabei and Dr. Liotta.

Malaria in Grosseto in 1899.—By B. Gosio.

Hydrocele.—Under infiltration-anæsthesia the upper portion of the sac is cut into and the testicle turned out, the tunica vaginalis stripped off and turned inside out. Stitches are passed to prevent the testicle from re-entering the sac. It is replaced within the scrotum, and the wound sutured.—WINKELMANN.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

MR. TREVES' ADDRESS ON HIS EXPERIENCE IN SOUTH AFRICA —VICTOR HORSLEY ON THE EFFECT OF ALCOHOL ON THE BRAIN—CONFERENCE AT MANCHESTER—LONDON UNIVERSITY —SIR BATTY TUKE, M.P.—PROFESSOR WYLLIE—DEATH OF DAVIES-COLLEY.

LONDON, May 11, 1900.

If you had visited the Medico-Chi. on Tuesday evening you would certainly have thought at first that you had strayed into the wrong meeting. The usually staid and dignified Royal Medical and Chirurgical Society—to give it the full official title—exhibited as many signs of animation as any of its more lively sisters. Instead of a sparsely scattered audience listening to an abstruse paper, there was a crowded room, every seat occupied and standing-room only to be had in a crush. There must have been some three hundred fellows present, and they all seemed cheerful and happy as if they were really enjoying themselves. They had turned out to greet the civil surgeons just home from the war, for it had been announced that these gentlemen would attend and speak. Naturally a full meeting was anticipated, but it was hardly supposed possible for such a number to put in an appearance, and the returned surgeons could not but be gratified at the friendly reception of their colleagues. Mr. Treves would no doubt be specially pleased that his own profession quite understood his recent utterance about the "plague of women" in South Africa. He really only put in forcible, if rather rough phrase, what Sir A. Milner had stated more diplomatically and what had been said in all directions by those who knew the facts. Of course some cried out as if they were hurt, and for a few days the female party was against Mr. Treves. But the tide seems to have turned, and I have heard ladies express delight that he had denounced the society seekers of excitement.

To return to the meeting. Mr. Treves brought no statistics. It is too soon for them. We shall get figures in plenty later on and also lessons in military surgery. Meantime it is interesting to listen to the impressions of one who was present and well qualified to form opinions. Many were curious to hear what Mr. Treves would say about abdominal wounds. He did not advocate interference; he pointed out the difficulties of carrying out abdominal sections under the circumstances of warfare. It is impossible for the surgeon to spend adequate time over one operation when many wounded men are waiting for his attention. Neither can the ordinary precautions and skilled nursing be at his disposal on the field or in the hospital after a battle. Then the modern rifle gives the wounded a better chance. The small bullet does not carry the clothing into the wound; hence this is mostly aseptic and soon heals, a fact frequently observed in this war as to wounds in all parts, while there have been most remarkable recoveries from those of the abdomen, some of which were related by Mr. Treves. The most dangerous of these are those which traverse the abdomen from side to side, but Mr. Treves has himself recorded some marvellous cases of the kind in which recovery took place though nothing was done. He mentioned the circumstances which should, in his opinion, deter from interference—such as the time after the wound, a long transport, retained bullet, wounds involving liver and right kidney, as they usually resulted in recovery, as did also those below the umbilicus. As to the mortality of abdominal wounds by the Mauser bullet he hazarded the guess that sixty per cent. of the wounded have recovered. This, as I just now intimated, is only a rough estimate or an impression. If it should eventually prove to be nearly correct it would show a great fall from the mortality met with in previous wars, and confirm the view of military surgeons generally that wounds from modern rifles are less dangerous than from older weapons. A great many other points were touched by Mr. Treves, who was accorded a vote of thanks for his interesting address.

At the next meeting Mr. Dent will give an account of his experience in the war, and Sir W. MacCormac also will probably speak.

Professor Horsley delivered the second Lees and Raper lecture at St. James' Hall on the 27th ult. This lectureship has been established as a memorial of the late Dr. F. R. Lees and Mr. J. H. Raper. The former of these was perhaps the most learned advocate of the temperance cause, a retiring scholar whose writings were everywhere respected; the latter was an eloquent and enthusiastic platform worker in the same cause. Mr. Horsley opened his lecture with a warning that the emotions excited by tragedies and poverty brought about by alcohol must not warp the judgment in considering the scientific aspects of the subject. He then proceeded to expound what is known as to the effects of alcohol on the brain. He explained and illustrated with lantern slides the structure and functions of the cerebrum and cerebellum, directing the attention of his audience particularly to the arrangement of the sensory and motor areas. The relation of the cerebrum to the cerebellum was then considered. The effect of small quantities of alcohol on the centres for voluntary movements and for co-ordination led to the necessity of explaining that the perceptive and associated centres work as a whole. A demonstration of the way in which the "reaction time" is measured was then given, and Kraepelin's researches were quoted as showing that after a small dose of alcohol it was slightly shortened at first, then it was very speedily lengthened, and continued so as long as the alcohol remained in the system. So far as to the simple reaction period, but when we come to the complex reaction (in which there is an association of ideas), there is no preliminary quickening but the slowing begins at once. Kraepelin had himself been deceived at first as to the complex reaction, for he thought he could add and subtract figures more quickly, but when he proceeded to measure on the recording drum the exact time he was astonished to find the reverse was the case; all his mental operations were really impeded from the first by even small or dietetic doses. Much the same deceptive feeling is produced by other drugs. Mr. Horsley proceeded to explain the effect on voluntary movements, and then stated the structural changes produced on nerve cells. These and other points were considered in the light of the most recent researches, and the lecturer concluded that the common notion that moderate doses, such as people take with meals, have no deleterious effect, cannot be maintained, and from a scientific standpoint the plain teaching is total abstinence.

The three direct representatives in the medical council attended the medical conference at Manchester and expounded their views. There were fifty delegates of medical associations at the meeting, and they represented about four thousand members. The conference extended over three days, and some pious resolutions were carried. I am afraid all three direct representatives have lost influence over the midwives bill, which was one of the subjects discussed. The outcry for an increase in the number of direct representatives in the council is useless. One or two more could do nothing, and no one expects a larger increase—scarcely any one hopes for that.

The London University, having safely effected its flitting to South Kensington, held its first presentation of degrees in its new home on Wednesday. The Prince of Wales was present on the occasion.

Sir J. Batty Tuke took his seat in the House of Commons on Tuesday as the new representative of the universities of St. Andrews and Edinburgh.

Dr. John Wyllie has been appointed successor to Sir Grainger Stewart in the chair of medicine of Edinburgh University.

Mr. Davies-Colley resigned his appointments at Guy's Hospital, where he had steadily worked for above thirty years, about Christmas last. He was in feeble health—in fact he knew himself that he was the subject of mortal disease, but he finished his work up to the Christmas vacation, and then went home, to return to the hospital no more. He died on the 6th inst. in his fifty-seventh year. He was a Cambridge graduate in arts and medicine, F.R.C.S., and had filled examinerships and other offices at his college and his university. But his life-work was at Guy's. He edited several volumes of the Reports, to which he contributed some papers as he did also to the medical journals and society transactions. When it became known that his illness would be fatal he received an address from a great number of Guy's men who had been his pupils, expressing their gratitude for his teaching and example and their regret that his health compelled him to retire. Few men at Guy's would be so much missed.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE INTERNATIONAL MEDICAL CONGRESS IN PARIS.

PARIS, May 18, 1900.

The Thirteenth International Medical Congress is to be held in Paris from the 2d to the 9th of August, 1900. The fact of its taking place during the exhibition will certainly tend to draw a large number of American medical men than would have been otherwise the case. It may be of interest to the reader to have a synopsis of what will happen during this congress, as well as sundry details as to the method of being inscribed, the advantages accruing therefrom, and the subjects chosen for discussion. A few remarks will be added on the hospitals to be visited and the arrangements made by the French government for furnishing information and for lodging visitors. The prices to be paid will also be hinted at.

The president of the congress is Dr. Lannelongue, well known for his works on infantile surgery, the use of craniectomy, and the treatment of chronic abscesses in Pott's disease. On calling at the headquarters of the congress, I saw Dr. Lannelongue as well as Dr. Chauffard, the general secretary of the congress, who gave me in great part the information which follows.

The first steps in the organization of the congress were taken long ago, and consisted in sending out circulars and invitations to a great number of physicians and surgeons, and also to different governments and scientific bodies. Five different classes were established under the following titles: biology, medical science, surgery, obstetrics and gynæcology; lastly, public medicine. Each class is divided into sections, of which there are in all twenty-four. It was, of course, a hard task to find the place to locate them in special halls in the space of a week. The general assemblies will be held in the grand amphitheatre of the Sorbonne; as to the sections, they will be held at the Faculty of Medicine, the Law Faculty, the School of Pharmacy, the College of France, the Sorbonne, the Pasteur Institute, the Assistance Publique amphitheatre, and the Val de Grâce, a military hospital. All these buildings are near each other, so that it will be easy for a member of the congress to go from one to the other. The ophthalmological section will attend the Hôtel Dieu; that of dermatology will, of course, hold its meetings at the St. Louis Hospital.

I shall now describe the method used for each member of the congress, how he is classified, and what paper he receives on writing for admission. This can be done either directly by writing to the general secretary, Dr. Chauffard, 21 Rue de l'École de Médecine, and enclosing a postal order for 25 francs, or else through a foreign committee, the president of which is Dr. Osler, of Baltimore, for America. Suppose an American physician to have written for admission. In a month he will receive a receipt for his 25 francs on stamped paper, a membership card, and a railway ticket to be used on arriving in France. On crossing the frontier this ticket is to be stamped by the railway officials, and the price of one single ticket paid. On leaving, this ticket, which must have been countersigned in Paris at the École de Médecine, serves as a free pass, but the same route must be followed without any stop-over. All this is indicated in a special circular printed in five languages. The applicant, moreover, receives the definite programme, the insignia to be worn, and invitations to the first and second general meetings. There is also sent a prospectus indicating a certain number of agencies, who will see to furnishing apartments or lodgings to the members of the congress. I notice on this prospectus that the "Agence Desroches" will receive the visitors at the station, conduct them to a hotel, and give them all the requisite information. The first day will be 20 francs, including room, lights, attendance, and first breakfast; the other days 10 francs; the last day 15 francs, including the ride to the station. One should notify the Agence, Rue du Faubourg Montmartre 21, of the day of one's arrival and send the first day's price, *i.e.*, 20 francs. The Agence des Voyages Pratiques, 9 Rue de Rome, undertakes the same thing for 6 fr. 50 c. up. There is also the Agence des Voyages Modernes, Rue de l'Échelle 1; the Agence Lubin, Boulevard Haussmann 36; the Société Française des Voyages Duchemin, 20 Rue de Grammont. One of these agencies should be written to at least a month in advance. For medical men travelling by themselves I must mention the fact that about eight hundred beds in the dormitories of the public schools will be put at their disposal. The price will be 5 fr. 50 c. for bed, attendance, and first breakfast. One should write to the office of the Medical Congress, 21 Rue de l'École de Médecine.

On arriving in Paris, the member should go as soon as possible to the École de Médecine, 21 Rue de l'École de Médecine, and show his card to the porter. The latter will direct him to a secretary speaking English, who will stamp his railway ticket, give him his personal card, write down his address, and give him the special invitations. There will be a night festival in the gardens of the Luxembourg, and official receptions by the President of the Republic and by the President of the Council. As souvenirs of the congress there will be the insignia, which are to be made by Vernon, a well-known engraver, and the volumes distributed gratis to the members of the congress.

On leaving Paris the visiting physician will be able to use his railway ticket without any extra charge. Of course luggage over-weight will undoubtedly be charged for.

During his sojourn in Paris the medical man will have a variety of hospitals to choose from, each one being in some way specialized. St. Louis will interest dermatologists on account of its wonderful museum; Necker and Beranjon have two genito-urinary services under the direction of Guyon and Bazy. At the Hôtel Dieu Dieulafoy is professor of clinical medicine. Potain is at the Charité. Ferrier, professor of surgery, has a service at La Pitié. Finally the physician should not fail to visit the newly constructed Boucicaut Hospital, where he will be able to see the latest type of hospital erected in France, and visit what is considered the best specimen of a maternity in this country.

LETTER FROM THE FALKLAND ISLANDS.

(From our Special Correspondent.)

The health of the colony of the Falkland Islands is most satisfactory. The death rate from preventable diseases has not exceeded that of former years, there being an entire immunity from contagious diseases, grippe, variola, diphtheria, typhus fever, etc. A few cases of scarlet fever simplex of an exceedingly mild form occurred recently, which has been stamped out. The climate is hostile to all diseases of a contagious or infectious nature. Tropical diseases could not exist for a single hour, the climate being too cold and bracing, and the strong westerly and southerly winds, with the amount of iodine in the air, would prove a sovereign prophylactic against their incursion.

The presence of tuberculosis, whether attacking the mesenteric glands, joints, or in the insidious form of phthisis, is met with, which is not to be wondered at considering the numbers of waifs and strays that elect to take up their abode in these islands. Notwithstanding this drawback, the climate and highly nitrogenized food successfully combat them, there being an entire absence of want or destitution of any sort. The humblest laborer receives at least 6 *s.* per day, and some of the above-mentioned diseases no doubt have been superinduced by living too highly, and over-indulgence in intoxicants. The large number of cases of drowning is not surprising considering the low temperature of the water, the ice zone being not far distant, and the sinuosity of the kelp, which entwines itself around the legs and arms of the swimmer, and with waving motion brings him beneath the surface.

The absence of specific disease is remarkable considering the number of blue-jackets and marines who for five months each year visit our shores. This fact speaks well for the medical officers in charge, or for the highly moral and respectable class of men in the navy. A few cases of tertiary or secondary syphilis have been under my treatment, but only one case of primary.

The usual diseases of childhood occur, such as urticaria, varicella, fevers, and convulsions, the latter the result of dentition or intestinal worms.

The Falkland Islands colony, when any other statistical test is applied, is phenomenally comfortable and thriving. But for the natural decay that comes with age, and a few deaths by accident, the Falklands might almost lay claim to being the islands of the immortals. The deaths number twenty-four in a population of some two thousand, but when fatal accidents to new-comers from drowning and shooting and other exceptional causes are taken into account, the rate is whittled down half-way to zero. The rate of infant mortality is little more than a fourth of the English average. It is impossible to find conditions more favorable to vigor of body and length of days. It would surprise many physicians at home to see how that dread malady phthisis is warded off, and I believe in many instances completely buffeted by the health-giving qualities of these islands. Let it not be thought that disease and pain are unknown. A chronic intractable rheumatism is apt to twinge the back in the form of lumbago, or the knee or elbow joints; but the bane of the islands is chronic indigestion. Pyrosis (or water-brash) is continually reminding the inhabitants that they are mortal, and yet the fault is their own; the source of mischief lies in the enormous quantities of coffee and tea consumed in the strongest forms, the indigestible character of the bread they eat, and the ignorance of most of the women of the rudimentary laws of cooking. Tested by exports and in comparison with the number of inhabitants, the prosperity of the Falkland Islands is unexcelled by any of Her Majesty's possessions, and represents the sum of £65 per capita in produce unaided by manufactures. The well-being of the inhabitant is further evidenced by the fact that the sum per head of the population deposited in the Government Savings Bank averaged £22. In the balance of loss and gain, the islanders with a small portion of sunshine and warmth, but without phthisis or crime, and £22 per head in bank, are certainly happy among colonists.

Ethyl Chloride is sprayed upon the inside of a thick Esmarch inhaler and administered. As soon as the patient is insensible to a pin's stick ether is substituted. The advantages are rapid anæsthetization, less disagreeable after-effects, and simplicity.—J. P. Tuttle.

Clinical Department.

PLACENTA PRÆVIA AND TWINS.

By ANTHONY BASSLER, M.D.,

NEW YORK.

THE following case occurred in the practice of Dr. Albert T. Swan, and by virtue of its rarity and successful issue is worthy of recording:

Mrs. C——, aged thirty-five years, mother of eight children, *i.e.*, four normal births; a placenta prævia partialis five years ago, delivered by Dr. H. J. Garrigues; a breech, uncomplicated, two years ago, and the present instance.

The mother could not give a definite account of the beginning of the last pregnancy because at the third month she had a flow lasting several days which she supposed to be menstruation. The history to the present period is uninteresting. Two weeks before delivery, while doing housework she had a slight hemorrhage from the vulva lasting about five hours; confident that she would have no return of the hemorrhage, the household duties were resumed. On February 25th she was awakened in the morning by profuse hemorrhage. Within a short time the diagnosis of placenta prævia was made, and inasmuch as the uterus reached to within three inches of the ensiform cartilage full term was supposed to have been reached, and the vagina was tamponed to control the hemorrhage and excite labor pains. On the following day the tamponade was removed and a fresh packing done. No more bleeding had taken place. This was done for two days longer; as no pains were set up, and infection of the placental site was feared, and as no safety to the mother could exist so long as pregnancy continued, forcible delivery was advised.

On examination under chloroform the uterus was found to be quite globular in shape. High on the left side a hard body was felt which was supposed to be a breech; being fearful of placental separation the head was not sought for in the pelvis. On vaginal examination the cervix was high and was lengthened. The external os was flaccid; the upper end of the cervix would barely admit two fingers, and was very firm. The entire lower uterine segment had a soft boggy feel, and internal ballottement could not be gotten. The cervix was dilated manually by Dr. Swan and myself; as it gave way to the force the placenta bulged down into its cavity and the bleeding increased. This bleeding was effectively controlled by pledgets of cotton wrung out in very hot bichloride solution pressed against the protruding mass. Care was exercised in dilating the cervix so as not to detach the placenta. Only the tips of the fingers were employed in overcoming the contraction above. When the cervix was fully dilated, diagnosis of placental site was made as occupying the right lower segment. A small portion of the placenta was felt on the left side. The flat hand was then passed upward on the left side between the placenta and uterus. About four inches above, the margin of the placenta was passed. Continuing upward between the membranes and uterine wall, about an inch beyond this margin, the amniotic sac was broken into and the hand passed into its cavity. During this time, as a precaution against alarming hemorrhage care was taken to keep the forearm to the right so as not to peel up the placenta. A child's head was seized, brought to the left side of the uterus, and delivered through the rent in the sac. After delivery the flow of blood was profuse. Quickly the hand and forearm were reintroduced and the second child was delivered in the same way. The placenta and its membranes were then removed. Although the uterus had retracted, the subsequent hemorrhage, not yielding to hot douches and acetic acid, compelled packing with gauze.

The mother made a rapid recovery, and excepting a slight rise of temperature on the third day (probably from absorption of stagnant lochia at the placental site) she ceased to be of interest. The children were about fifteen inches long and were attached to a single large flat placenta.

The first case of placenta prævia and twins was reported by Dr. H. R. Storer.[1] The woman was dead when first seen by him, and laparotomy was done in the interest of the children. Two placentæ and separate membranes were found. Dr. C. E. Quinn[2] reported a case in which pains were induced and the first child was expelled in its sac, the hemorrhage being very slight. Dr. Collingwood Fenwick[3] reported a case having two placentæ and two membranes. Dr. H. O. Nicholson[4] reported a fatal case, the mother living six hours after delivery.

Obstetricians differ as to the rarity of this condition. Among Dr. Trask's two hundred and fifty-three cases of placenta prævia, gathered from every source,[5] there was only one such case, and that foreign. Angus puts it as occurring once in 44,500 cases. Barnes states that it is not so common. Winckel states that multiple pregnancy predisposes to placenta prævia, the accident being relatively four times more frequent in plural than in single pregnancy. If Lusk's book be taken as a standard, we might conclude as follows: (1) Placenta prævia with single child occurs once in nine hundred cases; (2) in about every eighty labors one pair of twins are born; (3) by comparing these ratios we should expect to find twins with placenta prævia once in seventy-two thousand cases.

THE LIFE OF A PLASTER-OF-PARIS JACKET.[6]

BY HOMER GIBNEY, M.D.,

NEW YORK.

I PURPOSE giving the history of several cases of the very many of Pott's disease seen at Dr. V. P. Gibney's clinic, orthopædic department Vanderbilt Clinic, at the Hospital for Ruptured and Crippled, dispensary service, and those seen at our office, which, of course, are private cases; many of which in these various places came under my personal hand. The cases reported by Dr. Stokes are ones with which I am more or less familiar, and I know much care is always given to these individual cases as they present, and to this I think is due the fact that our jackets wear so well; and that, when we get an early case, apply a comfortable snug splint, thus absolutely fixing the spine, we are gratified to find on its removal all of the acute symptoms have disappeared, no psoas contraction, and no evidence of active disease.

There are many contributing causes to the longevity of a plaster-of-Paris jacket. I may be pardoned if I mention a few of the most prominent points which, if conscientiously adhered to, carry it to a "ripe old age."

First, the plaster must be carefully bought; that is, dental plaster, smooth and without grit; secondly, the bandages must be well or rather loosely rolled; and thirdly, the meshes of the crinoline must be well filled with the plaster. Each successive turn of the bandage must also be carefully and vigorously rubbed in. I believe one cannot pay too close attention to these apparently minor details to insure a perfectly fitting splint, a lasting support with the maximum comfort.

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[1] Boston Medical and Surgical Journal, 1856–57, pp. 347–349.

[2] Medical and Surgical Reporter of Philadelphia, September 12, 1874, p. 128.

[3] British Medical Journal, January 20, 1900, p. 140.

[4] British Medical Journal, February 17, 1900, p. 380.

[5] Trans. American Medical Association, 1855.

[6] Read before the Orthopædic Section of the New York Academy of Medicine, November 17, 1899.

I have three cases pertinent to the life of a plaster-of-Paris jacket. Briefly:

Case I.—A boy four years old, first seen in 1891. Symptoms present were abdominal pains and a disinclination to walk. He had been treated expectantly by some homœopathic doctor, a diagnosis not having been made. His family history was good; the hygienic surroundings were excellent, and there was no definite history of treatment. The consultation with their regular family doctor resulted in a diagnosis of caries of the spine—the prominence being at the mid and lower dorsal vertebræ. A Taylor brace was applied and worn with considerable discomfort; a large psoas abscess developed; the boy became much emaciated, and he was said to have developed a pulmonary tuberculosis. His parents were advised to take him at once to the country. Before this was done the abscess was carefully aspirated, but as its contents was thick, cheesy pus the field around was cleaned and an incision made, and the sac evacuated. Prolonged suppuration reduced him to an alarming point of emaciation. It was, however, thought best to apply a solid or permanent jacket. This was accordingly done; the bony prominences were protected, a fenestra being cut to dress the abscess. This jacket was worn for two months, when his general health was so much improved that it became necessary to change it. The deformity had not increased; there were no excoriations; the back and skin were in good condition. A new one was immediately applied. His condition remained good, and this jacket was worn for a year, when a new one was applied. His deformity remained the same, as shown by the tracing, which was taken with a lead tape, familiar to all those who have to do with spinal cases. His back showed no excoriations from the plaster, and the abscess instead of producing constitutional disturbances had, to a very large extent, given him no trouble.

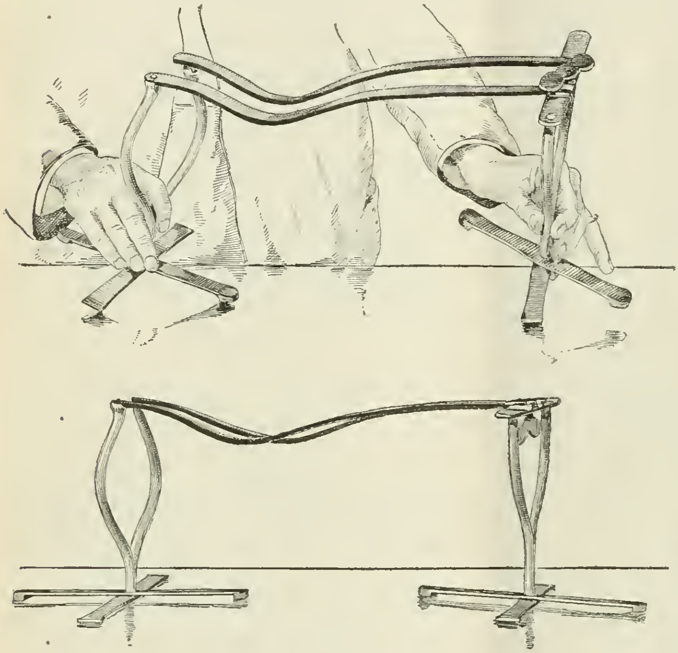

Fig. 1.

Two months ago a new jacket was applied, and he went again to the country and continues to improve.

Case II.—A boy six years old (caries of dorsal spine), was seen first in 1895. He had a fairly good family history. His personal history was fair, and the hygienic conditions and surroundings were excellent. The symptoms present were grunting respiration, attitude over-erect, unsteadiness of gait, and considerable abdominal pains. The kyphosis was most prominent at the tenth dorsal vertebræ. In this case, as in the previous one, a Taylor brace was applied, and this was followed by a Knight spinal. Both of these, however, failed to give him the desired support and consequent relief. His general health began to fail. A solid, permanent jacket was applied, and he was sent to the country. All of his symptoms rapidly cleared up; he gained in flesh, and it was necessary at the expiration of three months to reapply a new jacket, which was worn for eleven months. This was cut down; there were no abrasions and but slight excoriations, and the usual tracing revealed no appreciable increase in the deformity. A new jacket was applied less than two months ago. He runs and romps with other boys, and his general health remains excellent.

Case III.—Woman, twenty-seven years old. No definite history could be given. Following childbirth she had persistently severe pains through the lumbar spine and over the lower abdomen. Her family and personal history was good, and she was surrounded by best hygienic conditions. Her attitude was normal, the gait a little cautious and unsteady. She was exquisitely tender over the third and fourth lumbar spines. A snugly fitting, solid jacket, grasping the pelvis firmly, was applied, and she went to her home in Massachusetts the following day. She did not again appear at the office for a year, when she reported that within a month nearly all of her symptoms had disappeared and that for several months she had been absolutely free from all pain and discomfort. The jacket was cut down; the body was found to have no excoriations, in fact to be in excellent condition. There was no pain on concussion and no evidence of active disease. The spine was fairly flexible except at the point where tenderness and slight prominence were first noticed. A light steel spinal assistant was applied, and she was sent home cured.

These then are but three of the very many spinal cases which I have had the privilege of seeing in Dr. Gibney's practice, and in which we have applied the solid plaster jacket with most beneficial results. Just how long the solid jacket will live is difficult to say. I can but emphasize the cardinal point—careful attention to the minor details.

We have about discarded the swing or upright position in applying the jackets. Especially is this true in the cases of children when the deformity is in the lower dorsal and lumbar regions, we having adopted a slight modification of Goldthwait's frame, which apparatus is shown by the illustrations.

Two uprights on which the shoulders and hips may rest are placed at a short distance from each other on a table or board. Two untempered steel rods one-fourth to one-half inch in breadth are easily shaped to hug closely the deformity or prominence. The child is then held by two assistants, at the arms and thighs, in position on these vaselined rods, which fit into grooves in the uprights; the assistant at either end employing slight traction.

The bandages are thus rapidly applied, and as the plaster is setting or hardening the rods are carefully withdrawn, the spaces and unevennesses are smoothed, and the jacket is trimmed out with a sharp knife under the axillæ and over the hips, the edges being smoothed and bevelled. It is possible thus to make a most effective light support.

For many years we have promoted cleanliness and thus added to the age and efficiency of our solid jackets by putting a long strip six inches wide of linen or gauze next to the skin before the building-up process of the jacket begins. Then we carefully instruct mothers and nurses to move this back and forth under the jacket, first saturating one end with alcohol, thus giving the child practically an alcohol bath every day.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 3, 1900.

W. H. Katzenbach, M.D., Vice-President, in the Chair.

Remarks on Hyperchlorhydria. — Dr. Max Einhorn read this paper. He said that at one time it had been considered proper to treat almost all cases of dyspepsia by giving hydrochloric acid, under the supposition that the gastric juice was always deficient, but later observation had shown that sometimes the secretion of hydrochloric acid in these cases was actually greater than normal. Still later it had been discovered that digestion sometimes went on in the stomach when it should not do so, *i.e.*, when the stomach was empty. The present paper dealt only with those cases in which there was excessive acidity. According to his own experience, more than half of the cases of impaired stomach digestion were examples of hyperchlorhydria. Among farmers and others leading a life comparatively free from mental strain, the percentage would probably be much less than among his patients, who had been, for the most part, men in active business in the city.

Symptomatology.—Persons suffering from hyperchlorhydria were usually well nourished, and complained of uncomfortable sensations about one hour after meals. Some of them felt well except after their heaviest meal. Some complained of a burning sensation in the pit of the stomach, or sometimes of water brash. A smaller group complained not only of water brash but of slight regurgitation of food. The burning sensation might be present along the course of the œsophagus rather than in the stomach alone. These were the common symptoms, but they did not include all. Some of these patients complained of dizziness, or of a feeling of apprehension, or of severe headache, coming on perhaps without any distress in the stomach, at about the same time after taking food. In the more exceptional cases the symptoms might be vague, and might even simulate to some extent those of angina pectoris. A characteristic feature of all these different types of cases was that they experienced relief with the ingestion of food, and about ninety per cent. of the cases exhibiting these symptoms would be found to be instances of hyperchlorhydria. The appetite was usually good, and sometimes a hungry feeling was experienced about one hour after meals. Thirst was not increased. About two-thirds of these patients suffered from an obstinate constipation which was dependent upon an abnormal condition of the stomach. Sometimes there was a diarrhœa of similar origin, and the fact that it arose in this way was well shown by the ease with which it was controlled by the administration of an alkali. He was of the opinion that if the symptoms were reasonably distinct no examination of the gastric contents was demanded, but the fact should not be lost sight of that hyperchlorhydria sometimes existed without giving rise to the usual symptoms.

Pathology.—Opportunities for post-mortem study were naturally very rare in this disorder. In one case in which death had resulted from a pneumonia, examination, both macroscopical and microscopical, had failed to show any abnormality of the gastric mucous membrane, not even an ulcer. Most physicians now agreed that hyperchlorhydria was a functional disease.

Etiology.—As had been already stated, the disease was especially common among those subjected to much mental worry or anxiety, such as men in active business, or ladies too much occupied with social functions. Tobacco and alcohol were also prominent factors. As ulcer of the stomach was quite commonly associated with hyperchlorhydria, some had supposed that it was a cause of this affection. This could hardly be the case, because it was well known that gastric ulcers developed in cases not exhibiting hyperchlorhydria. Probably all that could be said on this point was, that hyperchlorhydria made it easy for such ulcers to develop. When these conditions coexisted, it might be impossible correctly to diagnose the presence of the ulcer except by the persistence of the symptoms in spite of appropriate treatment.

Treatment.—As a rule, cases of hyperchlorhydria responded promptly to treatment. Some physicians excluded all starchy foods for the reason that the excessive acidity interfered with the digestive action. He did not indorse this plan, and believed that most physicians had given up exclusive diets in these cases. As it had been found that an exclusive diet of meat stimulated and increased the flow of gastric juice, it had been recommended to exclude meats. His own practice was to try and strike the happy medium between these extremes, believing that exclusive diets were harmful. The diet which he usually arranged for those suffering from hyperchlorhydria comprised tender meats, not too highly seasoned, plenty of milk, water, and sugar. He directed that they should avoid acids, and should restrict the quantity of the starchy foods, particularly potatoes. The great point, after all, was to make them take their food in small quantities and at shorter intervals. These frequent meals in themselves gave relief, as the ingestion of food took up the acid, forming with it an acid albumin. Recent experiments seemed to show that sugar, as such, tended to diminish the acidity. Fats, especially butter, also decreased the acidity. The medicinal treatment consisted in administering alkalies at the time of maximum acidity, *i.e.*, about two hours after meals. One or two teaspoonfuls of bicarbonate of sodium would be found useful for this purpose, or, if the patients were constipated, bicarbonate of sodium and calcined magnesia, or rhubarb, soda, and magnesia, could be administered with advantage. He had also found the greatest benefit from the use of the bromides. Washing out of the stomach was not essential in these cases because there was no impairment of the motor function of this organ. The internal application to the stomach of either the faradic or the galvanic current would be found beneficial, as would also spraying into the stomach a solution of nitrate of silver.

The Occurrence of Mould in the Stomach.—Dr. Einhorn also read a report on this subject. He said that in all of his cases the microscopical picture had been the same. Dr. E. K. Dunham had examined the pellicles in the fresh condition. He had been unable to make them grow on the usual culture media, but had been more successful in growing them on bread. The species of mould had not been definitely determined from the fresh specimens—it might be an aspergillus or a penicillium. He had found these moulds more particularly in two groups of cases, viz., (1) cases of hyperchlorhydria, and (2) cases of gastralgia. It was reasonable to expect some benefit from the use of the gastric douche, or the spray of nitrate-of-silver solution.

Stated Meeting, May 17, 1900.

William H. Thomson, M.D., President.

Poisonous Snakes and Snake Poison, with Demonstrations.—Dr. Gustav Langmann read a paper on this subject. He said that snakes had two raised palatal teeth, both running almost parallel. The pointed hooks upon the back were used for hooking the prey. They had a very dilatable mouth, through which the prey was gradually drawn down into the œsophagus. The innocent teeth extended backward. In the row of teeth of the upper jaw, the poison was concentrated into one powerful tooth, the poison fang; sometimes there were two or three teeth at this point. The fangs stood immovable on erection, and folded like a pocket-knife when at rest. The arrangement of the teeth would aid in discovering if the snake-bite was harmless or not; but snakes did not always leave the imprints of their teeth. The poison gland was situated behind the eye, and was under the influence of the masseter muscle. The secretion was thrown into a groove in the mucous membrane at the base of the fang. The king-cobra was the largest of all poisonous snakes, measuring often fourteen feet, and enjoyed attacking and pursuing men.

Poison Apparatus.—The poison glands were triangular in shape, and this was supposed to be characteristic of all poisonous snakes. The glands were the homologues of the parotid glands. These animals could retain their secretion at will, sometimes keeping it for months. The poison was not odorless, and there was a specific smell for every species; the odor might be called "mousy." Fresh poison under the microscope showed epithelial cells and adenoid masses. It had been supposed until quite recently that the action of the poison was due to very virulent bacteria contained in the secretion. The cultures in different media gave entirely negative results.

Active Constituent of the Poison.—The first chemical examination was made with the viperidæ, and the active principle extracted was called viperine. Dr. Weir Mitchell, in 1883, published the results of his investigations: he found two albuminoids—one dialyzable and coagulable by heat, the other not; these he considered the active principles of the poison. There had really been no definite analysis of the poison made as yet, but there was quite reasonable assurance that the active principles were albuminoses. These albuminoses were peptones of rather recent date; they were the same as what was called propeptone, the intermediary stage in the changing of albumin to peptone. They were products by hydrolysis; they decomposed, took up certain constituents of the water, and so became more soluble and approached the peptones. It was important to know the different ways in which the albuminoses were changed, artificially by superheated steam, or by the gastric juice, or by pancreatic digestion, or by the living cells; these latter might be cells from the living organism or from the plant or bacteria. He asked what was the origin of the albuminoses. They were from the same albumin which had been worked out by superheated steam, by bacilli, or by gastric digestion, but they were entirely different; the toxins created in this way were different and could not be compared at all with each other. Different poisons had a different percentage of peptone and globulin. Gastric action had no influence on the snake poison, but the action of the bile had. A dried poison mixed in glycerin was as active as the fresh poison, even after the lapse of twenty years. Putrefaction would destroy it after a time. Alcohol rendered it inert for a time only.

Physical Effects.—Peptone caused some local œdema, with convulsions, and ended by paralyzing the respiratory centres. Globulin, on the contrary, excited local reaction with hemorrhages around the points of injection. Experience showed that the intensity of the hemorrhages and the paralysis corresponded with the hydrolysis of the albuminoses. Instant death was due to thrombosis.

Symptomatology.—The effect of the cobra bite was first shown by a scratch on the skin, which gave a burning pain with œdema; then appeared vertigo, followed by weakness of the limbs, paraplegia, ptosis, paralysis of the tongue and epiglottis, and inability to speak. The saliva dribbled from the open mouth. The paralysis was general, and the patient lay motionless. The pulse was weak, and continued after respiration had ceased. The respirations were slow and labored. The pupils were contracted. Slight convulsions sometimes occurred before the end. Absorption was exceedingly rapid, as experiments had shown, which were made by injecting the poison into the tail of a rat and amputating the tail after one minute, death following in a short time. If patients did not die from paralysis they recovered quickly. The bite of a rattlesnake caused more pronounced local disturbances. There were hemorrhagic disturbances and bloody exudations of all mucous membranes. Within thirteen minutes constitutional disturbances developed. There was a marked fall in the blood pressure. After a temporary increase of reflexes, tetanus and paresis supervened, and paraplegia of the lower extremities ending in complete paralysis followed. Patients died within twelve hours. If they recovered from the paralysis, septic fever might develop. An authentic case was instanced of a draughtsman in the National Museum at Washington, who was bitten by a snake on the index finger. After several weeks he recovered. He was bitten about the 2d of June. Swelling and inflammation of that finger occurred every year about the 2d of June, resulting invariably in the loss of the nail. It was only after ten years that this curious phenomenon ceased; he was then supposed to have been cured by the South American plant micania guaco. In autopsies the serous membranes were shown to have ecchymoses throughout, especially the peritoneum. The blood was liquid and did not clot even after a long time. The cobra bite gave symptoms analogous to those of acute bulbar paralysis in its most acute type.

The Pathological Effects.—No description of the pathological effects upon the central nervous system had ever been published which could be considered valuable. There were certainly pronounced effects upon the central nervous system and the medulla. Fresh poison added to the blood in a test tube caused the blood corpuscles to swell and lose their hæmoglobin. There was no change produced in the hæmoglobin. In the tissues diapedesis soon set in, and in a few hours after the injection one-half the normal blood corpuscles could be counted. The coagulability of the blood was influenced. Another important effect was the loss of the germicidal property of the blood plasma. Briefly summarized, it might be stated that if the patient died within a few minutes, he died from general thrombosis; if within twenty-four hours, from paralysis of the respiratory centres, and, later, from general paralysis; if after days or weeks, he might die from sepsis.

Prognosis.—The prognosis was not bad. Weir Mitchell once gave the mortality from the bite of the cobra as twenty-five per cent.; at another time he gave it as not more than twelve per cent. In Australia the mortality was said to be about seven per cent.

Treatment.—The object in the treatment of snakebites was (1) to prevent the absorption of the poison; (2) to destroy or neutralize its effects; (3) to accelerate its elimination; (4) the treatment of the symptoms. If the limb could not be immediately amputated, the ligature should be employed. This should be tied as tightly as possible and in several places: for instance, if the finger was bitten, the ligature should be applied to the finger, the wrist, and the elbow. Sucking the wound with the lips or with glass cups was a doubtful measure; if employed, it should be preceded by free scarification of the tissues. Many drugs were considered by the speaker, including permanganate of potassium, hypochlorite of lime, ammonia, alcohol, etc. Often alcohol was given to such an extent for snakebites that patients died from acute alcoholism; in many cases it was difficult to tell whether the snake-poison or the alcohol caused the patient's death. There were few chances of neutralizing the poison *in loco*. Since the kidneys were attacked it was doubtful if such measures should be employed as would increase their activity. Diaphoretics gave dubious results. It had been experimentally shown that, when morphine was administered hypodermically, much of it was eliminated by the stomach—in fact, by repeated washings more than one-half the quantity injected might be recovered. The same was the case with snake venom. Experiments showed that when animals' stomachs were washed out, after they had received a lethal dose of the poison, they lived; the control animals died. The fluid washed out of the stomach produced death when injected into other animals. In the snake-dance, in India, after the performance the performer received large doses of an emetic; then the whole crowd stood around watching the performer empty his stomach. The speaker considered remedies that were supposed to be specifics in snake poisoning, such as strychnine. This drug was repeated until tetanic symptoms appeared; enormous doses of it were given, especially in Australia. It could not be relied upon as a specific. It was noted that an artificial tetanus brought on by strychnine was stopped by the snake poison.

Antivenene Serum.—It had been found that certain animals were immune to snake poison. In the tropics this was regarded as caused by their activity. Poisonous snakes were immune against their own poison; this was ascribed to their own internal secretions. Antivenene he considered to be the only reliable antidote to combat the effects of snake poison. Full protection was afforded if from 5 to 20 c.c. was injected within one and half hours after the receipt of the bite. This antivenene had been used with success in the West Indies, the East Indies, and Africa. It was an open question whether the action of antivenene was chemical or physiological. Dr. Langmann thought it was chemical. He discussed the relation of toxin and antitoxin in detail.

The treatment was thus summed up. The ligature should be used, and followed by deep scarification. Antivenene and solution of calcium hypochlorite (1:60) should be injected. Stimulation with ammonia or alcohol was necessary. Hypodermoclysis of normal saline solution and artificial respiration may be called for. The victim should be encouraged to counteract the depression.

Demonstration of the Snakes.—Every human being had an aversion to snakes which could be overcome by will-power. There were about seven varieties of rattlesnakes. They were quite abundant in the Eastern States. Only a few years ago a man was bitten by one on the Palisades. These snakes, as a rule, were of a timid and retiring disposition, and were not aggressive, as they were reputed to be. If attacked they would stand and defend themselves. Dr. Langmann then showed how to handle these snakes. He removed them from the cage by means of a hooked stick. The snakes clung to it, being afraid to fall. Then, dropping them on a level surface, the stick was placed just back of the head, holding them down firmly, and the neck was grasped with the finger and thumb. The rattles were not an indication of the age of the snake; they got a new rattle with each shedding. The doctor showed, and handled, the diamond-backed rattler, the tiger, the moccasin, the copperhead, and others. The moccasin snake, when excited, would strike the floor with the tail, and the sound produced was very similar to that produced by the rattlesnake. Sometimes this snake was more dreaded than all others. Negroes were particularly afraid of them. The Palisades were still full of the prettiest of all snakes, the copperhead. Three years ago, sixty-nine copperheads were caught there.

Mode of Collecting the Snake Poison.—Dr. Langmann took a glass funnel, over the open end of which was stretched a piece of chamois skin; this was thrust into a cylinder. The snake being held as demonstrated, its head was brought close to the chamois and its fangs were deeply buried in it, the venom entering the cylinder by drops. To facilitate its passage the doctor pressed the poison glands with his fingers.

Demonstration of Rabbits Killed by Snake Venom.—One rabbit was shown which was killed by the intravenous injection of venom and which died in three minutes. On examination the peritoneum had a perfectly normal look and was not at all hyperæmic. The right auricle was filled with blood-clot. There were no hemorrhages. A second rabbit was then poisoned by the hypodermic injection. Here there were numerous hemorrhages. A third rabbit was shown in which there were numerous hemorrhages all over the peritoneum.

Anatomy of the Poison Apparatus.—DR. S. PULLITZER said that all vipers were distinguished by having a short superior maxillary bone which articulated with the lacrymal bone. Vipers brought forth their young alive. These two characteristics all species of vipers had in common. They were all poisonous, and were widely distributed, especially in the temperate and tropical zones, except in Europe, Australia, and New Zealand. Some vipers had a peculiar pit known as the "laureal pit." In 1866-67 a scientific study of this pit was undertaken. It was a depression on the side of the face on a line between the lower jaw and the margin of the orbit. This was called by some "the sixth sense." The function of it has been lett to conjecture, but it was thought to be connected with the elaboration of the poison; also, that it enabled the poison gland to get oxygen. At the bottom of the pit was found a delicate membrane which was invariably ruptured in attempts to dissect it off; it closed off an entire cavity which was lined with epidermis, which made it evident that it communicated with the outside skin and had an outlet. Serial sections were made, and the outlet was found near the margin of the eye. The speaker thought it was purely some kind of sense organ. He thought it might be an accessory organ of hearing, for a rudimentary cochlea and semicircular canals were found. There was no external opening or tympanum or external ear in any snake.

Findings in Nerve Cells after Poisoning.—Dr. P. Bailey presented a paper on this subject, based on experiments with rabbits.

Rabbit No. 1. Snake poison; rapid action. Cells showing changes were confined to the anterior horn of the spinal cord. Most of these cells were normal. A small number of cells presented in their chromatic elements modifications which probably evidenced the early stages of a beginning acute degeneration; *i.e.*, an increase in the granularity of the chromophilic bodies, and a fraying out at their edges, with some distinct loss in chromatic substance. The cyto-reticulum was normal. The nucleus might be normal or there might be an intensification of the surrounding membrane and a thickening of the strands of the nucleo-reticulum. A few cells were found in which there was much greater loss of chromatin, the cell bodies appearing extremely pale and no distinct chromophilic bodies being present.

Rabbit No. 2. Snake poison; long action. The character of the changes was the same as in the preceding, but more advanced and involving a much greater number of cells. Changes were found in the cells of the cortex, cerebellum, olfactory lobe (mitral cells), basal ganglia, medullary nuclei, anterior horn, and spinal ganglia. The cells showing the most marked changes were the anterior-horn cells, the Purkinje cells, and the mitral cells of the olfactory lobe. The changes were those of later stages of degeneration.

Rabbit No. 3. Heloderma poison; rapid action. The changes were almost identical with those found in rabbit No. 1.

Technique: The material was placed in a four-per-cent. alcoholic solution of formalin for twenty-four hours, then passed through graded alcohols. Sections were cut in celloidin and stained by Held's modification of the Nissl method, *i.e.*, erythrosin-methylene blue.

Dr. J. Ewing also presented a paper on this topic. The changes in the ganglion cells of a rabbit, in which moccasin-snake poison was injected, were found by Nissl's stain to be of a somewhat specific type and of the most extreme grade. The general appearance of the cells was that of total disintegration of chromatin bodies without marked loss of the amount of the chromatin substance. The outlines of the Nissl bodies were completely obscured, the substance having been redeposited in finely granular form all over the cell body and even in the pericellular lymph space. In the majority of the large stichocromes neither formed bodies nor reticulum could be distinguished. It was evident that the lesions extended much deeper than the chromatic substance, affecting the underlying cyto-reticulum, which was granular, disintegrated, and in some places completely destroyed. The nuclei were very opaque and the nucleoli often diminished in size and subdivided. The dendrites were very irregular, shrunken, or detached. These changes constituted a true acute degeneration of the cell in contradistinction to the simple disturbance of chromatic substance, which might be entirely physiological. He thought that the changes he had found in the rabbit were the most violent of all the conditions included in his experience with ganglion-cell degeneration.

SECTION ON GYNÆCOLOGY.

Stated Meeting, April 26, 1900.

J. Riddle Goffe, M.D., Chairman.

The Prevention of Dystocia due to Fœtal and Pelvic Disproportion.—Dr. Edward A. Ayers read a paper on this topic. He said that in multiparæ one had as an aid to prognosis the previous history of labors. Inquiry should be made as to the size of the children previously born, the size of the caput or other evidence of head moulding, the character of the pains, and whether or not assistance had been required. Up to the age of thirty-five years it was safe to assume that with each successive labor the child would be a little larger, and that after that age there would be a steady decrease in size. Some notion of the probable character of the pelvis might be surmised from a consideration of the size of the mother's bones generally. A stout woman was apt to have a less roomy pelvis than one not so fleshy. Large external pelvic measurements accompanied a heavy bony framework. When a woman had a satisfactory delivery history, careful internal measurements were not demanded. Measurements of the pelvic outlet were not generally taken, and this omission occasionally led the physician into trouble. The width of the pubic arch should always be considered. In cases of contraction of the true conjugate the child's head usually lay quite high. The variations of the head diameters were not so great as in the pelvis, but the determination of them should not be neglected. The speaker said that with sufficient experience very accurate opinions could be formed of the probability of obstruction occurring during labor, by examining during pregnancy with a view of determining the amount of resistance to the engagement of the fœtal head. This tentative engagement of the fœtal head would show in cases of marked contraction of the inlet a sudden and decided resistance as the head was forced down. If, on the other hand, the pelvis was roomy, the head could be forced down some distance, and its descent would then be checked gradually instead of suddenly.

Induction of Labor.—The chief and almost the only objection to the induction of premature labor was the danger of death of the infant from prematurity. This transferred the danger, to some extent, from the mother to the child. The question was really whether the prognosis for the child was better or worse if delivery was effected two or three weeks before full term by an easy labor, or at full term after a difficult labor. The best means of inducing labor were: (1) The use of the sterile, solid, flexible bougie, which should be tapering and not blunt; (2) the small Barnes' bag used only to excite contractions; (3) the tampon. All of these measures should be preceded by a full dose of castor oil.

Indications for Premature Delivery with Special Reference to Eclampsia; the True Toxæmia of Pregnancy.—Dr. S. Marx read this paper. He said that clinical experience showed that eclampsia was closely allied to renal inadequacy, and that the surest way to health was by the restoration of this function. The treatment must be early and timely. It was not sufficient to determine the presence of albumin and casts in the urine of the pregnant woman; the quantity of urea excreted daily must be estimated, for upon this must largely depend the question of the advisability of active interference. Five per cent. of all pregnant women had albuminuria, yet he had never known uræmic symptoms to arise when sufficient urea was excreted. For a woman otherwise healthy, the daily quantity of urea excreted should be about five hundred grains. The majority of albuminurias were simply danger signals; on the other hand, the absence of albuminuria, in the face of certain symptoms, meant nothing as regards safety. In some of the most desperate cases of eclampsia neither albumin nor casts were present in the urine. Progressive diminution of urea excretion, with or without albuminuria, was a special indication for interference.

Induction of Labor.—He was utterly sceptical as to the frequent occurrence of a truly contracted pelvis in this country. Most obstructed labors were the result of a disproportion between the fœtal and maternal parts. No matter how narrow the pelvis, as determined by the pelvimeter, a child could be delivered with assistance, provided it was small enough. The indication for the induction of premature labor was not to be found in the old-fashioned tables found in the text-books on obstetrics. All pregnant women should be subjected to a thorough pelvimetric examination because this instrument gave a clew to pelvic distortions and contractions. With one or two fingers in the vagina the other hand pressed the fœtal head down into the pelvis. The ease with which the head engaged at the brim determined whether or not premature labor should be induced. Small and even fair-sized fœtuses had been delivered through pelves whose diameters were far from normal, and in persons in whom there was reason for suspecting that major operations would be demanded. When once it was found that the head could not be made to engage, the time for interference was at hand. The pelvimeter should be used for purposes of comparison only.

The Treatment of Tumors Complicating Pregnancy.—Dr. Brooks H. Wells read this paper. Speaking of cancer, he stated that about forty per cent. of the children were born dead, and almost all of the others were feeble. Under these circumstances the child deserved only secondary consideration. In cancer of the cervix in a pregnant woman, operation was urgently demanded, and when circumstances were favorable vaginal hysterectomy should be performed while the uterus was still small. During the sixth month, or later, the viability of the child must be considered. If the case was first seen at term, and the disease was in the very early stage, the cervix might dilate satisfactorily, but there would probably be cervical lacerations. When the cancer involved the vulva, vagina, or rectum, the mass should be removed, if small; if more advanced, operation by the abdominal route gave the best results. The chance of becoming pregnant was less than when fibroids were present, yet when pregnancy did occur it was well known that the fibroids were prone to take on a much more rapid growth. Interstitial tumors grew the most rapidly, particularly where the uterine wall was much thickened. Subperitoneal tumors did not grow so rapidly, and if near the fundus were not of so much importance. In general, the higher the situation of the tumor and the more it approached the subperitoneal type, the less the danger. The most serious cases were those in which the fibroid occupied the pelvic cavity. It should be borne in mind, however, that the fibroids predisposed to abortion. Inflammation and sloughing of the tumor from injuries received during labor were very common, and constituted a grave danger. The mortality in labors complicated by fibroids had been, in the past, almost fifty per cent., and nearly as much for the child. During the early months of pregnancy myomectomy was indicated, and could often be done without interrupting pregnancy. For interstitial tumors of the fundus of the uterus, supravaginal hysterectomy should be done. Inversion occasionally followed delivery with tumors of the fundus. If the fibroid tumor obstructed labor and was in the anterior wall, it could sometimes be pushed out of the way while the patient was in the knee-chest position. Tumors of the cervix must be enucleated when possible, as even when they were very small enucleation was less dangerous than forcible delivery. A fibroid polyp, detected first after labor, should still be removed, as it was apt to slough and give rise to sepsis. To be successful these operations must be done early as a matter of election. Cysts or solid tumors of the ovary might also complicate labor. Large cysts were not likely to block the pelvis, but they caused much discomfort, and were particularly liable to rotation and twisting off of their pedicles. The dangers incident to delivery by version, forceps, puncture, twisting of the pedicle, intestinal occlusion, septic infection, and peritonitis were so great that the records showed a mortality here also of nearly fifty per cent. When seen early in pregnancy, an abdominal section, preferably by an intermuscular incision, with removal of the cysts, gave the best results. After the fifth month, if the tumor was not large or impacted, it was allowable to wait until the child was viable. At term, if the cyst was small, the child might be driven past it, or the tumor might be drawn above the brim. If the cyst was not impacted, and labor was progressing well, operation should be deferred until after the birth of the child. With an impacted cyst, puncture and delivery by version or forceps would seem proper, but the mortality was so great that it was rarely justifiable. Supravaginal hysterectomy was a better method. Labor might also be obstructed by enchondromata, cysts of the pelvis, hydatid cysts, displaced kidneys, and the muscle mass which sometimes resulted from ventral fixation of the uterus. His experience had been that during pregnancy abdominal operations in general were well borne. All unnecessary hemorrhage should be avoided, and particular care should be taken to secure perfect asepsis.

When was it Proper to Interfere in Apparently Difficult or Delayed Delivery, Especially in Primiparæ?—Dr. Malcolm McLean read a paper with this title. He emphasized the fact that the great difference between first labors and subsequent ones was to be found in the different condition of the soft parts. If surgical interference was attempted before the soft tissues had properly relaxed and dilated, great and unnecessary damage would be done to the mother. This was a very common error, and a notable example of meddlesome midwifery. If the presenting part was high up and movable, and the pelvic measurements were within normal limits, interference should be withheld. If the soft parts of the mother, once thoroughly relaxed and moistened with mucus, became hot and dry, the indications for interference were plain.

Dr. E. A. Tucker emphasized the necessity for being cautious in considering deductions from the first labor regarding the character of subsequent labors. In a case presenting suspicious symptoms of uræmia, the daily quantity of urea should be estimated at short intervals during pregnancy. He had recently urged primiparæ to do considerable walking during the last month or six weeks of pregnancy, in order to facilitate the engagement of the head. Such exercise did no harm, and he felt convinced that it accomplished much good in the way of facilitating engagement of the head. A substitute for the walking was the use of systematic exercise in bed—raising and lowering the body so as to exert abdominal pressure. Occasionally one would meet with primiparæ in whom the parts did not relax or become moist, even after many hours; here, of course, interference was demanded, and should be given, if possible, even before the vagina became hot and dry.

Dr. Egbert H. Grandin said that he was a believer in pelvimetry, and thought it would be better for womankind if all practitioners were taught and drilled in its use. Pelvimetry was valuable because it taught that, on the part of the woman, there might not be sufficient room, and hence impressed upon the attending physician the necessity for determining positively at the proper time whether or not one should interfere. He believed there was such a thing as an average normal pelvis, and yet through such a pelvis one woman would not be able to bring a child into the world, while another woman could do so, simply because one child was smaller than the other. If the presenting part would engage under suprapubic pressure, the chances were all in favor of the mother being able to deliver herself, but when the fœtal parts would not enter the pelvic inlet interference was at once demanded. Such interference should be as rapid as possible without injuring the maternal parts. He was sorry that Dr. Ayers advocated the use of the sterile bougie as a means of inducing labor, as it was a most uncertain and tedious method, and there was always risk of rupturing the membranes. If this accident should occur, one method of elective version was placed beyond our reach. Personally, he thought the best method was to use the tamponade of sterile gauze to excite dilatation, and then to complete this process manually.

Urinary Examinations in Pregnancy.—The time-honored teaching that the practitioner should make a perfunctory examination of the urine for albumin in the latter months of pregnancy should be relegated to oblivion. Some of the worst and most sudden cases of toxæmia that he had seen had been those in which there had been absolutely no albumin in the urine, and in which, the physician not having had his attention concentrated upon the quantity of urea and on renal insufficiency, the woman had suddenly passed into the condition of eclampsia.

Treatment of the Toxæmia.—He had recently looked over his records for the past twenty years, and had been struck with the large number of cases of toxæmia he had seen, and the high mortality that had attended the use of all of the approved methods of treatment. Of late years, in cases under his immediate supervision, just as soon as there had been evidence of urinary insufficiency, both as regards the total quantity of urine and of urea, he had not waited for cephalalgia and disturbance of vision, but had promptly emptied the uterus, because he felt that this meant the greatest good to the greatest number. He could not emphasize too forcibly the importance of making the treatment of this toxæmia of pregnancy a prophylactic one.

Dr. G. H. Balleray said that he had seen a good many women go through labor safely and well in spite of the large quantity of albumin in the urine; on the other hand, he had seen them succumb to eclampsia when there had been little or no albumin. He agreed with Dr. Marx that absolute pelvic contraction was rare. The indications of the pelvimeter should be looked upon as entirely relative. Pelvimetry was very much like measuring the outside of a man's house; it did not show positively whether or not the man could pass through a doorway in that house into one of the rooms.

Dr. F. H. Stuart said that the papers just presented had distinguished clearly two sets of conditions—those under the physician's control and those beyond his control. Examination of the pelvis by means of instruments, in his opinion. was fallacious; the digital examination by the experienced physician often afforded more reliable information. He would indorse most heartily the recommendation made by Dr. Tucker, that the patientshould be directed to walk and to exercise the abdominal muscles systematically and freely toward the close of pregnancy. Delay in labor was often owing to a faulty position, and this could have been avoided by preliminary efforts at securing proper head moulding.

Dr. Ayers said that the suggestions about walking in the later months were excellent, but required some modification, for the discussion had included both engagement of the head and the avoidance or relief of toxæmia, and if such exercises were not restricted one might walk from one danger into another.

Restricted Diet.—Dr. Marx said that he had made use of the restricted diet treatment for women in whom it was feared that labor would be difficult because of the large size of the child. It was certainly possible to accomplish a good deal in this direction by restricting the starches and sweets, and limiting the ingestion of water. At one time he had endeavored to improve upon this by administering the thyroid extract, but the women had returned to him complaining that they did not "feel life" so strongly as before. This diminution in the fœtal movements had been so marked as to compel him to abandon this mode of treatment. In closing, he would say once more that it was not albumin but urea that killed.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

Seventeenth Annual Meeting, Held at Washington, D. C., May 1, 2, and 3, 1900.

(Concluded from page 877.)

Third Day—Thursday, May 3d.

The Value of the Tuberculin Test in the Diagnosis of Pulmonary Tuberculosis.—Dr. J. M. Anders, of Philadelphia, read a paper on this subject, in which he said that among those who have made use of tuberculin there was a remarkable unanimity of opinion as to its value for purposes of diagnosis. The question of dosage was vitally important, and he said he favored a medium-sized initial dose, which would obviate the disadvantages arising from the necessity of repeated injections, as was generally the case when small commencing doses were used. Recent and extensive clinical testing of Koch's method in widely separated parts of the world, by competent observers, had resulted in a practically unanimous verdict, which emphasized its superior value as an aid to diagnosis of incipient cases on the one hand, and in no smaller degree its apparent harmlessness on the other.

Dr. J. W. Brannan, of New York, said he was somewhat uncertain as to what was considered a reaction after the use of tuberculin. In a number of joint cases of doubtful origin in which the tuberculin was used for diagnostic purposes, the injections were followed by a rise of temperature and an increased pulse rate, but no tenderness or other local signs about the joint. The speaker asked whether in such a case it could be claimed that the patient had reacted to the tuberculin test.

Dr. Charles E. Quimby, of New York, said that in cases of pulmonary tuberculosis the injection of a very small dose of tuberculin would sometimes produce an obvious increase in the râles heard over the suspected area, even when it did not produce an evident rise of temperature. The speaker said he usually started with a dose of half a milligram.

Dr. Charles Denison, of Denver, in discussing the question as to what constituted a tuberculin reaction, said he thought that sufficient weight was not attached to the local reaction in the affected lung. After such an injection, there was usually an elevation of the pitch, and a peculiar, harsh bronchovesicular sound which was diagnostic, and which could not be detected previously.

Dr. H. L. Taylor, of St. Paul, said he wished to protest against the statement made by Dr. Anders that tuberculin should not be used as a therapeutic agent. The speaker said he was thoroughly convinced that much good could be done by the judicious use of tuberculin in a therapeutic way.

Dr. Arnold C. Klebs, of Chicago, said he had frequently seen local changes in the lung produced by the use of tuberculin. Still, in looking for a reaction, the temperature must be our main guide. In his own practice he had adopted the following rule: The temperature of the patient was taken at frequent intervals for a week previous to injection: this was averaged, and if, after the injection, there was a rise of 2° F. above this average, it was regarded as constituting a reaction. Of course there were variations to this rule. Furthermore, different preparations of tuberculin gave different reactions, and there was no absolute standard to go by. The speaker said he usually began with a dose of one-tenth milligram, repeated, if necessary, after two or three days, and increased up to one or two milligrams if the previous ones are negative.

Dr. E. O. Otis, of Boston, said that in the course of his experiments with tuberculin in cases of cervical adenitis, the results of which were published last year, he found that the reaction occurred in a certain number of cases of syphilis. As to what constituted a tuberculin reaction, Dr. Otis said that in addition to the increased temperature he would expect to get malaise and general depression. In the syphilitic cases which reacted, he had no reason to suspect any latent tuberculous focus.

Dr. Edward R. Baldwin, of Saranac Lake, said he thought that tuberculin was rarely needed in the diagnosis of tuberculosis of either the lungs or joints. It should be used only as a last resort, when the older methods of diagnosis had failed.

The Hydriatic Treatment of Tuberculosis.—Dr. J. H. Kellogg, of Battle Creek, Mich., read a paper on this subject, in which he said he considered it remarkable that such an old and valuable remedy in the treatment of tuberculosis as water should have been so much neglected. Upon the application of cold water to the body there was an awakening of all the vital functions, which exerted a marked influence on the circulation of the blood. Instead of the rather too vigorous application of cold water by means of ablution or the use of a sprinkling-pot, as was done in some institutions in Europe, Dr. Kellogg preferred dry friction of the skin followed by the application of cold water by means of the hand, accompanied by vigorous rubbing of the skin. The temperature of the water should be 60° F., gradually lowered as the patient became accustomed to the applications. Dr. Kellogg also demonstrated a rapid and simple method of applying a cold pack to the chest.

Dr. Charles L. Minor, of Asheville, referred to the importance of simplifying hydrotherapeutic methods of treatment, so that they could be easily and quickly taken advantage of by the physician in his general practice.

Dr. R. H. Babcock, of Chicago, said that while he regarded hydropathy as a valuable adjunct to the general treatment of tuberculosis, he objected to the statement made by the author which implied that a certain number of his patients were cured in consequence of this method of treatment.

Petroleum in the Treatment of Phthisis.—Dr. William Duffield Robinson, of Philadelphia, read a short paper in which he recommended a refined preparation of the oleum petrolatum of the United States Pharmacopœia as a valuable remedy in the treatment of pulmonary tuberculosis.

Stamina: with Special Reference to the Consumption of Fat Food for its Maintenance as a Preventive of Tuberculosis.—Dr. A. N. Bell, of Brooklyn, read a paper with this title. He said that after a somewhat extended observation and careful study of the relations of tuberculosis to food, he had come to the conclusion that, other conditions being equal, tuberculous diseases were prevalent in the inverse ratio to the use of fat of some kind as an article of diet.

In persons on the verge of pulmonary consumption, inability to digest fat food was one of the most prominent symptoms. They were afflicted with dyspepsia, of the kind in which an acid stomach was predominant—that kind of dyspepsia which was the common effect of the excessive and too exclusive use of farinaceous food; insomuch as, in some cases, to have created a loathing of fat food in every form. Nevertheless, in medical practice generally, this condition was an indication for the use of fat food. Cod-liver oil, emulsified or otherwise, was almost universally the first remedy resorted to, and the most persistently urged. Butter or bacon was the most digestible of all fat foods. Fat was the needful thing to energize both digestion and nutrition, and that form of it which was the most acceptable was the best.

Dr. Judson Daland, of Philadelphia, said that tuberculosis had appeared in Iceland in recent years. It was supposed that it had been introduced from Denmark.

The Blood Changes in High Altitudes.—Dr. S. E. Solly, of Colorado Springs, made a few remarks on this subject. He stated that during the past year he had done considerable work in connection with examinations of the blood. Perhaps the most interesting part of this work was that done upon twenty-five college students in Colorado Springs. They were all healthy, as far as could be ascertained. The blood-count was almost always high in young men at universities, and it was higher than the average in those whom he had selected for his experiments. It was noticed that in those students who had always lived in that altitude, the blood-count and hæmoglobin did not average quite so high as in those who were there for a comparatively short time—two years or less. There was also an intermediate class between these two extremes. Dr. Solly said that his findings rather argued in favor of the theory that while the blood-count and hæmoglobin were higher in those altitudes than at the sea level, there was a loss rather than a gain by long-continued residence there.

Dr. Daland, in reply to a question as to whether the peripheral blood was always a good index of the character of the blood throughout the body, said he thought there was no question but that the peripheral circulation was often greatly modified by external conditions, such as friction, for example, and that the blood in that region varied at times from that in the deeper vessels. Still, for experimental purposes we could secure it only from the peripheral vessels, and we must abide by the results.

A Case of Endocarditis.—Dr. Harold Williams, of Boston, briefly reported a case of mural endocarditis with the findings at the autopsy by Dr. T. Leary. This case was chiefly remarkable because of the unusual group of pathological lesions, and because of the absence of murmur in spite of the fact of extensive mitral disease. The absence of pain was another unusual feature.

Dr. R. C. Newton narrated the history of a case of malignant endocarditis which had recently come under his observation, in which the physical signs were very obscure. There was an entire absence of pain. The patient lived about six months after the onset of his symptoms, and died of exhaustion.

Dr. N. S. Davis, Jr., of Chicago, reported a case of what he regarded as malignant endocarditis, with recovery.

Dr. J. W. Brannan said it was well known that the presence or absence of a murmur, or the character of the murmur, could not always be relied upon to indicate the anatomical conditions we had to deal with in cases of heart disease.

The president, Dr. Jacobi, said there were cases of endocarditis in which the murmur disappeared, or in which there was no murmur. In malignant endocarditis there might be extensive changes and deposits without a murmur. When, however, the deposits were along the edge of the valves, we had a murmur. The speaker reported a case of malignant endocarditis, of gonorrhœal origin, with recovery.

Dr. Babcock said that although a cardial murmur might be regarded as a very valuable guide-post, pointing out the direction in which we were to search, it was comparatively unimportant in the actual diagnosis of valvular disease. We must chiefly rely upon the secondary physical signs in determining the nature of the lesion. Theoretically, it seemed that the presence or absence of a valvular murmur depended largely upon the size of the orifice through which the blood passed. The entire subject, however, was still involved in obscurity.

Exercises Suitable for Children Suffering from Heart Disease.—Dr. J. Madison Taylor, of Philadelphia, read a paper on this subject. He began by alluding to the fact that a fair number of cases of heart disease were met with among people who had lived a long and arduous life, in whom the cardiac disability was recognized in very early years and pronounced by competent clinicians to be most dangerous. Dr. Taylor said that in carefully selected instances, the use of regulated activities afforded much relief to many of the distressing symptoms which accompanied and followed disordered conditions of the heart. The term "exercise," as he employed it, should be clearly kept in mind as being a normal use of the bodily parts—not merely of the muscular system, as it was usually understood, but particularly the inter-relation of the viscera and their mutual co-operation. The first and most important item was that the individual should learn to sit, stand, and move in proper attitudes, for only thus could this symmetrical activity of the various parts be maintained. The next was to secure and practise full flexibility of the movable joints and skeletal tissues. An invaluable form of exercise was the act of breathing correctly, which should be taught, enforced, and practised. After outlining certain forms of exercise more fully, Dr. Taylor related his experience in adapting these measures to children, showing what remarkable results were sometimes brought about by movements which would seem to be of the simplest sort. Among these he mentioned readjustment of the muscles of the trunk and limbs, also stretching, both active and passive, and the cautious use of massage and baths. Most of the movements should be begun in the recumbent posture, and all should be followed by long periods of rest, lying down. Each individual case must be carefully studied, and the rules governing it should be formulated from watchful experience.

Dr. Jacobi said that in the treatment of acute cardiac disease he knew of nothing better than absolute rest. In addition to this, we should stimulate the peripheral circulation and relieve the heart by massage and passive movements, or applications of cold water or alcohol to the skin. The skin normally contained an immense quantity of blood, and if there was no peripheral circulation the heart would suffer.

A Case of Cardiac Aneurism, with Thrombosis of the Left Coronary Artery.—Dr. Judson Daland, of Philadelphia, reported this case. The patient was a man over fifty years of age, with an old history of syphilis, who died suddenly. The autopsy showed an aneurism of the left ventricle, with extensive fibroid degeneration of the wall of that cavity and the intraventricular septum. There was also a thrombosis of the left coronary artery.

Officers Elected.—The following officers were elected for the ensuing year: *President*, Dr. R. H. Babcock, of Chicago; *Vice-Presidents*, Drs. A. C. Peale, of Washington, D. C., and S. W. Langmaid, of Boston; *Secretary and Treasurer*, Dr. Guy Hinsdale, of Philadelphia; *Member of Council*, Dr. A. Jacobi, of New York.

Therapeutic Hints.

Catarrhal Laryngitis.—

℞ Ammon. et potass. tartrat.	gr. $\frac{1}{20}$
Liq. ammon. cit. (Br.)	♏ x.
Elix. aromat	♏ v.
Aquæ	q.s. ad ʒ i.

M. S. Every four hours for a child of two or three years.

—Ashby and Wright.

Croup.—

℞ Chloral	gr. lxxv.
Potass. brom	gr. xlv.
Ammon. brom	gr. xxx.
Aq. cinnamomi	℥ ij.

M. S. Teaspoonful for child of seven years. Repeat in twenty minutes if not relieved. Decrease for younger children.

—Joseph Holt.

Creolin Pills.—

℞ Creolin	6 gm.
Spt. vini rect. dil	1 gm.
Ext. glycyrrhizæ, Pulv. glycyrrhizæ	āā 6 gm.
Gum. tragacanth	1 gm.

M. ft. pil. div. No. c.

For use in intestinal fermentations, infectious diseases, etc.—Spoeth.

Diuretic.—

℞ Salicylate of sodium and theobromine	āā 5 gm.
Syrup of orange-peel	25 gm.
Distilled water	60 gm.

M. S. Dessertspoonful every two or three hours.

—*Journ. de Méd. de Paris*, March 25th.

Acute Colic, when non-surgical:

℞ Chloroformi	7.5
Tinct. opii camph	50.
Ol. cajuputi	2.
Acaciæ pulv., Syrupi	āā q s. ad 100.

M. ft. emuls. S. Dessertspoonful in water every two or three hours.

—William Pepper.

Chloro-anæmia.—

℞ Artemisin	0.001 mgm.
Quassin. crystal	0.001 mgm.
Ferri protoxalat	0.10 cgm.

M. ft. pil. No. i. S. Take four daily.

This is said to bring rapidly back appetite and a good color.

Rebellious Intermittent Fever.—

℞ Quininæ sulphat	4. gm.
Ferri et potassii tartrat	10. gm.
Acidi arsenosi	0.10 cgm.
Aquæ destil	300. gm.

M. S. The day following the fever a teaspoonful every hour; subsequently every three hours.

—Baccelli.

Rheumatism.—Alkalies should always be prescribed along with the salicylates, and the one to be preferred is some potassium salt, the bicarbonate or the citrate. These remedies should be continued for two or three weeks after the joint symptoms have subsided. Iodide of potassium and sodium are often useful in the symmetrical type, in which the same joints on each side are affected. With regard to diet, meats and meat teas are contraindicated. Milk may disagree, and this may be overcome by adding to it a little salt. A temporary vegetable diet is useful. In the commencement the less food the better.—William Ewart.

After-Pains.—A hot meal may be better than medicine. For the instant relief of exhaustingly severe pains a piece of tissue paper is saturated with five or six drops of amyl nitrite and stuffed into a two-drachm vial, and the patient inhales this whenever she feels the pains coming on.—Winterburn.

Dysentery.—Free gentle purgation is kept up with

℞ Sodii sulphat	℥ i.
Aq. fœniculi	℥ iv.

giving as much as is required for the effect of producing bloodless stools.—W. J. Buchanan.

Grippe.—

℞ Sodii benzoat	20 gm.
Tinct. aconiti	gtt. ix.
Syr. polygalæ	100 gm.
Aq. bul.	q.s. ad 300 c.c.

M. S. Dessertspoonful three times a day in hot infusion.

Grippe with Circulatory Asthenia and Arterial Hypotension.—Daily intestinal lavage, after which 5 c.c. of the following can be injected:

℞ Caffeinæ,	
Sodii benzoat	āā 10 gm.
Aquæ bul.	ad 100 c.c.

—Grasset.

Gonorrhœa.—

℞ Methylene blue	gr. i.
Oil of nutmeg	gtt. i.
Oil of sandalwood.	gtt. ij.

In capsules. Give four daily.

—O'Neill.

Phthisis.—

℞ Tannin	6
Spt. vini rect	20
Glycerini	60
Elix. Garus (Fr.)	30
Aq. destil	160

M. S. Teaspoonful three times a day.

—Derscheid.

Grippe in Children.—

℞ Tinct. aconiti	gtt. v–x.
Sodii benzoat	1–3 gm.
Syr. lactucarii	5–10 gm.
Syr. aurant. flor	20 gm.
Mucil. acac	120 gm.

M. S. Dessertspoonful every two hours.

—Périer.

Or,

℞ Antipyrin	1 gm.
Aquæ laurocerasi	2 "
Syr. tolu	40 "
Aq. destillat	60 "

M. S. In three or four doses during the day.

—Comby.

Obstipation.—

℞ Hydrarg. corrosiv	0.1
Strychnin. sulphat.	0.05
Aquæ destil	30.
Ext. cascaræ sagrada fl	120.
Glycerin	ad 250.

M. S. One to three teaspoonfuls daily.

—R. C. Fisher.

Anæmia.—Give iron in hot solution.

Bronchitis.—Potass. iod. 0.3 in a tablespoonful of water half an hour before meals will give relief in three or four days; given after meals in a larger quantity of water it is said to have much less effect.

To Abort a Cold.—Give a nasal douche with a pink solution of permanganate of potassium. Place a plug of cotton in each nostril, soak with the solution, and leave in place for an hour.—Max Nassauer.

In Nursing Women.—Opium, morphine, atropine, hyoscyamus, colchicum, arsenic, cocaine, chloral, and salts of lead should not be given, and digitalis, ergot, and antipyrin should be withheld when they produce untoward effects.—Marifan.

Pertussis.—The following is to be applied to the pharynx:

℞ Acid. phenic. cryst	1.50 gm.
Glycerini puri	10 "
Syr. tolutani	5 "

M. S. External use.

—Guida.

Cervical Metritis.—

℞ Tinct. iod.,	
Glycerin (neutral)	āā p. æ.

Apply every second day, then every third, and finally once a week. At the same time inject daily for ten or fifteen days with:

℞ Iodi bi-sublimat	0.50 cgm.
Potass. iodidi	1.0 gm.
Aq. bull	1,000 "

—Cariere.

Pruritus Scroti.—

℞ Hydrarg. chlor. corros	0.50 cgm.
Spt. vini rectif.,	
Aquæ chamomil	āā 25 gm.
Chloroformi	gtt. v.
Aquæ camphoræ	100 gm.

M. S. Apply.

—Leistikoff.

Gout.—

℞ Lithii benzoatis	ʒ iiss.
Sodii phosphatis	ʒ v.
Tinct. colchici sem	ʒ iiss.
Aquæ cinnamomi	ad ℥ iv.

M. S. Dessertspoonful two or three times daily.

—Butler.

Snake Bite.—

℞ Selaginella apus (snake moss)	ʒ ss.

Macerate in an ounce of sweet milk and give at once. Also apply some of the moss to the wound.

—Rawley White, of Virginia.

Ulcerating Blepharitis.—Epilation, followed by washing for ten minutes morning and night with the following solution, diluted with three times its volume of tepid water:

℞ Hydrarg. oxycyanid	0.30 cgm.
Sodii chloridi	3. gm.
Aq. destil	500. "

Touch daily with a crayon of blue pyoctanin.—Coppez.

Convulsions in Children.—Hot or tepid bath or mustard bath if the child seems to have been chilled. To prevent recurrence give:

℞ Potass. brom.,	
Sodii brom.,	
Ammon. brom	āā 0.20 cgm.
Syr. codein	5. gm.
Syr. auranti flor	30. "
Aquæ	100. "

If the child cannot swallow, give a rectal injection with

℞ Musk	0.20 cgm.
Chloral hydrate	0.30 cgm.
Camphor	1 gm.
Yellow of egg	10 gm.
Water	100 gm.

J. Simon.

Parasitic Blepharitis.—

℞ Bals. peruv	2 parts.
Lanolin	4 "
Ol. amygdal. dulc	2 "

M. S. Apply to the margins of the partly closed lids and leave on for a half-hour or more.

—Roehlmann.

Medical Items.

How Frozen Meat Deteriorates.—Meats frozen and kept in cold storage for long periods do not undergo organic changes in the ordinary sense—that is, they do not putrefy, soften, or smell bad, but they certainly do deteriorate in some intangible way. After a certain time frozen meat loses some life-principle essential to its nourishing quality. Such meat lacks flavor; it is not well digested or assimilated. Its savorless condition cannot be remedied or successfully disguised by the use of sauces and condiments. Those who eat cold-storage food for any length of time develop diarrhœal disorders, lose in weight, and would eventually starve to death unless a change of diet was made. The same reasoning applies to tinned fruits and vegetables. They should not be used after a certain period has elapsed. Especially should people be warned against using stale eggs and old milk and cream. Milk and cream are kept for days, rancid butter is washed and treated chemically, but all food, and especially cold-storage food, is damaged by long keeping, and will not nourish the body properly. There is the greatest abundance of food, but it does not satisfy.—*Sanitary Record.*

The Home of Genius in Great Britain.—According to Mr. Jonathan Hutchinson, the home of genius in Great Britain is in the vicinity of Shakespeare's birthplace. In *The Home University* he has written a short article in support of this point, showing that within a radius of fifteen miles of Coventry were born Shakespeare, George Fox; Butler, the author of Hudibras; George Eliot, and Walter Savage Landor. Mr. Hutchinson suggests that the cause for this may be some surviving strain of Italian descent in the district, and further remarks that others have directed attention to the fact that it was here in the very centre of England that the Romanized Britons were less disturbed than elsewhere. It seems exceedingly probable that what we call genius is seldom or never produced by races of men only recently civilized, but that it occurs in those who in some degree trace their descent to the other stocks. The features of many European men of genius suggest some admixture of Semitic blood, and during the three hundred and sixty years of the Roman occupation it must have been that many Italians settled in England and subsequently left their descendants.

Medical Students in Paris.—The annual report on the attendance at the Faculty of Medicine of Paris has been published. There were inscribed at the Faculty for the year 1898–99, 4,315 students, of whom 4,122 were candidates for the diploma of "docteur en médecine," or of "officier de santé," an inferior qualification now abolished except for a few students who began their studies under the previous law of the students; 3,542 were French and 570 foreigners. There were 3,983 men and 1,229 women. The diplomas of "docteur en médecine" given were 671 in number; of "officier de santé," 13; of midwife, 48; and of surgeon-dentist, 68. The statistics show that 180 students less than in 1897 were inscribed, but it must be remembered that this includes the names of 160 struck from the rolls for not having been present during the past five years. Among the foreigners were 180 Russians, 79 Roumanians, 26 Germans, 25 Greeks, 24 West Indians, 21 Swiss, 12 Spanish-Americans. Most of the women were foreigners—100 out of 129—of whom 91 were Russian, 5 were Roumanian, 2 German, and 1 Swiss. The individual examinations were 9,119, passed before 34 professors and 36 professeurs agrégés. The number of candidates refused was 1,591, or 17.4 per cent., a rather high percentage of the 671 diplomas given; 79 were bestowed on foreigners and did not admit to practice in France.—Paris letter to *Therapeutic Gazette.*

The Age of Medical Graduates in Japan.—A Japanese paper, the *Jiji Shimpo*, finds reason for lamentation in the fact that whereas medical students in Europe graduate at twenty-two or twenty-three years of age, in Japan the age is over twenty-six. The paper in question points out that Japanese mature and age earlier than Europe, and that as the period of usefulness in life in Japan is considered to be over at fifty, the period of active practice is short. In Europe a man is usually at his best at fifty, and even at sixty, seventy, and over grave and reverent seniors are not looked upon as uselessly barring the way of ambitious juniors.—*Journal of Tropical Medicine.*

Dental Anomalies.—Among anomalies of the teeth are macrodontism, microdontism, projecting teeth, badly placed or misplaced teeth, double row of teeth, or teeth which are striated transversely or longitudinally. Caries of the teeth and Hutchinson's teeth are due to neglect or disease. The latter, however, may often be considered as a stigma of degeneration. Then there is a retardation of the first and second dentition.—Petersen's "Dental Diseases."

Books Received.

While the Medical Record *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

The Ophthalmic Patient. By Percy Fridenberg, M.D. 12mo, 304 pages. The Macmillan Company, New York.

Chemistry and Physics. By Martin Rockwell Gallaudet. 12mo, 374 pages. Lea Brothers & Company, Philadelphia and New York.

Medicine and the Mind. By Stacy B. Collins, M.D., translated by Dr. Maurice de Fleury. 8vo, 373 pages. Downey & Company, London.

Metropolitan Water Board. 8vo, 250 pages. Wright & Potter Printing Company, Boston, Mass.

Electric Medicine and Surgery. By John V. Stevens, M.D. 8vo, 520 pages. Scudder Brothers Co., Cincinnati, Ohio.

International Clinics. By Henry W. Cattell, M.D. 8vo, 315 pages. J. B. Lippincott Company, Philadelphia, Pa.

International Contributions to Medical Literature. "Festschrift" in honor of Abraham Jacobi, M.D., to commemorate the seventieth anniversary of his birth. 8vo, 496 pages. The Knickerbocker Press, New York.

Neuroma and Neuro-Fibromatosis. By Alexis Thomson. Folio, 168 pages. Turnbull & Spears, Edinburgh.

Golden Rules of Ophthalmic Practice. By Gustavus Hartridge. 48mo, 69 pages. John Wright & Co., London.

Guide Pratique d'Electrothérapie Gynécologique. Par Dr. E. Albert-Weil. 16mo, 292 papes. J. B. Baillière et Fils, Paris.

The Care of the Child in Health. By Nathan Oppenheim. 12mo, 308 pages. The Macmillan Company, New York.

Diseases of the Intestines. By Max Einhorn, M.D. 12mo, 391 pages. Illustrated. William Wood & Company, New York.

The Cell in Development and Inheritance. By Edmund B. Wilson, Ph.D. 8vo, 483 pages. Illustrated. The Macmillan Company, New York.

The Treatment of Fractures. By Charles Locke Scudder, M.D. 8vo, 433 pages. Illustrated. W. B. Saunders, Philadelphia.

Die angeborene Luxation des Hüftgelenkes. By Geh. Med.-Rat. Dr. Max Schede. 4to, 26 pages. Illustrated. Lucas Grafe & Sillem, Hamburg.

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Original Articles.

CHOLECYSTECTOMY FOR GALL STONES.[1]

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THE gall bladder was first removed in man by Langenbuch[2] in 1882; the operation proved a success both from the standpoint of technique and curative effect. This new "radical" method of treating cholelithiasis was for the most part unfavorably received at first. In later years its value was more generally recognized, but not along the line of usefulness planned for it by its originator, as most surgeons preferred to reserve it for secondary operations. It was also long after this advanced method was formulated, that even simple operations for gall stones became fairly common, and for some time it was lost to sight in the study of the advantages of cholecystotomy in one or two stages.

As a primary operation for the relief of gall stones it has never come into vogue, although it has always had individual champions. The script of the operation is essentially German, both by origin and practice.

In English-speaking countries the operation has generally been rejected or ignored. Certain French surgeons have used it with success, but have failed materially to increase its popularity among their colleagues.

According to a recent observation of Wolynzew,[3] the operation has been performed only six times in Russia.

It may fairly be stated that in this country the operation as a primary or optional measure is of great rarity. In the few instances that have been brought to the writer's notice the operation generally consisted in the removal of an atrophic calculi-containing bladder, usually buried in adhesions and subjected to such laceration in its search and the evacuation of its contents as hardly to leave any other choice than removal. The records of the New York Surgical Society contain only two cases out of the abundant material presented at its meetings for the last ten years, and they were of the character just described.

Cholecystectomy the writer believes has a far wider field of usefulness than would be indicated by the above. He finds also that certain operators of very great experience have become converted to its value with increased opportunities for its performance.

The operation has commended itself to the writer in two cases in which he employed it, although in each case the condition to be dealt with was quite different.

The history of the patients is as follows:

CASE I.—Mrs. R. F——, aged twenty-two years, admitted to St. Luke's Hospital June 3, 1899. Three months previously she submitted to double oöphorectomy at another institution. Since this operation she has had occasional uterine hemorrhages. She gives no history of symptoms referable to previous stomach, kidney, or liver trouble, except that she thinks she has been "bilious" for a few days before this attack. The bowels have been constipated.

Present illness: On the morning of June 2, she woke up with severe pain referred to either side of the upper abdomen and in the back. She had a distinct chill lasting twenty minutes. There was continuance of pain throughout the day. She began to vomit in the evening. To-day her pain continues but is confined to the right side.

On admission the temperature was 103° F.; pulse 120, of good quality and force. The face was flushed, but not presenting a picture of severe trouble. Examination showed a moderate amount of general abdominal distention. The muscles on the right side were very rigid. There was general tenderness over the entire right half of the abdomen, very marked and allowing of only superficial palpation, which yielded no information. Percussion was also without result. Vaginal examination was negative. The diagnosis was not made. She was originally admitted as a case of appendicitis, but it was believed that in the presence of the physical signs, together with the short history, the only possible form would be the extremely virulent type without limiting adhesions and general peritonitis; such a condition, in view of the absence of severe constitutional symptoms, was held to be highly improbable. Therefore operation was deferred. The next day there was a general remission of all symptoms. Palpation could be made more thoroughly, but still revealed nothing. The next day (the third in the hospital) she had a temperature of 100° F., and pulse of 100, rather small and jerky, and she looked bad. Fearing to delay any longer, operation was decided on. Under ether, palpation still remained negative. The incision was planned as an exploratory operation, being situated midway between the appendix and gall bladder; it being believed that one of these two structures was the site of mischief. The finger detected nothing in the cæcal region, and at first nothing above, but on enlarging the wound slightly upward there were found to be some soft vascular adhesions from the omentum and abdominal

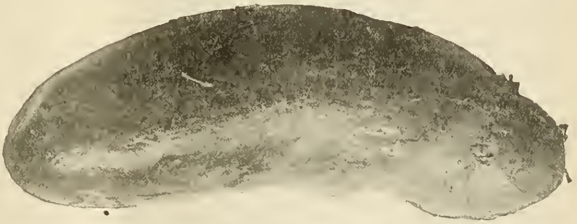

FIG. 1.—Case I. Unopened Distended Gall Bladder. (One-half actual size.)

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[1] Read at the meeting of the New York Clinical Society, March 23, 1900.

[2] "Chirurgie der Leber u. Gallenblase." Deutsche Chirurgie, Lieferung 45 c.

[3] Centralblatt für Chirurgie, 1900, p. 230.

wall, which having been penetrated revealed a large, elongated gall bladder lying parallel with but not coming below the edge of the liver; it was directed toward the right. It was felt to be full of stones. With a further enlarging of the wound along the edge of the rectus to the free border of the ribs, the entire biliary apparatus was exposed and found to be free except the gall bladder. This was surrounded by acute inflammatory adhesions. Aspiration of the fluid showed purulent contents. Removal of the gall bladder was performed with great ease by gentle blunt dissection after the cellular line between it and the liver had been entered. Holding up the fundus the cystic duct was easily exposed, ligated, and the gall bladder cut away. The stump of the cystic duct was further closed by a suture. Gauze packing of the pocket left by the removal of the gall bladder. Closure of the abdomen except at one angle for drainage.

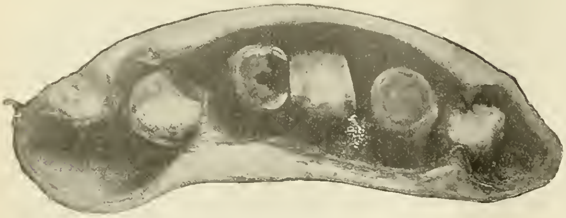

Fig. 2.—Case I. Section of Gall Bladder, showing Stones *in situ*.

The patient experienced no shock after the operation. Reaction was manifested by a temperature of 105° F. twelve hours after operation, after which convalescence was uneventful. The gauze was gradually removed. There was never any leakage, and the patient was discharged in a month with a firm wound and fully restored to health, which condition has since been maintained.

Case II.—Miss M. E. T——, aged forty-nine years; admitted to St. Luke's Hospital June 6, 1899. She has always been well except for the last two or three years. She has been troubled with palpitation of the heart and shortness of breath.

Present illness: Five months ago she began to feel a dull pain in the liver region, more marked when she lay on that side, also several attacks of sharp shooting pains, but lasting only a few minutes. Some two months ago she became jaundiced within twenty-four hours without any accompanying attack of pain. The urine became dark and the stools clay-colored the next day. She thinks there have been times when the jaundice has faded, only to return in a few hours, never entirely disappearing. She has lost sixty pounds of flesh.

Examination showed the patient to be very poorly nourished. The skin, mucous membranes, and conjunctivæ were of a deep yellow color. The skin in several places showed ecchymoses and petechiæ. The tongue was thickly coated. The liver flatness began in the sixth space; the edge of the liver could not be felt.

Operation, June 10, 1899. An incision was made six inches long, parallel to and just below the free border of the ribs. The gall bladder was found to be the size of a crab-apple, well up under the liver. A stone was found in the cystic duct and a larger one in the upper portion of the common duct. This latter was opened and both stones were removed; a dressing forceps was passed to the duodenum without obstruction, and a flexible bougie into the duodenum. The incision in the common duct was sutured with some difficulty and not entirely satisfactorily. There remained the gall bladder to be dealt with. As it could not be satisfactorily drained owing to its inaccessible position, it was removed by the free use of the scissors; some hemorrhage occurred, but not to any alarming extent *per se*, although all the operative field oozed freely throughout the operation. Packing of gall-bladder wound was done, with drainage of the site of the common-duct incision by a glass tube through which a rubber tube passed. The greater part of the incision was closed.

The patient did not rally well from the operation and required free stimulation. There was considerable bloody discharge on the dressing on the next day, June 11th.

June 12th: There was some discharge of bile on the dressings, still bloody; the jaundice was markedly improved, stools were yellow. She was still very weak.

June 14th: There was less bile but still a bloody discharge. Jaundice was decreasing; general weakness was increasing.

June 15th: Her condition was steadily getting worse. Bloody discharge continued. Fearing the weakness to be due to continued bleeding, the entire wound was reopened without an anæsthetic. An enormous hæmatoma was evacuated from the abdominal muscles. There was some oozing from the surface of the liver and other points, but no actual bleeding point was found. The patient collapsed rather suddenly, dying an hour later. No post-mortem was made. Death was due to exhaustion in a feeble subject, especially caused by continued oozing due to the icteric condition.

Briefly summarized, Case I. was that of a young patient with a chronic cholecystitis and the formation of large and numerous stones in the gall bladder, coming under observation during an acute exacerbation of cholecystitis. Cholecystectomy without opening of the gall bladder was early and speedily performed, all steps of the operation being accurately controlled by direct inspection. There was uneventful convalescence with entire restoration of health.

Case II. was that of an elderly woman, with intense and chronic jaundice, a small atrophic gall bladder with stones, and impaction of calculi in the cystic and common ducts. Choledochotomy was performed with evacuation of stones, and demonstration of freedom from further obstruction; cholecystectomy as the most rational means of dealing with the gall bladder situated out of reach under the liver. There was temporary benefit with restoration of biliary physiology. Death occurred by gradual exhaustion, chiefly determined by capillary hemorrhage due to jaundice. The cholecystectomy was not an essential if any feature in the fatal result.

The gall bladder was removed in the first case as a matter of expediency. In so doing the writer was influenced by the following considerations: (1) Avoidance of a long-continued drainage and its attendant annoyances. The cholecystitis was intense and of long standing, and drainage to be effective must necessarily be maintained for a long time. (2) Avoidance

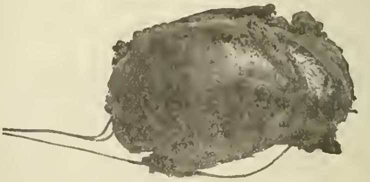

Fig. 3.—Case II. Atrophic Gall Bladder.

of a possible biliary or mucous fistula when the long-continued drainage was stopped, insuring a radical cure, which result can only be obtained with certainty by this method. (3) The avoidance of further disturbances, chiefly attacks of pain due to adhesions from neighboring tissues. Such disturbances were pretty sure to follow the acute inflammatory condition of the adjacent structures. (4) Because the operation presented no technical difficulties and could be easily and safely performed. Hence, given the above advantages it became the operation of choice.

In Case II. the sole indication was the difficulty or inadvisability of any attempt to deal with the gall bladder in any other way.

The foundation of these indications, the writer believes, is to be found in the following reasons. Other things being equal so far as safety and a restoration of the normal anatomy and physiology are concerned, a short convalescence unaccompanied by the discomforts attending the long-continued escape of bile, is to be preferred. The writer believes that in properly selected cases and properly performed the operation is as safe as cholecystotomy. In Case I. there was only the gall bladder to be dealt with, and the freedom of the rest of the extra-hepatic biliary passages was verified with unusual ease and freedom. The gall bladder was shelled out of its inflammatory bed with great ease—much more easily than the ordinary pus tube is removed. The structures at its junction with the cystic duct were all in plain sight, and the ligation and closure of the cystic duct were done with a perfect sense of their surety and effectiveness.

The avoidance of a biliary or mucous fistula was hereby guaranteed. It is a well-known maxim that if the bile ducts are free a sinus after drainage of the gall bladder closes readily. There are exceptions to the rule even if these conditions are fulfilled, and the proportion of fistulæ that require secondary operations, such as suture of the gall bladder or a secondary cholecystectomy, or some such ingenious expedients, is not inconsiderable. And there is a still larger number that close spontaneously but not for many months. Such a condition may not assume much importance to the surgeon, but to a nervous, hypochondriacal, self-observant person in the so-called higher walks of life it is a matter of the greatest importance, and the possibility of anticipating it is well worthy of consideration.

The insuring of a radical cure: Does a cholecystectomy insure a radical cure any more than does a properly conducted cholecystotomy with continuance of drainage till a return to the normal? It is the writer's belief that it does, because it is a radical cure; the focus of disease is at once abolished. It is, however, conceded that a cholecystotomy almost invariably does the same thing, but it is not a certainty. The impossibility of a positive cure in every case will be appreciated if one considers the pathological processes. Gall stones are the products of disease of the biliary passages and not its cause. The principal symptom of gall-stone disease is pain. Pain may be and usually is the result of inflammation of the gall bladder. The pain due to this inflammation is increased by the added complication of stones. Without inflammation of the gall bladder there is practically no pain, provided the stones are in a state of rest. "One in ten persons," says Kehr, "has gall stones; but ninety-five per cent. of persons having gall stones have no decided inconvenience from their presence." In reviewing the histories of a large number of patients after cholecystotomy, one is impressed with the scant evidence of actual re-formation of stones in the gall bladder. Further operations have not infrequently been necessary; but the stones have almost always been found in the ducts, from which they should have been removed at the time of the cholecystotomy. On occasions they have been found again in the gall bladder; but with an evident etiology, as in cases of Kehr and Homans, in which they had formed upon a nucleus of a silk stitch that had worked into the gall bladder. This circumstance would certainly show that the cholecystitis was not cured or the biliary salts would not have been deposited.

There is, however, a condition which is not uncommon after cholecystotomy, if one follows the cases, and it is the symptom that gives rise to the belief that the stones have re-formed, because of the recurrence of the prominent symptom—pain. It is due to the renewal of the cholecystitis, which, again to quote Kehr, "is a recurring condition, in which the succeeding attacks are of a much more pronounced character than appendicitis." To say that once for all this condition can be cured by one course of drainage, when especially there is a continued source of infection from the intestinal canal at hand, is to make an assertion that is contrary to all probabilities and cannot be substantiated by the usual course of analogous processes in the human economy. It is the recognition of this pathological basis of the symptoms that gives us the right to undertake more radical,—that is, curative measures.

The avoidance of disturbances other than those whose manifestations take place within the interior of the biliary passages. By this phrase the writer has in mind the very severe disturbances from adhesions formed by the gall bladder with neighboring organs. They are of very varied character, and not infrequently give rise to masses which so closely simulate a new growth as to make the recognition of their nature difficult, even after the abdomen is opened. They generally give rise to intense pain, and may provoke physiological disturbances of the organs to which they adhere. By some the pain of gall-stone disease is attributed more to these adhesions than to internal disturbances of the biliary tracts. The abdomen has not infrequently been opened without any evidences of stone formation being found at any point; but the breaking down of adhesions, either necessary to the search or intentional in purpose, has frequently given relief to the symptoms. This pain- and symptom-producing element, the writer believes, is a prominent source of the disturbances both before and after evacuation and drainage of the gall bladder; by any operation short of removal of the source of irritation, the condition is likely to exacerbations notwithstanding prolonged periods of latency. It is the writer's belief that this element of the pathological sequelæ of gall stone, though perfectly well known, has not been sufficiently appreciated. It is destined in the future, he believes, to be judged an important factor in the indications for seeking a radical cure.

The ease and safety with which the gall bladder can be removed in a given case are indications for its removal. This point the writer would particularly emphasize, as also the converse, that when for various reasons the operator believes the conditions are particularly difficult, and therefore attended with risk, the operation should be rejected, except under certain conditions when removal of the gall bladder is indicated because no other operation will approach it in effectiveness and safety. Such were the conditions in Case II., the atrophic gall bladder being situated entirely under the liver and therefore entirely unsuited to the normal process of drainage. Every case must be a law unto itself, and the operator must exercise his best judgment according as he finds the situation and according to his self-estimate of his capacity for successfully handling it. The writer therefore repudiates the operation as a routine measure, just as in like manner he would reject the operation of cholecystotomy.

A good many objections have been raised against cholecystectomy, and they are in great part perfectly justifiable if the operation is considered as a routine measure and not from what the writer believes to be its proper sphere. It is claimed that it has no advantages over the simpler and safer operation of cholecystotomy. Perfectly true in some instances; but that it has some very great advantages in general the writer believes he has demonstrated. The testimony of others bear out this statement.

In Duplay and Reclus[1]: "To-day cholecystectomy can and must be considered not only as a physiological operation, but also as a very rational intervention. The merits of cholecystectomy are therefore no longer in doubt." Kehr, in one of his most recent communications, and supported by an experience of nearly one hundred cholecystectomies, says:[2] "Cholecystotomy is not a radical operation, the reservoir so disposed to stone formation being left behind. With a recurrence of the inflammatory process, and when obliteration of the cystic duct results, the disturbances return *de novo*. Such a result has occurred in about six per cent. of the cholecystotomies, and for this reason I have more frequently resorted to extirpation in the last two years, now that I have acquired the necessary perfection of technique for its performance. I have never observed any recurrence of trouble after a cholecystectomy. . . . A cholecystectomy may be a severe operation; but not infrequently it is easier to do than a cholecystotomy. In one case the total time of the operation, reckoned from the first cut in the abdominal wall to the last suture taken in closing it, was only fifteen minutes." Attention is called to the great importance of this statement because it represents the views of the most experienced operator in gall-stone surgery, writing at a time when he had four hundred and thirty-three operations to his credit, of them "nearly one hundred cholecystectomies," and because it marks his conversion to an operation which only three years before he had performed only upon certain restricted indications. In his book[3] published at that time, his experience was based on two hundred and six laparotomies for gall stones, only twenty of these being cholecystectomies. So that while he has doubled his total experience, his operations for the removal of the gall bladder have increased fivefold.

He said then (page 65): ". . . . Total extirpation of the gall bladder is generally only indicated when there is generalized disease of the gall bladder, fistulæ, carcinomatous infiltration, calcareous degeneration or obliteration of the cystic duct." His last report on the mortality of his cases of cholecystectomy was 3+ per cent.

If space allowed, the changes of views of other individual operators due to increased experience might be offered: certainly we have in the radical change of opinion experienced by Kehr sufficient evidence in favor of the operation.

Still another objection sometimes advanced is "that the operation is more dangerous than cholecystotomy." This objection is granted by the writer; but he does not believe that it holds true if the cases are chosen with discretion. The procedure in its early days was damaged by some reports of cases, the unfortunate results of which were loudly proclaimed as definite reasons for the rejection of the method. Investigation of these cases shows that, for the greater part, the blame is not to be placed on the operation, but on the operators who chose to disregard Langenbuch's warning that a *sine qua non* of success depended on the absolute demonstration of the patency of all the ducts.

The operation is also objected to, "because, if stones should recur in the common duct, there would no longer be a guide to the duct." The writer is prepared neither to admit nor to deny that the presence of a gall bladder is necessary to find the common duct when it is the site of an obstruction of a size sufficient to cause it and demanding interference. He believes that only on theoretical grounds can this objection be supported. Langenbuch denies that obstruction can result from stones formed in the biliary ducts outside of the gall bladder. He points out that the two varieties of stone differ markedly in their chemical composition and in other respects. The gall-bladder stones, he believes, are mainly composed of cholesterin deposits and may attain a large size, while the stones formed in the hepatic duct are chiefly composed of bilirubin, and seldom if ever attain a size that makes them a danger.

The operation is also objected to, "because it deprives the body of an organ of more or less physiological importance. This objection can be dismissed pretty summarily by putting the burden of proof on the objectors to demonstrate that the gall bladder fulfils any useful function. As has been well said, it is "a structure of little value but of great importance." Comparative anatomy seems to treat the gall bladder rather as a joke: certain varieties of the animal kingdom have it, others have not; certain subdivisions of a given species are afflicted with it, while other members of the same group get along without it. The elephant has no gall bladder. Dogs, according to the most recent observations,[1] appear to resent the loss of a gall bladder, by setting up a compensatory hypertrophy of the cystic duct which replaces the lost organ. The reservoir function of the gall bladder must be considered as a physiological fairy tale; normally of the capacity of a *demi-tasse*, it cannot very efficiently store up much of the 600–900 c.c. of bile excreted daily.

There remains to be mentioned an additional indication for the performance of cholecystectomy which is destined to increase its future sphere of usefulness. The influence of chronic irritation in the production of malignant disease has long been recognized, but its practical application to prophylaxis is still little appreciated and still less practised. There are abundant statistics on the association of cancer of the gall bladder with gall stones. In all probability the cases of malignant disease of the gall bladder, not preceded by gall-stone formation, are the exception. It is therefore right, the writer believes, to remove the gall bladder which is endangered by its condition of chronic irritation.

It may be noted that throughout these indications for cholecystectomy it has been compared only with cholecystotomy. It may be asked why ideal cholecystotomy should not sometimes compete with cholecystectomy. This operation the writer now absolutely rejects, although he performed it with marked success six years ago, the patient remaining well while under observation (two years). With a greater experience and a clearer appreciation of biliary pathology he would no more venture to repeat the procedure than he would suture the incision made in an acute abscess. A gall bladder containing stones is a diseased organ, and the removal of the products of disease in no way influences the underlying pathological condition.

The scope of this paper forbids the consideration of the indications for cholecystectomy for conditions other than cholecystitis with or without cholelithiasis. Such details may be advantageously studied from the accompanying table taken from Kehr. It has been reproduced here in full that the reader may properly appreciate what an important part the operation of cholecystectomy performs in the treatment of the several varieties of biliary affections.

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[1] "Traité de Chirurgie," vol. vi., 1898.

[2] Sammlung klin. Vorträge, No. 225.

[3] Kehr: "Chirurgische Behandlung der Gallensteinkrankheit," Berlin, 1896.

[1] G. N. de Voogt: Centralblatt für Chirurgie, 1898, page 1097.

Variety of Affection.	Symptoms.	Diagnosis.	Treatment.
I. Stones in the bladder whose walls are little if at all diseased. Cystic duct patent. Contents of gall bladder, clear bile.	Symptoms almost constantly wanting (latent stage). Now and then gastric pains (temporary closure of the cystic duct). No passage of stones, no enlargement of liver.	Palpation negative. Occasionally slight tenderness in the gall bladder region (bimanual examination). Often mistaken for gastric ulcer, intestinal colic, floating kidney, hernia of the linea alba.	Medical.
II. Stones in the previously inflamed gall bladder. Cystic duct temporarily patent. Adhesions between gall bladder, intestines, and omentum.	As under I., frequently severe colic, due to kinking of cystic duct, from distention of gall bladder, causing vomiting and pain on pressure. Intervals may be entirely free from disturbances.	As above, during the colic tumor of the gall bladder is noticeable if the inflammation of the gall bladder continues to increase.	Operation is surely indicated if there are frequent relapses. The best one is cholecystectomy.
III. As in II. There are no stones, but adhesions exist.	Pain is frequently provoked by a change of position (sitting up). Otherwise as in II.	As in II. Patient's condition suffers markedly from its long continuance. Adhesions may cause stenosis of pylorus, obstruction, sense of oppression.	As in II., cholecystectomy is the best operation.
IV. Acute cholecystitis in a relatively healthy bladder. A large stone is usually impacted in its neck. Fluid cloudy or purulent. Walls thickened.	Gall-bladder tumor. Riedel's lobe. Jaundice infrequent. Severe pains (stomach). Prominence of upper abdomen. Marked tenderness on pressure. General condition not markedly affected if degree of infection is slight, but greatly so if severe. (Acute cholecystitis, with cholangitis. Circumscribed peritonitis (peri-cholecystitis). May or not have fever. Swelling of liver only if cholangitis.	Diagnosis is easy. Possible to mistake it for appendicitis. The diagnosis must demonstrate that the tumor felt is the gall bladder. (Form, mobility, tenseness, etc.) Usually constipation. If the cholecystitis ends with the expulsion of stone, obstruction of the common duct follows.	Best treatment is operative. Under medication (catharsis) the inflammation often subsides; the stone still remains. For the cholecystitis, cholecystotomy and drainage is the operation of choice.
V. Acute cholecystitis in an atropbic, frequently inflamed bladder. Cystic duct obliterated. Diffuse adhesions. A little muco-purulent fluid.	No tumor is felt because the gall bladder is high up under the liver. Pain as in IV. More frequent changes in the manifestations. Jaundice rare; if present, due to inflammation. No passage of stones.	Diagnosis difficult owing to negative palpation. Careful attention to the history is of the greatest help. With severe constitutional symptoms, purulent cholecystitis, without appreciable tumor, and without pronounced colic, has been mistaken for malaria, typhoid, and sepsis.	Cholecystectomy is the best treatment. Internal treatment is useless. Cholecystotomy in two stages, and deep drainage, frequently impossible.
VI. Dropsy of the gall bladder. Cystic duct blocked by stone, or obliterated. Contents clear and sterile. Walls thin as paper.	Symptoms may be lacking. Tumor is all that patient notices. Gastric pain frequent. No passage of stones, no jaundice, no enlargement of liver. Occasionally Riedel's tongue-shaped lobule.	Diagnosis easy. Bear in mind the possibility of mistaking it for floating kidney. The tumor (if no adhesions) is especially movable laterally, can be pushed backward, but immediately comes up again. Little tenderness on pressure. Dropsy of an *atrophic* bladder causes no tumor. Diagnosis then as in V. not easy.	Operation. Cholecystotomy with cysticotomy. Cholecystectomy.
VII. Empyema of the gall bladder. Pus in the gall bladder. Stone in the cystic duct. Adhesions. The disease is either (*a*) the result of an acute serous cholecystitis, or (*b*) begins as an acute empyema.	In the beginning symptoms as in IV., later fever may be wanting. Symptoms as in VI. Tumor is usually smaller than VI. Constipation.	An exploratory puncture must not be performed. Otherwise as in VI. With implication of the peritoneum, the picture of peritoneal irritation becomes most prominent. If perforation, symptoms of perforative peritonitis. In the beginning the tumor of the empyemic bladder very painful. Later the pain may subside, or even fully disappear.	As in VI.
VIII. Carcinoma of the gall bladder with stones, without involvement of the portal glands.	At first only disturbances of digestion. No jaundice. If the gall bladder and portal glands become involved, then jaundice. Tumor of marked hardness and unevenness. Later cachexia.	Little pain. At first diagnosis very difficult, usually made only with appearance of jaundice. With involvement of the portal glands (ascites) diagnosis becomes easy.	No use unless early cholecystectomy with resection of liver.
IX. Acute obstruction of common duct by stone.	Marked jaundice, colic, vomiting. Usually fever (chill). Remission of symptoms when stone passes into the duodenum. Passage of stones.	Diagnosis is easy. Colic is of the type known from time immemorial	Internal treatment. Morphine, hot applications. Operation only exceptionally required (drainage of the hepatic duct).
X. Chronic obstruction of common duct by stone. Stone in the supraduodenal portion.	Jaundice may be wanting. Varies. Stools now brown, now gray. Frequently intermittent fever. Pain is generally present, but may be entirely wanting.	Gall bladder usually cannot be felt. Liver more or less enlarged. Tenderness on pressure, more in the middle line. Spleen often enlarged.	Choledochotomy with appropriate treatment of the conditions present in the gall bladder.
XI. Chronic obstruction of common duct by stone. Stone impacted in the duodenal papilla.	As in X., jaundice is usually intense, less apt to vary.	As X.	Possibility of choledocho-duodenostomy. If after three months, medical treatment (Carlsbad) unavailing, operation is necessary.
XII. Chronic obstruction of the common duct by a tumor situated in the pancreas or duodenum, or obliteration of the common duct.	Marked and unvarying jaundice continually increasing. Stools always clay colored Usually absence of fever. Little or no pain.	Gall bladder generally enlarged. Spleen normal. Liver increased in size. Little or no pain on pressure.	Expectant treatment. Cholecystenterostomy.

In conclusion the writer would express his belief that cholecystectomy as a means of treating cholecystitis and cholelithiasis is called for under the following conditions:

In all cases of cholecystitis with or without stones, acute or chronic, provided that the gall bladder and gall ducts can be properly explored, and that the conditions promise an easy removal of the gall bladder. It is to be borne in mind, that the more distended the gall bladder, the more likely is its separation from the liver to be easy. And provided that the common and cystic ducts (sometimes also the hepatic) are demonstrated to be free from stone, and that in addition to stone there is no other obstruction of the lumen of the common duct such as a tumor, benign or malignant, of the pancreas.

The operation is also recommended even when its performance is difficult or possibly entails a slightly greater risk in a limited class of cases—that is, when it is the only satisfactory way to deal with the gall bladder (as illustrated in Case II.), and as a prophylactic measure against malignant disease in the presence of long-standing irritation.

If these various limitations receive a strict interpretation, the number of cholecystectomies that are justified by the above indications will be comparatively restricted, and the operation will be done only under circumstances that permit of its greatest usefulness with a minimum of risk.

48 West Forty-ninth Street.

Precautions Taken to Keep the Plague of Women from the Hospitals of South Africa.—Surgeon-General Jameson, speaking a few days ago at a medical meeting in London, and referring to the "plague of women" of which Mr. Treves had complained as infesting the hospitals of South Africa, said that already Mr. Treves' remarks had borne fruit, for he was informed that the engineers had encircled with barbed wires the hospital containing cases of enteric fever.

ACUTE SUPPURATIVE FOLLICULITIS OF THE SCALP.

BY WILLIAM S. GOTTHEIL, M.D.,
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THE inflammatory affections of the hair follicles form one of the most unsatisfactory chapters in dermatology. Their nature, varieties, classification, and nomenclature are still matters of dispute. Examining two or three of the more prominent text-books, I find that Hyde, under the caption of "alopecia follicularis," mentions a whole series of interesting and important affections of the hairy parts, which he admits have not as yet been distinctly differentiated from each other, nor the series from all others. Crocker mentions follicular disease of the scalp, but maintains that it is always secondary to eczematous disease of that organ. Lesser barely refers to folliculitis and perifolliculitis of the scalp, or sycosis capillitii, saying that it is of extremely rare occurrence.

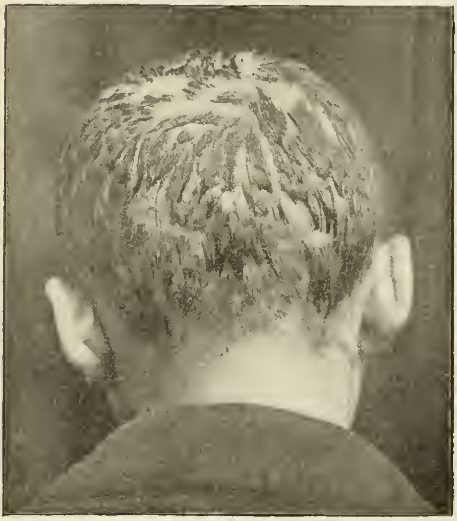

FIG. 1.

Follicular inflammations of the scalp similar to the ordinary folliculitis, or non-parasitic sycosis so common on the bearded face, have been described by several authors under an astounding variety of names. Thus we have the folliculite destructive s. epilatoria of Quinquaud; the folliculite et perifolliculite décalvante of Brocq; the alopécie cicatrisante innominée of Besnier; the acne décalvante of Lailler; the ulerythema sycosiforme of Unna; the dermatitis perifollicularis atrophicans of Sack; the conglomerate pustular perifolliculitis of Leloir; the folliculitis exulcerans of Lukasiewicz; and the bacillogenous sycosis of Tomassoli. And even this by no means exhausts the list.

There can be no doubt at all that several distinct affections, all characterized by a follicular or perifollicular inflammation of the hair sacks, and leading, with or without suppuration, to loss of hair and atrophic changes in the tissues of the scalp, are included in this list. The analysis and classification of these cases is a task that must await a wider experience and more exact records. Certain prominent characteristics, however, are noticeable in all of them. The affections are all chronic, with a duration extending over months and years; they affect localized or isolated areas of the scalp; and they are rarely frankly suppurative, the inflammatory process being subacute and the resultant atrophy being due to interstitial absorption of tissue.

I have had occasion during the last year to observe two cases of follicular inflammation of the scalp which differ in many essential characteristics from those recorded by the authorities mentioned above. In both the process was acute, lasting only a few weeks; the entire scalp was involved, every single hair being affected at about the same time; suppuration was frank, occurring in all the hair follicles; and there was no resultant atrophy of the hair papillæ or other structures of the scalp, and, although I have been unable to find any cases resembling it in its essential features, I have no doubt that the affection occurs occasionally, more especially among the foreign-born and less cleanly of our population, and that other instances will be recognized when attention has been called to the disease.

One only of the two cases above referred to was observed with care during its entire course. It was referred to me through the kindness of Dr. George Lesser of this city, and was under observation from February 18th of this year until the present time (December 15, 1899). Its history is typical, and is detailed below. The other case occurred in a child aged six years, also of Russian parentage; the process was similar, though not so acute, and the patient disappeared from observation after a few visits to the dispensary.

History: L—— G——, aged sixteen years, February 18, 1899. The patient is a well-grown girl, apparently in robust health. She has menstruated for two years, regularly until three months ago; since which time, without any other symptoms, she has been amenorrhœic. Her past history is entirely negative. So far as the surface of her body, other than the scalp, is concerned, the only abnormality is a scar on her left loin, due to a burn received in childhood, and which is occasionally irritated and made sore by the corsets that she wears. Seven months ago a blister

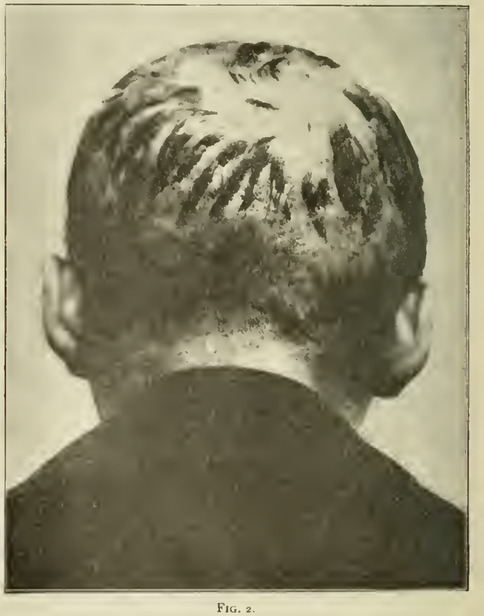

FIG. 2.

appeared on the scar, followed, when it broke, by some suppuration, but which healed promptly under a simple vaseline dressing. She states that this lesion occasionally becomes chafed and opens, as she terms it, and that then there is some discharge from it. Her scalp has always been covered with an abundant growth of fairly coarse black hair, and, until the present affection appeared, she has never had any trouble with it. Some three weeks before, and at a time when the scar on the loin was irritated and discharging, she noticed a painful, pinhead-sized blister among the hair at the front of the scalp. It grew bigger, and filled up with matter, finally rupturing, and when the crust that formed came away it carried the hair shafts with it. After the blister had ruptured, the process was entirely painless; and the patient did not know that the hair had fallen until she accidentally discovered, in the looking-glass, the red bald spot of the exact size of the pre-existent crust. While this process was going on with the first lesion, a few other small blisters appeared on the back of the head, which were hard and very painful, so that she could not rest on her back in bed. The patient cannot report concerning the appearance of these lesions, since she could not see them; but they were undoubtedly similar to the first one, and, like it, left reddened and hairless areas of skin behind them.

Dr. Lesser first saw the case at this time, and reports that there was then a bald, reddened, depressed, tender, bean-size, and apparently cicatricial area on the scalp near the frontal margin of the hair, a few similar lesions were on the vertex and back of the head, together with a number of tender and indurated nodules over which the hair was tightly matted with secretion. Treatment with various ointments and applications did not stop the progress of the affection. New nodules began to appear with frequency, and the older ones commenced to suppurate.

As it was impossible to treat the scalp effectively in the condition in which it was, and as the patient refused to have her hair cut off, she was sent to a well-known specialist for diagnosis and treatment. The diagnosis made was apparently pediculosis, and an application was ordered to be used for twenty-four hours, with the warning not to go near a fire or light while employing it. Inquiry showed that this application was the customary mixture of vaseline, kerosene, and olive oil, with a small amount of balsam of Peru. This she used for one day; and she claims that it burned her so terribly that she lay awake screaming with pain the whole night. Emollient applications were thereupon ordered by the attending physician, with some relief from the pain.

Meantime new nodules appeared continuously, until the whole scalp was involved. From time to time the older crusts would become detached without pain; the entire hair of the affected area coming with them, and bald spots being left behind. The patient felt very bad; she was feverish, and lost her appetite. Her sleep was much disturbed; and during this whole period the only position in which she could rest in bed was prone upon her abdomen, with her face upon the pillow.

On February 21st I examined her carefully. She looked pale, depressed, and anxious; but was otherwise in fair health and well nourished. Her scalp was covered with an abundant growth of thick, bushy, black hair. Near the head this was firmly matted down by dried secretion, ointment, and débris. There was no trace of pediculi or their ova. Scattered all over the scalp were hairless, pea to quarter-dollar sized, reddened, slightly depressed, and moderately tender areas; most of the rest of the scalp was invisible, being covered with the matted and crusted hair. In the few places where the scalp was visible, it was covered with minute red papules, papulo-pustules, and pustules, each one pierced in its centre by a hair. A number of minute pustules were also visible on the redder, tenderer, and more recent bald spots. Removal of the crusts was excessively painful; but, once loosened from their adhesion to the scalp, they were readily taken off, and in each case the entire bundle of hair growing from the affected area was removed with them. The entire scalp was œdematous and excessively painful; the cervical lymphatic glands were moderately swollen. She was ordered to apply cloths thoroughly soaked in two-per-cent. salicylic-acid oil to the scalp, and, after softening, to try to remove the crusts with warm water and soap.

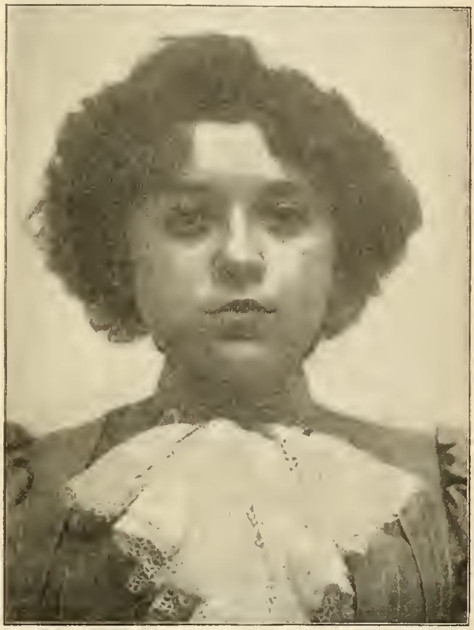

Fig. 3.

On February 26th I noted that the patient had been unable to remove the crusts on account of the pain. More or less extensive suppuration was going on under many of them; and at various places, some of them already denuded, deeper abscesses had formed, which were evacuated. As it was impossible to treat the scalp, or even examine it properly, she was directed to cut the hair off as close to the skin as possible.

March 1st: On this date I took a negative of the patient's head (Fig. 1). All the surface of the scalp not already denuded was covered with closely adherent crusts containing bundles of matted-down hair. Removal of these crusts was still intensely painful; but I succeeded in persuading her to allow me to displace several of them. In every case all the hair came out with the crust, leaving a reddened, slightly moist, and depressed scalp behind. Even where the adherent material had been softened by the applications employed, the hairs came out on removing the débris; the shafts seemed to lie entirely loose in the follicles. But few new pustules had appeared lately; probably because all the hair follicles had been or were involved.

From February 21st to date I made a number of careful microscopical examinations of the hair shafts and crusts. The hairs were always normal, not frayed, and contained no fungus. The crusts and scales consisted of masses of epithelium and fat, with detritus and various bacteria, but with neither mycelium nor spores. As suppuration was in active progress under all the crusts, and as at each examination a number of larger pus collections had to be opened, I proposed the anæsthetization of the patient and a thorough cleansing of the scalp. This, however, the patient refused; and she was, therefore, ordered to wash the scalp as thoroughly as possible every day with warm water and tar soap, and to apply cloths thoroughly soaked in carron oil.

On March 13th I noted that the patient's condition was about the same. A few new pustules had occasionally appeared, and many of the older crusts had been removed, so that the scalp was now about two-thirds denuded of hair. The older bald areas were less red and tender, and the crusts were now more readily removed. There were a few boggy, infiltrated areas of pus collection, which were freely incised. Careful examination revealed the presence of a number of minute, colorless lanugo hairs springing up over the oldest denuded areas. There was no other growing hair upon the scalp; only detached hair matted in the still adherent crusts. She was placed upon a three-per-cent. xeroform-olive-oil suspension in the place of the carron oil.

March 31st: The patient claimed to have got great relief from the last application. She could now, for the first time in many weeks, sleep upon her back, and rest her head upon the pillow. A new crop of minute pustules had, however, appeared upon the denuded and partially lanugo-covered occipito-cervical region of the scalp. They presented in exquisite form the original lesion of the disease, being pin-point to pin-head sized, seated on inflamed bases, and pierced each in its centre by a delicate lanugo hair. It was evidently a recrudescence, or, rather, a renewed infection of hair follicles that had already been involved, and gave me an excellent opportunity to study the disease in its various stages. The pustules increased in size, and finally ruptured, extruding the lanugo hair of the follicle in the pus. But the lesions were isolated and discrete; and, as there were no long hairs to be matted together and retain the pus, they ran a short course and gave the patient little trouble. The accompanying illustration shows the condition of the head at this time.

On April 14th I noted that the patient was now quite comfortable; almost all the crusts were gone; and of her original stiff black hair not a trace remained, save the few loose bundles that were still held in the crusts. The older lesions were now white and covered with thin, fluffy lanugo hair of very light color. No new lesions had appeared. The xeroform oil was continued.

I saw the patient from time to time during the next two months. No fresh lesions appeared; all the crusts came off; the denuded areas whitened; and finally the whole bald scalp began to be covered with an abundant growth of lanugo hair, which in its older portions was already getting longer, stiffer, and darker. All treatment save vigorous cleansing and brushing of the scalp was stopped; a good prognosis as to the restoration of the hair was given, and the patient was discharged.

I sent for her on December 1st of this year, and the accompanying illustration from a photograph (Fig. 3) will give an idea of the condition of her hair. Her scalp was normal, and her hair as abundant as it was before she was attacked by the malady. It was, however, thinner, somewhat lighter in shade, and more curly than was the original pilous covering.

Apparently, then, the case was one of acute general suppurative folliculitis of the hair sacks of the scalp. It is possible that infection occurred from the lesion on the loin; and also that the kerosene applied during its early stages hastened its spread. But its acuteness and generalization, and its superficiality, as shown by the fact that, though apparently all the hair follicles were involved, and every hair shaft detached, the papillæ were not destroyed, and permanent baldness did not result, combine to form a picture that differs essentially from the folliculitides of the scalp described by the authors mentioned in the begining of this paper.

THE EFFECT OF SUMMER HEAT UPON THE PUBLIC HEALTH.[1]

By HENRY DWIGHT CHAPIN, M.D.,

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THE effect of climatic changes upon the public health is a subject of great interest and importance. When certain conditions are known to be approaching, it is the duty and privilege of preventive medicine to indicate plainly where the dangers lie, and what may be done in an endeavor to obviate them. The depressing effects of continuous heat may be shown most on the nervous and digestive systems, and the extremes of life are especially vulnerable. With reference to the gastro-intestinal tract, not only does great and continous heat depress the digestive power and hence make for disease, but the food supplies also depreciate from the influence of heat, and fermentation has frequently begun before the nutriment is ingested.

A glance at the summer death rate from gastro-intestinal diseases, in comparison with the winter rate, is suggestive in this connection. Four summer months are compared with four winter months during the past five years in the following tables, which will be preceded by a statement of the mean temperature and mean humidity of the summer months:

	MEAN TEMPERATURE (FAHR.).				MEAN HUMIDITY.			
	June.	July.	Aug.	Sept.	June.	July.	Aug.	Sept.
1895	72.80°	72.50°	75.60	70.80°	71	78	64	63
1896	69.80	76.80	76.10	67.20	69	72	69	74
1897	67.40	75.90	73.20	66.90	69	71	69	65
1898	71.10	76.00	75.30	70.20	73	80	78	69
1899	74.10	76.20	75.11	66.10	68	66	75	64

	DEATHS FROM GASTRITIS, GASTRO-ENTERITIS, AND ENTERITIS.				DEATHS FROM DIARRHŒA, UNDER FIVE YEARS.			
	June.	July.	Aug.	Sept	June.	July.	Aug.	Sept.
1895...........	112	344	223	179	281	1,084	564	441
1896...........	148	313	260	176	363	880	446	245
1897...........	116	301	248	203	220	914	650	319
1898...........	75	318	304	244	157	834	643	461
1899	150	391	221	210	176	608	276	187
Totals	605	1,667	1,256	1,012	1,197	4,320	2.579	1,653

	Nov.	Dec.	Jan.	Feb.	Nov	Dec.	Jan.	Feb.
1895...........	34	54	44	51	41	35	49	29
1896...........	34	57	61	38	41	36	38	36
1897...........	43	42	47	60	46	30	39	42
1898...........	56	56	50	50	31	26	20	23
1899...........	59	54	43	41	23	25	15	34
Totals..	226	263	245	240	182	152	161	164

I am indebted to Dr. Tracy for access to the board of health records.

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[1] Read before the Medical Society of the County of New York, May 28, 1900.

A glance at these tables shows the enormous increase of the summer mortality from gastro-intestinal diseases over the corresponding winter months. It is especially noticeable in the deaths from diarrhœa, in children under five years. One encouraging feature, however, will be seen—that there is a certain diminution in the death rate at this period during the past five years. This is doubtless due to the improved sanitary condition of the city, with a stricter supervision of the food supply, especially milk. There has also been a certain improvement in drainage, sewerage, and the ventilation of dwellings.

It has long been recognized by sanitarians that the death rate among infants, and especially the prevalence of diarrhœal diseases among them, are sensitive tests of the general sanitary condition of the community.

One of the greatest dangers during the heated term consists in sunstroke. The following table shows the deaths from this cause during the past five years, during the four summer months:

Deaths from Sunstroke.

	June.	July.	August.	September.
1895...........	45	4	18	13
1896...........	5	30	725	
1897...........	3	28	2	6
1898...........	..	75	46	253
1899...........	80	10	5	
Totals	133	147	796	272

In looking over the records of the board of health, the most fatal recent years from sunstroke are 1892, 1896, and 1898. The deaths from sunstroke during 1896 reached the enormous number of 765; of this total 671 occurred in one week, and 52 during the weeks immediately before and after, making a total of 723 during the three weeks covering the extreme heated period. If we take the day when the greatest number of deaths occurred as a culminating point of the period of extreme heat in each case, including in each period all days when the temperature rose to 90° F. or more, we find that the culmination in 1892 was on the fifth day, and in 1896 on the eighth day. The greatest number of deaths in any one day was 350 in 1892 and 386 in 1896. The noticeable increase in the number of deaths began on the second day in 1892 and on the fifth day in 1896. Whether this postponement of the fatal effect of extreme heat has been due to a difference in other meteorological conditions than heat alone, or whether it is due to an improved sanitary condition of the city, rendering the population more vigorous and more capable of resisting the morbific effects of heat, cannot be positively determined.

The year 1898 was an exceptional one in that the vast majority of deaths from sunstroke, 253, occurred in September.

A most depressing influence, where there is a continuance of great heat and humidity, is the coexistence of hot days and hot nights. If the nights are so warm that sleep is interfered with, there is little opportunity for recuperation from the exhaustion of the day.

Depression of the nervous system by heat is apparent in lassitude and a general vulnerability to disease. In two nervous affections, the death rate is actually higher in summer than in winter. Thus, during the four summer months of this period, there have been 1,399 deaths from meningitis reported, while during the months of November, December, January, and February of the same period, there were only 1,040 deaths from meningitis. Probably a certain number of cases of meningitis reported were, however, spurious hydrocephalus following infantile diarrhœa. During the five years there were 781 deaths reported from convulsions, while during the winter months the number reached only 737.

In looking up the deaths from alcoholism, there have been fewer reported in summer than in winter, 460 being the number for the summer months, against 525 for the four winter months of these five years. It is well known, however, that alcoholism is a common predisposing cause of death in sunstroke.

The actual increase of sickness in any community due to summer heat is hard to estimate; everything possible, however, that preventive medicine can suggest should be employed to obviate the deleterious effects of heat. A consideration of this subject must include in its scope an oversight of the city, the house and the life and habits of the people. The responsibility of the city is to be doubly watchful in the interests of public health; the streets must be kept scrupulously clean, all garbage and decaying animal and vegetable matter must be promptly removed and destroyed. Perishable food-stuffs, particularly cow's milk, require the greatest watching and regulation As hinted above, the work of the board of health in this connection has already borne fruit.

With reference to milk, while a minimum proportion of cream is now called for by law, there should be a certain standard of freshness as well. The number of bacteria found in each cubic centimetre of milk bears a direct ratio to the age of the milk, as well as the proportion of lactic acid. What is needed is a better regulation of the city's milk supply at its source, viż., the dairy farm. A committee of this society is now at work on this problem and hopes to be able to secure a fresher and cleaner milk for all desiring it.

A very efficient way in which the city can modify the deleterious effects of the heated term is by planting trees and furnishing small parks and breathing-places. In the *Popular Science Monthly* for February, 1899, Dr. Stephen Smith shows how trees are of the greatest utility in modifying and equalizing climatic conditions. He calls attention to the fact that an average temperature of the air of 54° F. is best adapted to public health, as at that temperature the decomposition of animal and vegetable matter is slight and normal temperature is most easily maintained. Every degree of temperature above or below this point requires an action of the heat-regulating power to maintain a proper equilibrium.

In a densely populated city, the summer heat is conserved and reflected by the stone and asphalt of the street as well as by the bricks and mortar of buildings. Even during the night, the stones, by retaining their heat, prevent any appreciable fall of temperature. Here is where the modifying effects of trees can be most beneficial. As trees maintain an average mean temperature of 54° F. in all seasons, it is easy to see what a constant cooling influence they possess in an atmosphere of 90°. Add to this the constant exhalation from the leaves of watery vapor, that has been absorbed from the moisture in the soil and from the surrounding air, and the cooling effect is much enhanced. This takes place most actively during the heated portion of the day when it is most needed.

A general purification of the air is not the least benefit to be derived from vegetation, as carbonic acid is absorbed and oxygen given out, just the reverse of what takes place in the animal economy. The purifying and cooling influence of trees placed uniformly through the city would have a marked influence on the public health in summer. The Tree Planting Association of New York has proven that various species of trees are adapted to our soil, and with a little care can be made to thrive. It seems, however, that in a matter that concerns not only the health but the beauty of the town, the city itself should be responsible for a uniform and continuous effort. If our thoroughfares were lined with shade-trees, the summer heat would not be so intolerable and unhealthful. The construction of the underground road through upper Broadway will injure the life of the beautiful rows of trees now planted in that thoroughfare. It is much to be hoped that not only in the interests of beauty, but of public health as well, efficient steps may be taken to preserve the life of these trees. New York is bare enough without sacrificing any vegetation in a satisfactory state of growth.

With reference to the domicile, the proper efforts must be made in the line of extra cleanliness. Food of all kinds must be removed when the meal is ended and all decaying refuse be not allowed to accumulate. Sometimes by keeping rooms closed during the heat of the day, and thoroughly aired at night, a certain equalization of temperature will result.

With reference to individual hygiene much may be accomplished by a proper observance of the laws of health, especially with reference to eating and drinking. Doctors must especially protest against the indiscriminate use of alcoholic liquors during a prolonged hot spell. Eating to excess of nitrogenous food and rich and "made-up" dishes is also injurious. Overfatigue during the heat of the day should also be discouraged. The temperature of the body may often be satisfactorily lowered by a tepid bath, the effects of which will often remain longer than when a cold bath is used.

With reference to food, extra care must be taken that it is fresh, as a slight spoiling is most disastrous to the consumer. This is particularly true with reference to the universal food, cow's milk. It is estimated that there are 146,600 children under the age of three years in the boroughs of Manhattan and Bronx, or 6.72 per cent. of the whole population. This immense number subsists principally upon milk. Recent studies show that if cow's milk can be properly cooled it will keep a considerable time, and is much better than relying too largely upon superheating. Here is where the subject of ice comes properly under the physician's notice. Any difficulty in the free procuring of ice by the poor during the heated months, whether from a natural scarcity of this article or from a cornering of this staple by commercial greed, is a public calamity.

In 1896, during the heated term the death rate among little children rose to such an alarming state that the board of health requested the city authorities to distribute ice freely among the poor. This was done during the heated term, and doubtless resulted in a great saving of life. The streets were likewise flushed at this time.

SEASICKNESS AND WHAT TO DO WITH IT.

By HERMAN PARTSCH, M.D.,

BROOKLYN, N. Y.

"Repetition is the law of impression," said the Rev. Robert Mackenzie, and that explains why I have not yet succeeded in impressing the susceptible seagoing passenger with an understanding of the theory that explains and the method that succeeds in reducing seasickness to a minimum of about one-tenth of what it may otherwise be. No drugs nor any extraordinary procedures are involved. It is a little matter of simple instruction, which, when repeated to the point of impression, is likely to result in action and do some good. I must therefore repeat the effort, though the words may not be the same. But, first, may I be allowed to account for my position as a self-constituted instructor on this subject?

The first two and one-half years of my professional career were spent as medical officer on various ocean steamships. In April, 1886, the Medical Society of the State of California awarded me a prize for an essay on "Motions in the Etiology of Seasickness." This was published in the *Pacific Medical and Surgical Journal*, November, 1886. In 1890, a Boston firm published for me a book of one hundred and ninety-six pages on seasickness. The undertaking, I suspect, may have proven fatal to the firm's existence, as I have heard neither of the firm nor the book for six or seven years. Also in 1890 I issued a little pamphlet for the instruction of susceptible passengers in regard to seasickness. My efforts on this subject received the hearty and unsolicited approval of Dr. L. C. Lane, president of Cooper Medical College, who was competent to judge by virtue of four years of experience of his own at sea. Approval came also from many other good sources, and, besides, from the four principal steamship companies operating from San Francisco.

By means, then, of the following instructions, understood and based on the brief explanations that are thrown in and also to be understood by the person who is managing his own case, or conducting the case of another, the worst degree of seasickness can easily be replaced by a condition of comparative comfort under the circumstances.

Make no other preparation calculated to avoid seasickness. Continue in your usual ways. A steamer chair will prove a desirable convenience if the voyage is to be long and the weather happens to be good.

Get on board a half-hour before sailing, get your cabin and small luggage arranged to suit you, and have nothing to do but take care of yourself after the ship starts.

Shoes should be warm, comfortable, and easily put off or on. Besides being comfortable, have all clothing as convenient as practicable for dressing and undressing.

Rooms amidship are preferable. Avoid the extreme ends of the ship. Good facilities for ventilation are very necessary.

Strive to have the air inside of the room about as good as outside, even when you are in it; do at least the best you can under the circumstances toward this end. Two sufficiently large openings to the room are necessary. Good, clean, fresh air is of the greatest importance to the susceptible passenger. There is no danger from draughts. Second-hand air is a factor in the causation of seasickness.

Weather and condition of health permitting, stay on deck much of the time, in a steamer chair, in a semi-recumbent position, comfortably covered and eyes closed.

Anywhere on ship, in berth or chair, keep the eyes closed during the daytime, with exceptions of short duration, until immunity from optical vertigo is acquired. Thus you will exclude optical vertigo, by which are meant that dizziness and nausea which are often consequent on the continued observation of unusual relations among our environs, and between them and ourselves.

Whenever the slightest sensation of illness is felt, lie down at once and close the eyes. Use only one pillow, or if quite sick, or it seems likely that you will be, have the head even below the level of the body, with no pillow for a while. I have seen the pillow make all the difference between great misery and almost absolute comfort.

Steamship motion can be analyzed into twenty-six different factors. It is therefore very complicated and, of course, incomprehensible at first. The many variations occur to the passenger unawares. His animal mechanism cannot adjust itself to them, because he cannot at first foreknow them. The case becomes much like that of going up or down stairs in the dark and finding one step more or less than was expected. The variations not being adjusted to, because not foreknown, violence of some kind is the result. The disturbances occur in a continued series, each very slight, but the series results in an accumulated sum of violence which we call seasickness.

What is first disturbed in the animal mechanism is the vaso-nervous system, that which controls the circulation of the blood, and, as a result, the circulation itself must of course be disturbed. The first important result is a relaxation of the blood-vessels in the abdominal cavity; these vessels having much less outside support than those that traverse muscular tissue.

The second effect is the gravitation of blood into the relaxed vessels, thus permitting the occurrence of a deficiency in the brain. One result of this deficiency in the brain is the sensation called nausea. This mechanical deficiency of blood in the brain, with its corresponding sensation (nausea), is to be avoided when observed to be approaching, and corrected when already present, by lying down with the head no higher than the body. If the patient does not promptly lie down, retching will take place. Retching is nature's method of flooding the brain with blood, by squeezing the contents of the abdominal cavity in such a manner as to force upward some of the excess of blood contained in its relaxed vessels. The regurgitation of food or fluids from the stomach is merely incidental, and not essential. The stomach has nothing to do with seasickness except to be incidentally and accidentally implicated.

By the time a patient has been seasick two or three days, and his forces have regardless of his consent been heavily drawn upon by many hours of retching, and having meanwhile, of course, not profited by anything swallowed, he will be suffering from poverty of blood. The sense of hunger will be obscured by the nausea.

Even while lying down, a susceptible passenger will not escape seasickness if his blood becomes impoverished in respect of nutritive material; and, having been seasick, he cannot recover while his blood remains so impoverished. To prevent seasickness one must keep his blood saturated with nutritive material. To recover from seasickness one must saturate his blood with nutritive material. For this purpose one must eat, and if unable to eat enough at a time, he must eat oftener. To eat seven times a day is about right; the three regular meals, ten to fifteen minutes before rising, half-way between meals, and at bedtime.

Always eat and drink at least ten minutes before rising in the morning. It matters little what it is, provided only it is what you want. Porter or stout is good, so are hard sour apples. At sea we may find ourselves liking and longing for things that we hardly ever think of on shore. Whatever you really want, that is the best thing to take; and porter or stout is always good, whether you want it or not.

Whatever is taken before rising must be so conveniently available as not to require the patient to raise his head. In case of porter or stout, the glass must be dispensed with and the liquid taken directly from the bottle.

When one is already seasick, those liquid foods are best which require least digestion, are most rapidly absorbed, and yield the quickest returns—beer, ale, porter, stout, broths, soups, meat extracts. These cannot all be prescribed with success; they should only be suggested—then the patient will choose which he wants, and the stomach will agree on the choice. The sicker the patient the oftener he must eat and the less at a time, and when he feels a repugnance to all other foods, porter or stout taken without raising the head, directly from the bottle, a mouthful at a time, at about five-minute intervals, will prove a great success.

A woman taking care of herself will not generally attend to these details, but will suffer instead. But if she have the help of another who will promptly attend to each detail at the right time without stopping to ask the patient's consent, the scheme works beautifully.

If you are able to be up and about and are regularly going to meals, then always lie down immediately after eating, about fifteen minutes at least. At table do not wait, but begin eating at once on something, or delay going to table until the rush is over, or stipulate with your waiter for immediate attention. When done, do not wait, but go directly to your berth or elsewhere and lie down.

Whenever there appears the slightest sensation of hunger, or nausea, or any indescribable sense of discomfort about the stomach, or in the head, eat and lie down.

The worst case of seasick retching will easily be made comparatively comfortable in thirty minutes or less, by lying down without a pillow, closing the eyes, and taking a pint of porter or stout in six doses at five-minute intervals. Another food for such an emergency, but not so good as stout, is made by mixing well the yolks of two raw fresh eggs with an equal bulk of good brandy. Give a teaspoonful at ten-minute intervals. If you do not feel quite well with a pillow, remove it, and you will feel better. This is very important.

Retching occurs in paroxysms at intervals more or less regular. The best time to take the malt beverage, or any other food, is just after a paroxysm of retching. Should it be taken before and thrown up, then take another dose immediately after the paroxysm. That will stay down, because the next paroxysm will not occur under ten to fifteen minutes, and by that time the patient has had the benefit of the dose, or several doses, and should not retch at all. So after casting up an entire meal it is proper to go and straightway eat another, which is not likely to come up.

All necessary edibles are, I believe, supplied by the steamer steward; but on short voyages it may be more convenient to have one's own variety of such things for extra use in one's cabin. In so providing one should bear in mind the presence of rats on some steamers.

Avoid all needless expenditure of mental or muscular energy. Talking, reading, and listening are done at the expense of power, which the patient may not have to spare, and should be reduced to a minimum by the susceptible at sea.

When the patient is eating too little to keep the bowel well filled, constipation will be only apparent. He must not expect to discharge much cargo when he is taking little in. Respond promptly to the calls of nature. On long voyages when the patient has begun to eat fairly and the bowel is well filled, and real constipation is present, it will be better to resort to instrumental means for relief daily by using an enema of glycerin; twenty drops, more or less, will be sufficient. Do not mix it with water or anything else. The use of purgative or laxative medicines is attended with too much additional and general violence.

Seasickness is sometimes accompanied by severe headache or by much mental uneasiness. If these do not yield to the treatment already prescribed, then bromide of sodium may be given in a dose of half a teaspoonful of the dry powder in a little water; repeat the dose in an hour if necessary. The bromide of sodium may be used with the patient's food as salt (which it much resembles in appearance and taste), but only while the necessity for it continues. Should there be any doubt about its necessity, do not use the bromide at all.

If these directions are promptly, fully, and faithfully executed, the passenger will be able to endure a sea voyage of any length with not more than a tenth of the illness that he might otherwise suffer, and this minimum of discomfort can be without retching. I have promised to get people of known susceptibility across without retching, and have fulfilled my promises.

95 Hicks Street.

Diagnosis of Raynaud's Disease.—Adolf Calmann reports a number of cases which he holds confirm the opinion that the Raynaud symptom complex may occur without demonstrable anatomical disease of the central nervous system, and add to the number of cases in which the Raynaud manifestations are only symptoms of an affection of the central nervous organs, especially of the spinal cord. They afford no grounds for considering a disease of the peripheral nerves as the cause of symmetrical gangrene, equally little for hysteria. The author says, however, that those who assume an immaterial trouble of nervous nature in all of the Raynaud cases far overshoot the mark. Opposed to such a partial opinion are a not inconsiderable number of observations which demonstrate *in vivo* or by obduction an anatomically developed disease process to be the cause of the local asphyxia and its sequelæ.—*The Alienist and Neurologist*, April, 1900.

Sprains.—S. H. Huntington holds that in the treatment of sprains our first object should be to check hemorrhage from the torn vessels and to limit the extent of the injury to what has already occurred. This is best accomplished by firm, even pressure, obtained by strapping the sprained joint with strips of adhesive plaster. If properly applied in sprains of the ankle, the pain is immediately relieved and the patient can walk at once. If the conformation of the sprained joint forbids the use of the plaster straps, apply firm pressure by means of an unyielding muslin (not rubber) bandage, first carefully padding all hollows. A thorough douching of the parts with very hot water may precede the application of the dressings. Passive motion of the sprained joint should begin as early as the second or third day. If motion is made only in the direction and to the extent that the joint is naturally capable of, there is no possibility of stretching or displacing injured parts, and the formation of adhesions will be prevented.—*Yale Medical Journal*, May, 1900.

Pancreatic Digestion from the Standpoint of the Comparative Anatomy of the Bile and Pancreatic Ducts in Mammals.—B. K. Rachford says that certain anatomical conditions have been developed in the carnivora which have the effect of so slowing the rate of passage of food through the duodenum that the time of exposure of foodstuffs in the duodenum of these animals to the action of bile and pancreatic juice is greater than in the herbivora. From these facts one would infer that it is of physiological importance that the fats and proteids should be retarded in their passage through the duodenum in order that they may be longer acted upon by the bile and pancreatic juice while the food yet contains combined acid, and before it reaches the alkaline succus entericus of the jejunum and ileum. This physiological inference finds support in laboratory experiments made by the author.—*Medicine*, May, 1900.

The Pulmonary Complications of Typhoid Fever.—C. E. Edson calls attention to the extra-intestinal growth of the bacillus of typhoid, and to the fact that the care of a patient in this disease includes care of the whole man and not merely of his abdomen. Bronchitis has been found in fifty-four per cent. of Edson's cases. Ulcerations are frequently seen in the upper trachea. Bronchitis may assume a mild or severe form, often masking at first the true nature of the malady. Pneumonia is the most common thoracic complication. It occurs about the second week, rarely before. It may be lobular or assume the true croupous form. Pleurisy, dry or with effusion, may occur at the outset of typhoid, but with the greatest rarity, and it is a very infrequent complication at any stage of the disease. Abscess, gangrene, and infarction are all rare complications and secondary to others, such as pneumonia or infected areas of hypostatic congestion. Small areas of infarction are generally overlooked or confounded with patches of hypostasis. Œdema of the lungs must be considered as a circulatory complication from failing heart rather than a truly pulmonary disorder. A tuberculosis may be implanted upon an unresolved patch of pneumonia, or an old tuberculous infection, latent and never yet active, and may find in the lowered vitality of the convalescent its opportunity to spread. Both these conditions, however, partake more of the character of sequelæ than of true complications. The possibility of the supposed typhoid preceding a rapid general tuberculosis having been not typhoid at all, but tuberculous fever, must be borne in mind.—*Colorado Medical Journal*, April, 1900.

Hepatism and Neuropathy.—R. Massalongo says that chronic diseases of the liver are sometimes, but only exceptionally, accompanied by disturbances of the central or peripheral innervation. Acute or chronic diseases of the liver do not cause such disturbances more than do affections of other organs. The phenomena of auto-intoxication in the human organism are very complex; the symptomatology of the lesions of an organ is never exclusive nor independent; local diseases in the strict sense of the term do not exist. There is too great a tendency to specialize, to create new morbid entities, and to carry laboratory data with too much enthusiasm to the bedside of the patient.—*Rivista Critica di Clinica Medica*, April 28, 1900.

Cystitis Caused by the Bacillus Pyocyaneus.—Thomas R. Brown cites the investigations leading up to the accredited belief that the pyocyaneus may be pathogenic as well as saprophytic. He relates an instance of cystitis in a woman after operation for pelvic adhesions caused by this bacillus as shown by cultures. This is the first case in the author's knowledge in which this cause has been definitely proven. The urine left over night showed a green color, thought to be due to the fact that it contained sufficient albumin to act as a culture medium for the bacterial growth.—*Maryland Medical Journal*, May, 1900.

The Etiology of Tumors.—Antonio Carini says that the origin of tumors is one of the most widely discussed subjects at the present day. The theory of a parasitic origin is the one most generally accepted. From the author's experimental and historical researches he reaches the following conclusions: In tumors extirpated during life under aseptic conditions, he has never succeeded in isolating blastomycetes, even when a histological examination had determined the presence of Russell's bodies (blastomycetes of Sanfelice). By the inoculation of a pure culture of blastomycetes he never obtained true neoplasms. The blastomycetic nature of the Sanfelice bodies (fuchsin corpuscles of Russell) is doubtful. These bodies are not constant in tumors, and are found in other pathological processes in tuberculous organs and in normal organs. The bodies found in tumors, and described as parasites, as a rule do not take the specific coloring of blastomycetes.—*Il Policlinico*, April 15, 1900.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Fifty-first Annual Meeting, Held in Atlantic City, N. J., on June 5, 6, 7, and 8, 1900.

WILLIAM W. KEEN, M.D., OF PHILADELPHIA, PRESIDENT.

GENERAL SESSIONS.

First Day—Tuesday, June 5th.

THE meeting was called to order at 10:45 A.M. in the Marine Hall, Young's Pier, by the president, Dr. William W. Keen, of Philadelphia; and the session was opened with prayer by the Rev. Frederick J. Stanley.

Dr. Keen was then presented with a gavel, sent by the profession of Canton, O., his native city.

Addresses of Welcome.—ACTING-GOVERNOR JOHNSON, of New Jersey, delivered an address of welcome. He referred to the absence of Governor Voorhees on a sea voyage by saying that his excellency was "half seas over," and, hence, unable to be present. The very fact of his being away at this time in search of health was but another proof that there was a power even above that of the chief executive of the State, *i.e.*, the authority of the family physician. As a matter of seniority, the State of New Jersey had a right to entertain this large representative medical body, for history told us that the first medical society was organized in New Jersey in 1766. He had been informed that the minutes of that society were still in the possession of the Medical Society of New Jersey. After adverting to the many advances in medical science during the present century, the speaker bade the association a hearty welcome.

HON. L. P. STORY, mayor of Atlantic City, also welcomed the association in a few well-chosen words.

The President's Address.—W. W. KEEN, M.D., LL.D., of Philadelphia, made an address, of which the following is an abstract: He commenced his remarks by congratulating the association on its great prosperity, as evidenced, among other things, by a membership of about nine thousand physicians. While this number was truly a large one, when one considered that there are over one hundred thousand regular physicians in these United States it seemed strange and anomalous that the association should comprise less than one in ten.

Rush Monument Committee.—With reference to the Rush monument fund, he said that as he had been called upon to fill the vacancy on the committee left by the resignation of Dr. Albert C. Gihon, he had appointed Dr. James C. Wilson, feeling that it was appropriate to select for this place one who was a physician rather than a surgeon, and who was also from Dr. Rush's native city. The committee had actually in hand a little over $11,000—a sum too large to go backward, and not enough to go forward. Probably several thousands of dollars were still in the hands of various State organizations, which had been pledged to this fund.

The Anti-Vivisection Bill.—On the subject of anti-vivisection, the president said that he had been so deeply impressed with the tremendous harm that would be done if the "anti-vivisection bill," or Senate Bill No. 34, were allowed to pass, that he had deemed it his duty to send out letters to the president and secretary of every State medical society in the country, to prominent members in the profession, and to a large number of other influential men, urging them to arouse a public sentiment against the bill. He was proud to be able to bear public testimony to the enthusiasm and unanimity with which the profession in every part of the country had responded. He believed this action had exerted an enduring influence on senators and representatives in establishing and confirming their judgment against the inhumanity of any such bill. A hearing had been granted, before the sub-committee in Washington, to both the friends and opponents of the bill. Among the latter was a noble array of speakers, counting among them such names as Drs. William H. Welch, Henry P. Bowditch, H. A. Hare, William Osler, Mary Putnam Jacobi, Howard A. Kelly, Surgeon-General George M. Sternberg, together with Bishop Lawrence, of Massachusetts, and others. It was encouraging to note that this effort had not been in vain, the present committee having so far changed its views that it was probable the bill would slumber in committee or be reported negatively. One of the most telling and forceful of the communications in opposition to the bill was a letter addressed to the chairman of the committee on the District of Columbia by President Eliot, of Harvard College. It was worthy of note that President Eliot takes the ground that it is the anti-vivisectionists who are inhumane and cruel to the last degree, because they would condemn both man and animals to suffering and death by impeding the progress of medical science.

Members of the Association by Invitation.—Dr. Keen called particular attention to the desirability of limiting the "members by invitation" more strictly than had been done in the past. For instance, it had been the custom, in most of the sections, to invite medical men of distinction, not members of the association, to read papers before the sections. Some of these persons had even been openly hostile to the association, yet year after year had had these courtesies extended to them. It seemed just and right that this loose practice should cease, for membership in the association was open to every American, and any one who did not choose to avail himself of the privileges and advantages of membership by joining the association should be debarred from them.

A Section on Pathology and Bacteriology.—In view of the importance of pathology and bacteriology, he had ventured to ask a number of gentlemen to act as a provisional and unofficial committee to organize such a section, under the chairmanship of Dr. Ludwig Hektoen, of Chicago, feeling sure that the association would give its official sanction at the proper time.

Annual Exhibit.—The annual exhibit was an important financial aid to the local committee. As yet there were no rules or regulations to govern the conduct of this important business. He therefore urged the establishment of a permanent committee, or one member of the previous year's committee to be retained, so as to give greater stability and uniformity of management.

Publication of Papers.—The speaker advised, in connection with the vexed question of publishing the Transactions, that only the more important papers should be printed in full, the example of the *British Medical Journal*, in publishing only abstracts of the less important communications, being worthy of emulation.

Endowment of Medical Schools.—The remainder of the address was taken up with a thoughtful and earnest review of the needs of our medical schools, and the reasons why they should be liberally endowed. Dr. Keen said that the tide of charity in the United States had reached a remarkable height, amounting, in 1899, to the enormous sum of nearly $80,000,000, yet only a small portion of this had been bestowed upon medical schools. In his opinion, the chief cause for this discrimination against the medical schools was to be found in the vicious method by which these schools were formerly conducted—*i.e.*, practically as joint-stock companies. But that day had happily passed. As a consequence of the broadening and lengthening of the medical course of study, the cost of medical education had enormously increased, yet it was not practicable to increase the students' fees, and the latter were entirely inadequate to meet modern demands. President Eliot, of Harvard, very rightly says: "There is no branch of education which more needs endowment. Medical education is very expensive, because it has become, in the main, individual instruction." He was not one of those, however, who believed that the day of the didactic lecture had passed, for, in the language of President Faunce, of Brown University, "never shall we be able to do without the personality of the teacher, flaming with enthusiasm for knowledge, pressing up the heights himself and helping the student on." One or two such men in every school made a good faculty. But the great difference between the modern method of teaching medicine and the older method consisted in laboratory instruction and clinical instruction, both of which must be individual. In the modern, fully equipped medical school no less than thirteen laboratories were needed, viz., (1) the dissection room, or anatomical laboratory; (2) the laboratory of histology; (3) the laboratory of embryology; (4) the physiological laboratory; (5) the laboratory of chemistry; (6) the laboratory of physiological chemistry; (7) the laboratory of pharmacy; (8) the laboratory of pharmacology; (9) the laboratory of practical obstetrics, where obstetric operations may be taught; (10) a laboratory for instruction in surgical operations; (11) a laboratory of morbid anatomy; (12) a laboratory of bacteriology; (13) a laboratory of hygiene. The laboratory in the last few years had done much for humanity; it had discovered the cause of tuberculosis, tetanus, cholera, typhoid fever, and a host of other diseases; it had shown us how to avoid all danger from trichina; it had shown us how to banish erysipelas, pyæmia, and tetanus from our hospitals, and reduce our death rates after operation from fifty or thirty-three per cent. to ten per cent., five per cent., one per cent., or even lower; it had given us a scientific instead of a guess-work hygiene; it had pointed out the rôle of the mosquito in malaria, of the rat in the bubonic plague, and of the fly in typhoid fever; it had limited the spread of diphtheria; it would, in time, enable us to conquer other implacable enemies of the human race—and yet, there were those who would stay this God-given hand of help! Another reason for the increased expense of medical education was the lengthening of the curriculum. When he was a student, the course of study consisted of two sessions, of about nineteen weeks each, or thirty-eight weeks in all; now it was, as a rule, made up of four sessions of thirty-two weeks each, or a total of one hundred and twenty-eight weeks. Comparing the endowments of theological and medical schools it is found that in 1898 five theological schools reported endowments of from $850,000 to $1,369,000 each, yet in 1899 there were only eight thousand students of theology for whom this enormous endowment was provided, as against twenty-four thousand students of medicine—in other words, each theological student had the income of an endowment of $2,250 provided for his aid, while each medical student had only the income from $83.

Grants for Research.—Dr. Keen, in closing his address, said that while the first object of the association should be to place itself on a strong financial basis, he hoped it would before long assume a rank second only to the British Medical Association, and that it would set a fruitful example by giving each year "scientific grants in aid of research." To a profession which gave so freely of its own life-blood surely the public could afford reasonably to endow its schools; it would be returned to the community tenfold, and more devoted, self-sacrificing men and women they never could have.

Report of the Treasurer.—Dr. H. P. Newman, of Chicago, presented the report. He stated that the total disbursements for the past year had been $57,874.75, and that on January 1, 1900, there had been a cash balance of $13,556.38, the total assets amounting to $27,396.86.

Report of the Secretary.—Dr. George H. Simmons gave a detailed report of the work of his office. He said that he had supplied every regular medical college in this country with copies of the Code of Ethics, with the request that a copy be placed in the hands of every graduate in medicine. Among other interesting features of the report was the announcement that the Honolulu Medical Society, having sixteen members, had applied for admission to the American Medical Association.

SECTION ON PRACTICE OF MEDICINE.

First Day—Tuesday, June 5th.

The chairman, Dr. George Dock, of Ann Arbor, Mich., in his opening address discussed the difficulties of modern medicine due to the numerous advances which had taken place in methods of accuracy, and to new discoveries. He said that medicine, as a study, was becoming more difficult. He referred to an absurd superabundance of medical schools in the United States. The laboratory expert should be selected with as much care by the practitioner as was the operating surgeon, and his recompense should be more carefully made. The profession had a weight of guilt in the matter of the great prevalence of mercantile concerns putting forth their cure-all wares, which called for correction.

A System of Personal Biological Examinations of the Condition of Adequate Medical and Scientific Conduct of Life.—Dr. George M. Gould, of Philadelphia, advocated the establishment and systematization of a series of periodical scientific personal examinations, tests, and measurements of the human body throughout life, having in view the discovery of the early symptoms of disease now often passing unnoticed—the symptoms of the symptom—as well as the functional abnormalities that finally led to organic disease. To the methods of the anthropometric, psychophysical, and physiological laboratories should be added those of the specialist and general physician, to determine morbid tendencies and to preserve a general biological picture or epitome of the individual life. He described the possible methods of carrying out the plan, and the function of the physician in the suggested work. He also alluded to the connection with life-insurance problems, with public sanitation and hygiene, with governmental, military, and civil-service examinations, and with the hygienic and educational work of schools, colleges, and universities, and the relation of the same to the specialist and general physician. The speaker made a plea for a living anthropology, with a system of records carried throughout life, starting with the data of inheritance. Something similar to the Bertillon system should be made the basis of the first and of all subsequent examinations. The pathological element had been sadly neglected in all previous anthropological study. The physician's case-books would furnish the most valuable data if they could be utilized for this purpose. With this view histories should be made scientific and preserved for future study.

The Hospital Clinical Laboratory.—This was the title of a paper presented by Dr. C. N. B. Camac, of New York, who spoke of the value of bedside examinations carried out by especially appointed internes for this service. The reader reviewed the work of European laboratories, and discussed the importance of proper record-taking in connection with ward laboratory work. The clinical laboratory contributed only certain elements which, taken in conjunction with clinical data, led to the correct diagnosis. No one instrument of precision by itself alone was sufficient. All contributed to the end in view. The first laboratory was established at Breslau in 1825. The time had come when all the data since then piled up by scientific investigation of this kind should be supplemented by the practical hospital and ward clinical laboratory. Here methods determined upon in anatomical, physiological, chemical, bacteriological, and pathological laboratories could be applied and carried out. Photographs of thoroughly equipped workshops of this kind were shown by the speaker. He had established such laboratories in the Johns Hopkins and Bellevue hospitals in 1896, and similar ones would shortly be established at St. Luke's Hospital. The apparatus was simple and readily brought to the bedside. One of the objections was the expense of microscope and cabinet, in which poisonous reagents were locked away from the patients. The cost was from $30 to $50 per year for maintenance, and the original outlay need not exceed $300.

On Blood Examination and its Value to the General Physician.—This paper was read by Dr. M. H. Fussell, of Philadelphia, who showed simple apparatus to be carried in a bag and used at the bedside.

In discussing both papers Dr. Osler said that apparatus for bedside examinations were as essential to-day as was the knife to the surgeon. Proper diagnosis by the aid of simple equipment would lead to proper treatment. When his time came to fall, the speaker said, he preferred to fall into the hands of the man with his microscope with him in a bag for bedside use.

Dysentery.—Dr. Simon Flexner, of Philadelphia, spoke upon this subject, and described experiments carried out in Manila by a body of young men sent out by the Johns Hopkins Hospital. It was a mistake to suppose that tropical dysentery was of one single kind. There were different groups of organisms to which the disease had been attributed. Many still believed that the bacillus coli communis was the cause. Pyogenic cocci were supposed by others to be causative in their action. There was a protozoon which was now believed to be active in tropical dysentery, the amœba coli. This form of dysentery was not distinct on this point alone, but in its pathological anatomy as well. The studies referred to were made for the most part on American soldiers, in both acute and chronic cases. The acute stage often attracted little attention. Here the amœbæ were commonly found. In other cases the amœbæ did not occur or were few in number. In some very acute forms bacilli were often found, not normally present in the intestines, and showing peculiar reaction. When the acute form became chronic, the ulcers were superficial and were not undermined, and the danger of stricture was not so great as in tropical dysentery. Immunizing experiments in the laboratory showed that small animals could be rendered immune with the products of these micro-organisms. The speaker thought that the bacillus found was the same as that reported as being observed in the dysentery of Japan, and that it was intimately concerned with the acute dysentery of the tropics. Army surgeons in Manila now distinguished an "infectious" in distinction from the tropical form of dysentery.

Notes on Tropical Dysentery.—This was the title of remarks by Dr. J. H. Musser, of Philadelphia, who related the case of a patient who had come from Porto Rico and was treated in the Philadelphia Hospital. There were marked emaciation and extensive pigmentation of the skin, with numerous boils upon the surface of the body. The symptoms were those of colitis and proctitis. The stools were free from fresh blood, and mucus was absent or but sparingly present. Purpura was a striking feature, with signs of scorbutus, which latter might have been the diagnosis made, were it not for the microscopical examinations. In agglutination methods the speaker thought we had a means of obtaining an accurate estimate of the affection.

Dr. Osler said he had formed the impression that the amœba would have to take a back seat since Dr. Flexner had reported his findings in connection with the bacillus he had described. He believed the disease was separate and distinct from that of the tropics, and thought it might be the same form as that which occurred in this country in epidemics seen in jails, hospitals, etc.

Dr. Briggs mentioned a patient who had come from Cuba, whose history was substantially that described by Dr. Musser for his own case, but here the Widal reaction occurred. In a second case it did not.

Dr. Hunter, of Minneapolis, spoke of cases from Manila, in one of which amœbæ were found. In a second case in which they were not found the symptoms were mild while the patient was at rest, but severe under exertion.

Dr. Woodhull, of the regular army, recently stationed at Manila, spoke of the service to medicine at large, as well as to the army, rendered by Dr. Flexner and others who went to Manila to carry out these investigations. He found that many patients had to be sent to a colder climate before they began to show signs of improvement.

Dr. Murphy, of Missouri, said that in Kansas City he had studied three cases of amœbic dysentery. Expectorated pus showed that a liver abscess had perforated the lungs in one instance. He desired to call attention to the occurrence of the disease in northern latitudes.

Dr. Vaughan, of Ann Arbor, spoke of epidemic bloody flux occurring as far north as Michigan. Nothing more than the colon bacillus had been found in these cases, and he was inclined to think the latter the cause of this particular form of the affection. Strychnine hypodermatically acted well in conditions of severe collapse and depression. Dr. Wilson, of Pennsylvania, referred to a case in which the tongue was denuded and appeared sandpapered throughout. The temperature was at times subnormal and never elevated. Emaciation was progressive till death, but there was never any pain. Treatment and dietetics were futile.

Dr. Flexner, in closing, gave credit to Dr. Woodhull for furthering the investigations in Manila by giving full opportunity to prosecute them. Every acute outbreak should be examined bacteriologically, and the blood should likewise be examined. The micro-organism he described was closely allied to the typhoid bacillus, but it could be distinguished. Typhoid blood had no effect upon it. Liver complications in the form he studied were extremely rare.

Serum Therapy in Croupous Pneumonia.—Dr. J. C. Wilson, of Philadelphia, discussed this question together with the bacteriology of the affection. He said that in direct infection by way of the air passages there was an exudate and a toxæmia. The more abundant the exudate the greater was the toxæmia. After brief historical considerations and reference to theoretical points he mentioned intricate problems which had to be solved in the laboratory. Experiments he found to be encouraging for the serum therapy. An analysis of eighteen cases treated with serum placed in the speaker's hands by Dr. McFarlane, of Philadelphia, showed that antipneumococcic serum gave results which were encouraging. In some cases the serum acted in preventing general septicæmia. The clinical histories and records of blood examination were given. Other treatment was not excluded. The pneumococcus was present in fourteen examinations. The dosage of serum varied from 22 c.c. to 460 c.c. It was employed timidly at first, and more boldly later on. Recent serum gave better results than old, and the results showed a general improvement in most cases. There were four deaths. The duration of the disease was from five to fourteen days. The small number of cases did not permit of definite conclusions.

Dr. A. O. J. Kelly, of Philadelphia, in discussing this paper reported a case showing consolidation of the right lower lobe, in which the antipneumococcic serum was given. The patient died, and the autopsy showed conditions which would probably not have been cured by any treatment.

Dr. Rochester, of Buffalo, referred to a trial upon another patient of serum obtained by blistering the skin of a convalescent from pneumonia. There was slight improvement.

Dr. Newton, of New Jersey, inquired as to the mode of preparation of the serum.

Dr. McFarlane, of Philadelphia, answered that it was obtained by administration of living cultures of the pneumococcus to horses, and described the method minutely.

Influence of Sea Air and Sea-Water Baths on Disease.—This paper was read by Dr. W. Blair Stewart, of Atlantic City, N. J. He described the essential differences between sea and land breezes, considering particularly the absence of pollen, dust, miasm, germs, etc., and the presence of ozone, iodine, and moisture. He alluded to the peculiar location of Atlantic City with reference to sea air and tidewater, and its action on neurasthenics. convalescents, tuberculosis, rheumatism, etc. Other subjects discussed were: sea water, its composition, and its temperature at Atlantic City; the surf bath, its time, limitations, physiological action, and its use and abuse, naming particular contraindications and indications in disease. Hot and cold sea-water baths were described, with their use in rheumatism, gout, neurasthenia, etc., and their physiological action. Particular stress was laid on the action of sea water in cases of tuberculosis and neurasthenia, and in convalescence.

SECTION ON SURGERY AND ANATOMY.

First Day—Tuesday, June 5th.

The section was called to order by the president, Dr. H. O. Walker, of Detroit, Mich., at 3 p.m. His address was as follows:

A Retrospect of Surgery of the Stomach.—He spoke of the great advances which had been made since the pioneer work of Billroth, twenty-five years ago. Stomach lesions, he said, might be classed under two heads, the benign and the malignant. In considering the relief of these conditions, he emphasized the fact that beyond peradventure the posterior operation in gastro-enterostomy was the operation of choice, except when the pylorus was bound down by extensive adhesions. In gastroptosis he felt that the shortening of the ligaments was of very questionable value. He spoke of the very great difficulty of early diagnosis, and hoped that much help would come to the surgeon from the gastric specialist. To the medical man, it was of little importance to determine the exact seat of the lesion; to the surgeon it was of the utmost importance, for upon the location depended the character and the prognosis of operation. As to technique he had used Senn's plates, Murphy's buttons, and the various sutures, and had found them all about equal. The cause of death was usually shock or sepsis, or hemorrhage. In regard to the last, it was important to ligate and cut, rather than to use the knife first and then suture afterward. Gastrectomy could hardly, as yet, be considered as established, but he pointed out that physiologically at least it was doubtless feasible, because the stomach being already gravely diseased, its function practically at an end, the patient had now habituated himself to digesting with the unaided gut. He cited many experiments on dogs in which buttons as well as other methods of anastomosis were used, but the animals, habituated to the use of their normal stomachs, were unable to recover from their sudden loss and died within forty-eight hours. In conclusion he said: (1) Non-perforating gastric ulcer must be operated on if medical treatment failed, and posterior gastro-enterostomy was usually the best operation for these cases. (2) Perforating ulcer must always be operated upon early. (3) Benign tumors called for surgical intervention if producing pyloric stenosis. (4) Pylorectomy was indicated in the case of small movable growths; posterior gastro-enterostomy, if the growth was large. (5) In case of hourglass contractions, posterior gastro-enterostomy or gastro-anastomosis should be done. (6) Exploratory cœliotomy was justifiable in all questionable cases.

Non-Perforating Gastric Ulcer with and without Hemorrhage.—Dr. W. L. Rodman, of Philadelphia, read this paper. In Germany, gastric ulcer was said to occur in five per cent. of all cases. While it was possible that this was excessive, there seemed little doubt that the condition was far more common than generally supposed. He said that the best statistics were furnished by Welsh, of Johns Hopkins, from a total of seven hundred and ninety-three cases. These showed the lesser curvature, posterior wall, and pylorus to be the areas involved, three and a half times as often as elsewhere. Also, they showed that one in five was multiple, and that this multiplicity might reach as high as thirty-five. Cicatrices were very common and were frequently seen to be merging into malignancy, while hyperchlorhydria, which was denied by Ewald, was shown by Welsh to be a very constant factor. The etiology was unquestionably in very close relationship with anæmia, it having been overlooked that the occupations commonly supposed to predispose to this disease were invariably accompanied by profound blood changes. Particularly of interest was the statement that ulcer was relatively more common between the ages of forty and sixty years than at any other period. Of the symptoms, pain, severe and boring, influenced by food, localized, was the most characteristic. Vomiting was not so important, but if occurring two hours after eating, and particularly if accompanied by hyperchlorhydria, it was of diagnostic significance. Hæmatemesis was a variable quantity, the color depending entirely on the amount of hemorrhage. It was the cause of death in from three to five per cent. of all cases. The treatment should always at first be medical: three-fourths of all cases thus resulted in cure in from three to five weeks. The remaining one-fourth were conceded by even the most conservative to fall within the realm of surgery. As to the character of the operation, the first question was, "Should the ulcer be excised?" Were it not that there was a mortality of fifteen per cent., this would be the operation of choice. Adhesions frequently contraindicated it. Pylorectomy or gastro-enterostomy might be done, though both might fail to cure. Again, there might be a multiple ulceration. Here gastro-enterostomy should be done, and preferably by Murphy's button.

Dr. Fenton B. Turck, of Chicago, opened the discussion. He dwelt on the indications for operation, and spoke particularly of those cases rendered obscure by pyloric spasm, and absence of tumor. The condition of gastric myasthenia was frequently misinterpreted, and still a third was an hypertrophy of the gastric glands accompanied by degeneration and atrophy of the walls. The diagnosis of perplexing conditions was greatly aided by the passage into the duodenum of a pyloric sound. A beautiful *x*-ray photograph was exhibited showing such a sound in position and outlining with great clearness the greater curvature. The contraindications to operation were not limited to so-called inoperable cases; heart and lungs were factors frequently overlooked. Circulatory disturbances often aggravated the existing auto-intoxication, and so killed, while kidney insufficiency was another very important factor. Important points in the technique mentioned were rapidity; the use of the rubber dam in isolating the operation area, and the avoidance of tugging at the viscera during their manipulation. For this last reason he deprecated posterior gastro-enterostomy. He closed by urging the importance of technique and the ante- and post-operation care of the patient.

A New Method of Elevating the Glottis during Anæsthesia and after Certain Cervical Operations.—Dr. Christian Fenger, of Chicago, spoke on this subject. He said that the method consisted in making a median longitudinal incision over the hyoid. and passing beneath it a strong silk suture. In cases of bony ankylosis of the inferior maxilla this method was of great value to the anæsthetist, while as a post-operative procedure in cases in which the upper hyoid attachments had been cut away, this suture, tied to the dressing, held the epiglottis well open and prevented the inhalation of foreign particles and consequent pneumonia.

Diagnosis and Treatment of Cholelithiasis.—Dr. W. J. Means, of Columbus, Ohio, read this paper. He spoke of the need of early diagnosis and of the very important complications involving intestinal and hepatic changes. Of twenty cases, ten had been operated on, of which all had resulted in recovery; ten had been treated medically, of which number three had been fatal. The average age was fifty years. Fourteen of the patients were females, and six males. The number of calculi ranged from one to two hundred and thirty. Sixteen patients had a history of recurrent attacks, while typhoid had preceded the attack in four. Rigors had been observed in four cases, vomiting in fifteen; jaundice in thirteen, coming within twenty-four to thirty-six hours. Hepatic enlargement was present in eight. Tenderness and rigidity were marked in all. Pain likewise was a constant factor, but of very variable intensity. In fifteen the stools were white. Considering some of these factors in detail, he stated that pain frequently radiated toward the stomach on up to the right shoulder, two hours after eating. Nausea was usually more severe than in appendicitis. Jaundice he considered important, and carefully differentiated the two forms. Cholangitis was a frequent cause of jaundice. Of great importance was the fact that women in the fourth decade of life were the most frequent victims. The treatment was medical and surgical. The first should be employed only in the way of prophylaxis, for the mortality of medical treatment after the deposition of the stones was very high. On the contrary, the surgical intervention was free from danger, and if, as was often the case, the function of the ducts was re-established, the cure was permanent. Early operation here was as necessary as in appendicitis.

Cholecystectomy, with Special Reference to the Removal of the Mucous Membrane of the Bladder in Certain Cases as a Substitute for it.—Dr. W. J. Mayo, of Rochester, Minn., read this paper. He said that trauma, phlegmon, gangrene, and malignancy were the chief indications for total ablation of the bladder. Trauma was very rare. In gangrene, two courses were open—first, excision of the sac; second, drainage. Cases of obstruction of the cystic duct were frequent. Here a permanent fistula discharging mucus often followed cholecystostomy. This condition could easily be cured—he had done it in seven cases—by the entire removal of the mucous membrane. He would also use this method in preference to cholecytostomy in cases of chronic catarrh of the lining membrane, for it was the secretion of these cells which was at the root of the evil. In closing, he outlined the technique of the denudation.

The Importance of Early Operation for Biliary Calculi.—Dr. M. H. Richardson, of Boston, read this paper. Gall stones, he said, must be removed as soon as diagnosed. There was a close analogy between this condition and appendicitis. The earlier the operation, the greater the success. There was slightly more danger in the early operation than in the interval appendectomy, but this was largely due to the greater average age of the patients. In speaking of the chronic cases he dwelt on the influence of cholæmia in lowering the vitality and often causing death. He cited his thirteen fatal cases, all but one of which were chronic, many extending over a period of twelve years. The most frequent complications were acute infection of the gall bladder and appendicitis. The indications for operation consisted in finding faceted stones in the stools, non-faceted stones so found contraindicating operation. Repeated attacks with or without finding stones pointed to operation. Quiescence no more contraindicated operation that it did in appendicitis. Repeated attacks of tenderness and persistent pain over the gall bladder were among the most valuable indications.

Dr. John Wyeth, of New York, on being asked to open the discussion, said that he agreed so perfectly with the spirit of the paper that he would not discuss it.

Dr. Mynter, of Buffalo, said that he believed the hæmatogenous theory of jaundice to be exploded. He thought the colon bacillus was the constant cause, and that all jaundice was due either to inflammatory or other obstruction of the ducts. In regard to Dr. Richardson, whom he congratulated on presenting his fatal cases, he said that all his own early-stage cases had resulted in recovery; not so the late. He urged that continual pain and intermittent tenderness over the gall bladder were almost pathognomonic.

Dr. Nicholas Senn, of Chicago, recommended the use of the *x*-ray. He deprecated the operation of Dr. Mayo because it seemed to him to call for two stages, and spoke of the danger of leaving bits of mucous membrane behind. He recommended a splitting of the peritoneum from the fundus to the point of obstruction, and a removal of the tissues beneath. Again, he protested that gall-stone operations were becoming deplorably frequent, and urged conservatism.

Dr. Grey, of Jersey City, cited a case in which the appendix had become involved by an acute exacerbation of a chronic cholelithiasis.

Dr. H. O. Marcy, of Boston, emphasized the need of ablation of the bladder in many cases, and of the crying need of early operation.

Dr. J. B. Deaver, of Philadelphia, said that perforation-peritonitis was the most fearful condition the surgeon could be called upon to treat, whether it be caused by appendix or gall bladder. He strongly criticised Dr. Senn and supported Dr. Richardson. There must be early operation. Further, the *x*-ray was useless in diagnosing cholelithiasis, though it had a place in the kindred kidney lesion.

Dr. Wyman, of Detroit, urged the simplicity and the value of cholecystostomy, which relieved the cholæmia.

Dr. Merrill Ricketts, of Cincinnati, advocated early intervention. Contracted gall-bladder work was one of the most fearful undertakings in the surgical line.

Dr. Ochsner, of Chicago, said that almost all fatal cases were due to procrastination—the early operations being invariably successful.

Dr. Bevan, of Chicago, said that in 16.5 per cent. of all dissecting-room cases there were gall stones. Of all patients over sixty years of age twenty-five per cent. were found to be in this condition. Thus they must often give no symptoms.

Dr. John Summers, of Nebraska, spoke of the use of Murphy's button in anastomosing the common bile duct and the duodenum; of the need of introducing the finger into the foramen of Winslow, and of a modification which rendered the use of the button easy in these cases.

Dr. Means, in closing, said that he supported the old classification of jaundice. He did not agree with Senn in his conservatism nor in the use of the *x*-ray. Jaundice led the practitioner into grave error because the surgeon had placed too much weight on this factor. He felt that stones almost always produced prodromata.

Dr. Mayo said that Dr. Senn had misunderstood the spirit of his operation. It did not call for a double operation, but was useful, first, for those cases in which a permanent fistula had established itself, and, second, in case of a mucopurulent discharge being a prominent factor at the time of the primary operation. He said that all who had worked on the stomach would realize how easily mucous membranes parted from the other layers, and that this was equally true in the case of the gall bladder.

Dr. Richardson applied to the gall bladder, though to a less marked degree, the rules which governed our treatment of the appendix. He thought Senn's conservatism good, but said that it should not go too far. He admitted that stones might exist without symptoms, but felt that dissecting-room findings were a pernicious argument against the modern operation.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

First Day—Tuesday, June 5th.

Chairman's Address.—The meeting was called to order by the chairman, Dr. W. E. B. Davis, of Birmingham, Ala., who then read his address. After expressing his pleasure at the honor conferred upon him in selecting him to preside over the deliberations of the Section on Obstetrics and Diseases of Women, he said he believed he could say without fear of contradiction that the members of this section had done most for the advancement of gynæcology. He referred to the illustrious work of Sims and McDowell, and in the words of another said "that the outcome of the labors of these two men in beneficent results had no parallel in medicine." Reference was made to the effort of the late Dr. Parvin to have a combination of the chairs of obstetrics and gynæcology. He believed there was every reason why the gynæcologists should be the teachers of obstetrics; that nothing short of the attainments of the gynæcologist could make the chair complete. He believed we could learn a lesson from Austria and Germany in having large maternities for teaching purposes. He believed the exalted position which gynæcology occupied in this country owed much to the medical journals devoted to this department, and to the national special societies of limited membership whose transactions had gained world-wide reputation. The development of gynæcology had been attended with many errors, but with so many earnest workers only time was required to correct these. For the vaginal section he believed too much had been claimed, although believing it to have a wide field. Peri-tubal and peri-ovarian abscesses of large size, from whatever cause, he believed should be drained by this route, and later abdominal section be done if necessary. Puerperal inflammation occurring in the first month or six weeks after delivery, at term or prematurely, should also be dealt with by vaginal incision. A good percentage of such patients would be cured, and some he stated would bear children. Cases of pelvic inflammation should be operated on without waiting for pus formation. His experience in cases without pus had not been large, but the results had been exceedingly satisfactory. In cancer of the uterus, when the disease had passed beyond the uterus, he advocated palliative operations rather than radical ones. He was gratified to note the increasing popularity of the round-ligament operation for retro-displacements of the uterus. Much honor was due to Pawlik, Kelly, and others for their work in exploring the bladder and kidney; and particularly for the method popularized by Kelly, but he thought it carrying refinement too far when attempts were made to treat pus in the kidney through the ureter. The surgery of the bladder he believed to be little advanced beyond the surgery of Marion Sims' operation in 1878. In the closure of the abdominal wound he employed a method combining the tier sutures with absorbable material and the interrupted through-and-through sutures with unabsorbable material. He used interrupted sutures of silkworm gut uniting aponeurosis, recti muscles, and peritoneum, securing the sutures by means of very small silver tubes corresponding in length to the thickness of the skin and subcutaneous fat through which the ends of each suture are passed and then through a perforated shot. The suture should be superficial or subcuticular.

The Angiotribe in Vaginal Cœliotomy.—This paper was read by Dr. Carstens, of Detroit, Mich. He called attention to the point that Battey had originally removed the ovaries through the posterior cul-de-sac. With the increased knowledge of extensive pelvic lesions, the abdominal route was chosen, while later the removal of the uterus and all the pelvic organs by the vagina was practised, but on account of the tendency to conservatism the abdominal route was generally selected at present. He said that the vaginal route was preferable if thorough work could be done, which was the case in selected cases, but the great trouble in removing a single ovary and small ovarian tumors or diseased tubes by the vagina consisted in the difficulty of applying a ligature and controlling the hemorrhage. In the angiotribe, however, we had an instrument which enabled us to make use of the vaginal route in many cases in which it could not previously have been done. The angiotribe was, therefore, one of the most valuable instruments ever devised in abdominal surgery, as it enabled us to operate with less danger, and with decidedly shorter convalescence.

Angiotripsy.—Dr. Hugh M. Taylor, of Richmond, Va., said his experience sustained the advantages claimed for the angiotribe. In selected cases he thought it was a safe substitute for forceps and ligature. It was very easy to apply, and this should commend it to those who have not served a long apprenticeship in the use of the ligature. He was impressed by the commonly observed fact that post-operative shock was markedly diminished in the cases in which he had used the angiotribe, and he thought this was equally true as to the intensity and duration of post-operative pain. Convalescence seemed to be established at an earlier date and to progress more rapidly. In only one instance did he fail to secure complete hæmostasis by means of the angiotribe. This occurred in resecting a section of badly infected omentum which had wrapped up a necrotic appendix. In all he had used the angiotribe in fifteen cases, all of which were suprapubic sections. He had not used it when operating by the vaginal route. This was largely due to the fact that he had had but a limited experience in working through the vagina. The encouraging reports from so many, he thought, warranted the conclusion that the angiotribe would find a large field of usefulness through the vaginal route. A majority of his cases were very simple in character; about one-half were uncomplicated hysterectomies, while the others were types of cystomas. In only one instance were there post-operative symptoms which suggested the occurrence of hemorrhage. This case was a large unilocular ovarian cystoma with extensive bowel adhesions. He had had no opportunity to use the angiotribe in septic cases, but it seemed especially desirable to avoid the use of the ligature in existing or threatening septic conditions.

Improved Technique in Major and Minor Surgery of the Female Generative Organs.—Dr. Henry P. Newman, of Chicago, read this paper. He said that under the favorable conditions in which operations were now done it must not be forgotten that in handling the organs or tissues of the body we were dealing with living substances of different degrees of resisting-power, and that the success of the manœuvres depended largely upon the amount of delicacy, dexterity, and expedition that was used. A cervical operation, to be successful, must at the same time, in inflammatory conditions, remove all adventitious tissue from the organ, and in deformities of imperfect development remodel the organ to as nearly normal outlines as possible, giving ample lumen to the canal and establishing proper menstrual and intermenstrual function. To accomplish these ends the speaker did tracheloplasty, which consisted in clean removal of a more or less wedge-shaped plug of the diseased tissues from the centre of the cervix by the use of a right-angled knife, especially designed to make the flap, and a pair of curved scissors. In perineal work to restore contour, stability, and function to the pelvic floor, the author recommended the Harris method with a slight modification, of shortening the torn or stretched fibres of the levator ani muscle. In rectal and urethral work for hemorrhoids, fistulæ, etc., the best results could be obtained by clean dissecting out of these lesions and approximating mucous membrane and cut surfaces with catgut or some less yielding suture material. In vaginal section and vaginal hysterectomy the ligature and the angiotribe had replaced the retention forceps. Dr. Newman was the first to introduce the angiotribe into America. He designed his model for use in abdominal and vaginal work, and his experience had upheld his confidence in its advantages.

Dr. J. W. Bovée, of Washington, D. C., was glad to hear such good reports from the use of this instrument, which seemed to him more like a plumber's instrument than a surgeon's. He could not see why cases should have a shorter period of convalescence which were operated on with the angiotribe than those operated on with gauze. He had not had a case of vaginal hysterectomy in which the patient had been in bed longer than two weeks, and he did not believe the use of the angiotribe shortened the length of time. He thought it was only necessary to refer to the French and German literature to learn of a number of deaths in cases in which the angiotribe had been used. He did not think as much of the broad ligament could be removed with the angiotribe as with scissors and ligature. He also believed that hemorrhage was best controlled by ligation of the internal iliacs.

Dr. W. E. Ashton, of Philadelphia, believed that the use of the angiotribe would be more extensively resorted to within the next year by all those who familiarized themselves with its use. He had had little experience with it, because the major portion of his work was by the abdominal route. In reference to the question of lacerations of the cervix he believed it a great mistake to do trachelorrhaphy and curettage, and that rather amputation should be done, when the patient not only recovered but went on to child-bearing.

In the discussion of the papers of Drs. Carstens, Taylor, and Newman, Dr. Wathen, of Louisville, said that much of the objection to operation on the uterus was the result of multiplicity of technique, three to four large retractors—posteriorly, anteriorly, and laterally—generally being used. For the last two years he had performed no operation in the vagina, or done hysterectomy for cancer, in which he had ever used more than one retractor, and generally none at all; with few exceptions he believed them absolutely useless. He had not used the angiotribe himself, but had examined it carefully and recognized that there was a field for its use. He objected to the statement that there was much work done per vaginam by the use of the angiotribe which would otherwise have to be done by the abdominal route. He could not conceive of any instance in which as much could not be accomplished per vaginam by the use of the clamp as with the angiotribe.

Dr. J. Riddle Goffe had had some little experience with the angiotribe, and wished to say a word for it. In order to test the efficiency of it in critical cases he had selected two cases of advanced cancer upon which to try it. He found that even in cancerous tissue the instrument controlled hemorrhage. In a recent case he had used it when he resected the rectum through the vagina, and the result was very satisfactory. In hemorrhoids he had secured perfect hæmostasis. He had reduced the time of application from two minutes to a minute and a half.

Dr. Carstens, in closing the discussion, said he did not care about the size of the instrument if it did the work better than a smaller one. In answer to the man who had spoken of his principles, he said that in the case of an ophthalmologist, he thought, if a patient had an eye dislocated to the extent of three inches the ophthalmologist would take it out, and that it would be good surgery too. He did not claim that the ovary should be taken out unless it caused pain and trouble. He adapted his methods to the conditions, and did not remove every uterus and every ovary, nor use the angiotribe all the time. He thought he had been meek and humble in his declarations; he had said the angiotribe was good for certain cases of vaginal hysterectomy. He did not believe it was good in cancer of the uterus. In that condition he used clamps, getting away as much as possible of the broad ligament.

Dr. Newman, in closing, said that in regard to operation upon the cervix he did not state in his paper that he did trachelorrhaphy, but tracheloplasty. In answer to Dr. McMurtrie he stated that the advantages of the angiotribe were expedition, complete hæmostasis, doing away with the ligature or doing away with foreign bodies, which had been the aim of all surgery; it also did away with the massing of tissue. The lineal stump left was another advantage claimed. Like Dr. Carstens he used the angiotribe when indicated, and had found it very useful when applied in controlling hemorrhage.

Dr. G. B. Massey, of Philadelphia, took exception to the statement of Dr. Carstens that prolapse of the ovary in a young girl was incurable, that nothing but removal of the tube and ovary was proper. He thought that if the ophthalmologist went on that plan the result to the patient would be very bad.

Dr. McMurtrie asked what advantages were claimed for the angiotribe, and to what degree it was superior to the present methods of controlling hemorrhage.

Dr. Porter asked that the gentleman who had recommended the angiotribe would state how long it should be applied, and how many pounds' pressure was required.

Dr. Boldt, of New York, did not believe the angiotribe in the least superior to the ligature, with which he felt more secure than in the use of the angiotribe.

Dr. John C. Da Costa, of Philadelphia, said he was like the Irishman—that the proper way to do a vaginal hysterectomy was by the abdominal route. He did not think ligature on cancerous tissue was good surgery; when all of the diseased tissue could not be removed he thought it better to leave the patient alone. He agreed with Dr. Ashton that trachelorrhaphy was often done in mistake for amputation.

Myomectomy per Vaginam.—Dr. J. Riddle Goffe, of New York, said in this paper that myomectomy was preferable to hysterectomy, and vaginal myomectomy was preferable to abdominal myomectomy in all cases in which it could be employed. He believed the scope of vaginal myomectomy much wider than it was usually thought to be. A report of cases was given illustrating the author's principles.

Myofibroma Uteri.—Dr. H. J. Boldt, of New York, read this paper. He said that the greater number of solid neoplasms of the uterus were fibro-myomata. Tumors consisting only of fibrous connective tissue (fibroids) or only of muscle (myoma) were rare. The original site of such neoplasms, the writer stated, was, strictly speaking, interstitial, and they subsequently grew in the direction of least resistance. The histogenesis of fibromyomata was still a disputed point. His own studies led him to believe with Rösger that they arose from the muscularis of the capillaries. This, too, would explain why in the earliest stages we found many mixed tumors from a histological standpoint. In the matter of treatment the author stated that if by any measure adopted a symptomatic cure could be secured, it should be done in preference to a radical operation. It must not be forgotten, however, that there were instances, although rare, in which nothing but undelayed operations should be advised; they had been mentioned among the degenerations of serious character. The position in life of the patient must be considered, because a woman of the laboring class could not observe the rules laid down for those in better circumstances. No specific had been discovered to check the size of the growth, stop bleeding or the pain. In his observations of the influence of thyroid extract, recommended by Shober and Polk in this country, he had noted three instances of improvement; but with regard to the size of the tumor it must be remembered that this extract had the effect of diminishing the amount of adipose tissue in the abdominal walls. Among the remedies for local use considered palliative, the speaker believed electricity had a limited field.

Arrhythmia Cordis Complicating Fibromata Uteri.—Dr. J. Wesley Bovée, of Washington, D. C., in this paper reported a case successfully operated upon. The arrhythmia was probably of nervous origin, as the pulse was regular during anæsthesia and arrhythmic again during convalescence. He classified the etiological and pathological conditions into (1) nervous and cerebral; (2) neurotic and psychic; (3) reflex; (4) toxic; (5) critical arrhythmia of acute diseases; (6) arrhythmias of cardiopathies. He mentioned several cases demonstrating the wide variance in results from cardiac arrhythmia depending upon the pathological cause. His conclusions were: (1) Arrhythmia cordis was not yet well understood. (2) As a complication of fibromata uteri it was exceedingly rare. (3) It had a serious import, the degree of which depended upon the condition causing it. (4) Its presence as a complication of conditions requiring surgical operations necessitated a careful inquiry into its cause before operation was done. (5) It was a contraindication of more or less influence in all cases for surgical operation. (6) If not due to severe pathological lesions other than those for which operation was to be done, its presence did not necessitate prohibition of operation, but lent additional doubt as to the patient's recovery.

The papers of Drs. Goffe, Boldt, and Bovée were discussed jointly.

Dr. Porter, of New York, said that the field for myomectomy in the larger tumors was much more limited than in the small. He adhered very closely to a limit as regards the age of the patient. He believed the operation should be done with due consideration of possible malignant development, and in patients of the age of forty its use should be limited. The operation in its technique he regarded as very simple; the location of the tumor must help in the selection of an anterior or posterior incision. He preferred the Alexander operation for replacing the uterus to the antero-fixation suggested by Dr. Goffe. When there was difficulty in removing the growth from below on account of its size, abdominal operation was advocated in a large percentage of cases.

Dr. Wiggin spoke in support of incision along the anterior vaginal wall in operations through the vagina, as it facilitated operations in which it was necessary to get at the ovarian vessels. In reference to a remark by Dr. Porter as to the necessity of abdominal hysterectomy when the tumor was of large dimensions, he recalled one case in which the patient would have died had this been resorted to.

Dr. Carstens regarded myomectomy as described by Goffe as excellent and in selected cases applicable: in a great many cases it could not be done; some fibroids were not encapsulated; they were really myomas and went all through the uterine tissues. The younger the woman the more inclined was he to do a myomectomy, and the more advanced the age the more he favored hysterectomy, whether abdominal or vaginal.

Dr. Joseph Price, of Philadelphia, thought nothing was more important than that there should be a consensus of opinion concerning methods of operation. He thought the retrograde changes in fibroids very common. After the age of thirty years he thought the mental state very marked in a woman carrying a fibroid; after operation it was greatly improved. He did not think the lower route could be used by every one, owing to the lack of facilities in some locations.

Dr. Zinke admitted that the operation per vaginam could be done most dexterously by such a man as Dr. Goffe, but in view of that ease he thought how much more easily it might be done through the abdominal wall. He did not believe that the method of Dr. Goffe would ever be practised largely in this country or abroad. He was sorry that Dr. Boldt still found a place for electricity.

Dr. Wathen believed the conditions in each case must be considered in deciding upon the abdominal or vaginal route. The expertness of the operator must also be regarded. He believed it better to begin the operation in either way indicated by the operator's judgment, and be prepared to complete it by any other method demanded.

Dr. C. P. Noble, of Philadelphia, preferred the abdominal route in general, on account of the greater facility in reaching the field of operation, the greater certainty of asepsis, and the greater control of hemorrhage. To the objection to the abdominal route on account of hernia, he said that those who worked from above seldom saw herniæ. In all cases in which it was possible in young women he did myomectomy; in older women, hysterectomy.

Dr. G. Betton Massey, of Philadelphia, expressed the feeling that physicians should guard against professionalism. If they were prejudiced in favor of one method of treatment, patients coming to them did not get what they paid for, and if paying nothing they did not get what the medical profession should give to these patients free. He had noticed this professionalism in regard to the use of electricity. The absence of this professionalism was very marked in the treatment of doctors' own families, for he had treated a large number of the wives and daughters of physicians. He thought the word infection should be used in connection with fibroids rather than the word degeneration.

Dr. Goffe in closing said he did not mean to imply that his method was the only way; but that it was one way. He would do laparotomy in large fibroid tumors. He insisted on the danger of hernia from the abdominal route. He believed that Dr. Noble did not see all the cases of hernia, nor did any operator; the patient usually going to another surgeon. He admitted in reply to one criticism that he might not get out all the tumor; but if the larger part was taken out, as much as possible had been done to prevent development.

Dr. Boldt said in closing that he had given electricity only a limited field as a palliative measure. To say it had no field indicated a want of careful observation. He believed that a certain indefinite number of interstitial myomata would be symptomatically cured by electricity. He stated that the cases of submucous fibromyomata which were lodged in the pelvis, when it was possible to split the cul-de-sac from side to side, were the cases in which vaginal operation was indicated. Interstitial fibromyomata he did not believe indicated vaginal operation.

SECTION ON PEDIATRICS.

First Day—Tuesday, June 5th.

Address of Chairman.—Dr. Edwin Rosenthal, of Philadelphia, called the section to order. He said that pediatrics had become a most important branch of medicine. The most frequent diseases that we had to consider were diphtheria and typhoid fever. In speaking of antitoxins he said that the original antitoxin was a patented preparation. Those preparations now in use, however, were not. He never gave less than 1,500 units for an initial dose, but in cases of laryngeal diphtheria he gave 2,000 units. In speaking of typhoid fever, Dr. Rosenthal mentioned the three methods of treatment, viz., the antiseptic method, the Woodbridge method, and the antipyretic method.

Etiology of Idiocy and Imbecility.—Dr. Martin W. Barr, of Elwyn, Pa., read this paper. He said that, judging from his experience of the last fifteen years, the etiology of idiocy was threefold, viz., heredity, malnutrition, and accidents. In speaking of heredity, Dr. Barr considered mental and physical defects. He said malnutrition was predisposed to by the use of drugs, vicious habits, etc. He then referred to weak-mindedness in certain families among the nobility of Europe. Dr. Barr had a case of insanity which could be traced clearly through seven generations. Out of three thousand and forty cases, nineteen per cent. were imbeciles, five per cent. were insane, and seven per cent. were due to intermarriage. The so-called Mongolian type constituted about ten per cent. of the cases of idiocy. Tuberculosis and epilepsy were mentioned.

Physiological Training of the Feeble-Minded.—Dr. S. J. Fort, of Ellicott City, Md., presented this paper. He said a feeble-minded person was one in whom certain things were lacking that were necessary for association with people in general. He then spoke of the so-called "moral imbecile," and he considered a child that was six years old and unable to talk as feeble-minded. In conclusion, he thought that the institution was not only the best place for such cases, but that it was absolutely essential for their advancement.

A Study of the Circulation in the Feeble-Minded.—Dr. J. Madison Taylor and Dr. F. Savary Pearce, of Philadelphia, presented this paper, which was read by Dr. Taylor. It was based upon observation of nine hundred and fifty-five cases. Cardiac and vascular changes were more common in males. Presystolic murmurs at the apex were the most common organic changes, there being one case that had an aortic murmur. The circulatory changes he thought were very interesting in that all of the cases involved a loss of tone. Dr. Taylor thought that these conditions were due to a toxæmia acting on the neurons.

Infantile Cerebral Palsies.—Dr. A. C. Cotton, of Chicago, read this paper. He considered anything that impaired the function of the brain as palsies. He had collected the histories of twenty-five cases, and found that females were more often affected, and that diplegia was the most common form (seven out of the twenty-five cases), and that dysphasia was the rule. He exhibited some very interesting photographs.

Dr. William M. Leszynsky, of New York, opened the discussion. He did not agree with Dr. Fort in the institutional treatment of feeble-minded children. He thought that "home treatment" would be as beneficial as any. In considering Dr. Cotton's paper, Dr. Leszynsky thought that every case of epilepsy should be examined for infantile cerebral palsy.

Dr. J. P. Crozer Griffith, of Philadelphia, said that he thought tremor, as a post-cerebral symptom, was rare, while choreiform movements were quite common.

Dr. Taylor said that years ago he had thought, as Dr. Leszynsky did, that home treatment for feeble-minded children was the best thing for them, but now he knew that institutional treatment was the only right way to handle these cases.

Dr. Cotton, in closing the discussion, said that he strongly favored institutional treatment, and, in passing, mentioned the case of a child who became self-supporting by such treatment and training.

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Leon Solomon, M.D., Chairman.

First Day—Tuesday, June 5th.

Chairman's Address.—Dr. L. Solomon, of Louisville, the chairman, expressed the opinion that the greater precision in the knowledge of the use of medicinal agents within recent years was gradually overcoming the therapeutic nihilism so prevalent a decade ago. This branch represented the highest aim of all medicine, and was the culmination of all of the researches of the other departments. After outlining the past history of the section and the plans for the future, he gave a review of the progress in this department for the past year. Particular attention was devoted to the subject of serum therapy. Natural, passive immunity was discussed at length. Ehrlich's side-chain theory offered the best explanation of immunity. The various tissues of the body had different side-chain combinations—as an example, tetanus toxin in an emulsion of fresh brain became much attenuated. The diphtheria antitoxin neutralized all of the side chains. Other antitoxic serums failed because they failed to neutralize all of the side chains. No serum over six months old should be dispensed. The tetanus antitoxic serum fulfilled all the requisites of an antitoxin, and would be of undoubted service if we could diagnose the disease at its inception, as in the case of diphtheria. In discussing the antipneumococcus serum he pointed out that inasmuch as the pneumococci circulated in the blood, the phagocytic power of the leucocytes furnished the chief means of attack. The function of the antipneumococcus serum, therefore, was to stimulate the leucocytes. This agent thus far did not hold a fixed place in our armamentarium. The tuberculins could neutralize only a few of the many toxins of the bacillus tuberculosis, and their action was therefore limited. The antirabic serum of Tizzoni had not been a success. The toxins of bacillus prodigiosus and of bacillus erysipelatis gave good promise. In closing he spoke very forcibly of the slanderous rumors derogatory to the officers of this section that had been circulated throughout the country.

Dr. A. M. Lyons, of Detroit, outlined the policy of the American Pharmaceutical Association, of which he was a delegate. He advised a censorship over all of the papers and advertisements in the medical journals.

Treatment of Acute Alcoholism by Large Doses of Digitalis; A Clinical Study Based on Cases in the Alcoholic Wards of Bellevue Hospital.—Dr. Henry P. Loomis, of New York, read this paper. He said that this agent was largely employed for this purpose in England. One observer reports seventy successful cases. It was generally agreed that there was a great tolerance of this agent in acute alcoholism. He administered it in ten cases. There were two deaths, only one of which could in any way be attributed to the drug. One-half ounce of the tincture was given every four hours for three doses; if this was not effectual he waited six hours and repeated the procedure. The effects observed were a better pulse, the skin became warm, the temperature fell, and the patient went to sleep. Recovery was much more rapid than with any other treatment. The speaker, however, cautioned against the indiscriminate use of such large doses, and thought they should be given only to robust young people. If after three doses the narcotic effect was not evident, it was better to desist.

Dr. O. T. Osborn, of New Haven, said that the vessels of the stomach in cases of acute alcoholism were in a state of vasodilatation, and, therefore, absorption from the stomach was very slight. This was the reason why such large doses of so powerful an agent produced so little effect.

Some Dangers from the Use of Narcotics in Young Persons.—This paper was read by Dr. T. D. Crothers, of Hartford, Conn. He said that when opiates were administered to some people for a limited period a diathesis was established which cropped out late in life if the subject was given opium again. The patient often did not know that the drug was administered before. In some individuals a repugnance was established with the first administration, which continued ever after. When opium did not cause nausea and disagreeable after-effects there was a predisposition toward the habit. A child born of a woman who was addicted to its use was irritable, and this irritability was often only overcome by the use of opium.

Dr. W. B. Hill spoke of the possibility of the cells being stimulated to produce a kind of antitoxin to neutralize the effect of the opium toxin, and thought that when the opium was discontinued the cells continued to produce the antitoxin, thus creating a demand or craving for the toxin.

Dr. J. N. Upshur, of Richmond, Va., deprecated the advice of college professors to students to use morphine for all pains. The students should be taught the responsibility of using narcotics.

Dr. Crothers in closing pointed out the difference between the opium and morphine habits, and said that both alcohol and opium habits were often the result of a psychosis inherited or acquired.

Therapeutic Progress.—Dr. I. Tracy Melvin, of Saguache, Colo., read this paper. He spoke of the uselessness of the knowledge of an accurate description of medicinal plants as far as the physician was concerned. The active principle was all that he needed. The Galenical preparations of the crude drug were too uncertain to be of any scientific value. The effects of soil, climate, and variety were so great that it was impossible that any two samples of a crude drug should possess the same effect. They often varied as much as three hundred per cent. in their percentage of alkaloids. He believed that the alkaloid should be prescribed in preference to the crude drug preparations.

Dr. N. S. Davis said that the physiological effects of many drugs could not be got from the use of their alkaloids. He believed in a proper combination of medicinal agents in many cases, and that the effect was really more simple than if a single agent was prescribed for each symptom.

Dr. F. Woodbury, of Philadelphia, believed that the scientific attitude toward all new remedies was that of scepticism until their value was clearly determined.

Plea for Greater Simplicity in Therapeutics.—Dr. L. Faugères Bishop, of New York, read this paper. He said that a small number of drugs well understood tended to clearness of thought and definiteness of purpose in therapeutic measures. Often a single ingredient of a complicated mixture caused injurious effects which were attributed to the course of the disease. He would advise young men to use a few drugs which they knew well, and to rely on hygiene for the rest of the treatment. He strongly protested against the use of proprietary combinations, the ingredients of which could not be varied and in many cases were not even known definitely.

Dietetic Treatment of Diabetes.—This paper was read by Dr. N. S. Davis, Jr., of Chicago. He said that in mild cases patients would cease to pass sugar when the sugars and most of the starches were withheld from the dietary. In cases of moderate severity improvement would take place as soon as both sugar and starches were entirely stopped. The sugar would not disappear from the urine in severe cases under this regimen. Even the amount of albumin ingested must be limited. The carbohydrates should not be stopped at once. It was wise to do this gradually. Very rarely could any diabetic patient take more than three and one-half ounces of carbohydrates in twenty-four hours. Fats should be taken liberally. Meat, milk, and eggs were the staple articles of food for most diabetics. In ordinary cases of patients who had improved sufficiently to take regular food again, a day of fasting should be observed about once a week, when the patient should return to the diabetic regimen.

Coma Diabeticum and its Treatment.—This paper was read by Dr. Heinrich Stern, of New York. In an analysis by the author of the number of deaths in Manhattan and the Bronx for the past year, there were two hundred and six cases of death in which diabetes was the cause. Sixty cases terminated in coma. He did not believe that it was true diabetic coma, however. There were two forms of diabetic coma—the true, and the pseudo-diabetic or coma due to an intercurrent affection. In true diabetic coma there was a regular dyspnœa, without any apparent cause, present in the lungs. Cyanosis was rare. The pulse was weak and the temperature low. After the onset the quantity of urine became much less; it generally contained albumin; glucose was absent in sixty per cent. of the cases examined by the writer. Before the coma occurred there was sometimes a diminished alkalescence of the blood. In some cases casts were found. When these were present they were absolutely diagnostic of diabetic coma. They were short, smooth, and broad, and of a pale hyaline appearance. There was no reliable symptom to warn one of the approach of coma. Usually death occurred in twenty-four hours. As a preventive alkalies in large doses afforded the best results. When coma occurred they were useless. Two cases were reported by the writer in which he saved the patient's life by the use of precipitated calcium carbonate. It was administered per rectum.

GENERAL SESSIONS.

Second Day—Wednesday, June 6th.

Address on Surgery.—Dr. W. L. Rodman, of Philadelphia, delivered this address, taking for his subject "Gastric Hemorrhage."

Gastric hemorrhage of whatever nature was, until recently, looked upon as strictly a medical affection, and was treated upon the same general principles as those which underlay that of many other internal hemorrhages. This was still true of many cases of gastrorrhagia, but not of others which were treated by a combination of medical and surgical means, and of others still which should be met by prompt operative procedure. Hæmatemesis, he said, might result from ulcer of the stomach, duodenal ulcer, gastric carcinoma, cirrhosis of the liver, vicarious menstruation, post-operative hæmatemesis, purpura hæmorrhagica, miliary aneurisms, aneurisms of the aorta and other vessels, leukæmia, typhoid, yellow, and other infectious fevers, valvular disease of the heart, and various kinds of traumatism. Gastric ulcer was the most common disease of the stomach producing hemorrhage —occurring in five per cent. of the entire population, according to Ewald and others. Hemorrhage occurred in at least fifty per cent. of all cases of gastric ulcer, and many authorities estimated it as present in eighty per cent. It was, too, fatal in eight per cent. of the cases in which it occurred, according to the conservative estimate of Leube, and it was indirectly fatal in a much greater number of cases by anæmia and its remote consequences. The character and amount of the ejected blood, however, would usually give prompt and positive evidence of its source and the cause underlying it. Bleeding in carcinoma was rarely so free as in ulcer; the amount of blood lost being small in quantity, and of the characteristic coffee-grounds appearance. It did not resemble pure blood, as it did in ulcer even though mixed with food. The presence of hydrochloric acid in the ejected matter was as characteristic of ulcer as its absence and the presence of lactic acid were of carcinoma. Ulcer was more frequent in women under the age of forty, whereas carcinoma occurred more commonly in men past middle life. Formerly the treatment of hemorrhage from gastric ulcer was uniformly by ice, astringents, and opium, combined, of course, with rest. This should properly be the treatment still for the first hemorrhage in all cases; for the second, possibly; but not for subsequent ones—for recurring hemorrhage, like appendicitis, would sooner or later prove fatal, and should, like that affection, be treated radically; and to carry the parallelism further, the best time to operate was between attacks. With two hemorrhages coming close together we might assume that as in appendicitis there would be a third attack, and if anything was to be attempted surgically it should be done when the patient was in fairly good condition, and not in the collapse of hemorrhage. The speaker said that better results would be secured by judicious interference than by the policy of inaction hitherto invariably followed, though he would not be understood as advocating interference in every case. Up to a certain point there was substantial agreement between physicians and surgeons, and, indeed, the idea of arresting hemorrhage from gastric ulcer by surgical means occurred to a physician and a surgeon at the same time. The results of operations for chronic hemorrhage were most encouraging. There had been thirty-one operations for frequently recurring, or what might be called chronic, hemorrhage, with six deaths, or a mortality of 19.3 per cent. Mr. Robson had reported one hundred and eighty-eight operations for gastric ulcer (non-hemorrhagic and non-perforating) with a mortality of 16.4 per cent., which was about the same percentage found by Heydenreich, Tricomi, and others. The good showing now made for recurring hemorrhage would be still better when physicians generally recognized that if delayed operations were justifiable, early ones were better, and should, therefore, be encouraged at a time when the chances of success were correspondingly brighter. While hemorrhage *per se* as a symptom of gastric carcinoma had not yet, Dr. Rodman said, led to an operation, he thought that in certain cases it might be either so free or of such frequent recurrence as to make one desirable. Resection would be the best procedure, but gastro-enterostomy would not only arrest the bleeding, but usually delay the inevitable end, and bring about a decided amelioration of all the distressing symptoms. Indicated as it often was in advanced carcinoma without hemorrhage, the presence of the latter as a symptom should be an additional reason for surgical intervention. Hemorrhage into the stomach was a frequent symptom in cirrhosis of the liver. The diagnosis of cirrhosis could be made in only one-third of the cases at the time of the first hemorrhage. A study of Preble's cases along with those collected by Savariaud showed the possibility of an unexpected and fatal gastric hemorrhage in the course of cirrhosis of the liver. Several of the cases reported as having been operated upon for diffused or capillary hemorrhage complicating ulcer were really, the speaker held, instances of venous hemorrhage into the stomach on account of an obstructed portal circulation due to cirrhosis. It was quite certain that operation for gastric hemorrhage in cirrhosis had a less promising future than the same procedure in bleeding ulcer; for in the former there was, in addition, that general hemorrhagic tendency that made bleeding from any situation most difficult to arrest. No operation had as yet been deliberately performed in cases in which the diagnosis of cirrhosis had been made, although some of the cases reported and operated as hemorrhagic ulcers might have been instances of cirrhosis.

Vicarious Menstruation.—There was a more or less general belief that vicarious menstruation might manifest itself in the way of hæmatemesis. If this did happen, one would naturally think that it should do so in young women whose ovaries and tubes had been removed, or in women submitted to hysterectomy, the appendages being left, and who could not therefore menstruate in the natural way. The speaker said he had written to fifty prominent gynæcologists and surgeons to learn if they had seen, and if so how frequently, instances of vicarious menstruation showing itself by hæmatemesis following removal of the appendages, uterus, or both. Nearly all answered, and only two reported (each a single case) affirmatively. Many of the writers expressed a positive conviction that vicarious menstruation did not occur.

Post-operative Hæmatemesis is rare. Mayo Robson, in his Hunterian Lectures, states that he has encountered it in seven cases of his own, two being fatal, and refers to a similar experience of Eiselberg, who reported to the Surgical Society in Berlin the details of six cases. It is significant that nearly all of the cases reported by Robson and Eiselberg were instances of operations on the intestines, omentum, and structures adjacent to the stomach. Robson stated that in six of the cases the omentum was ligated, and in another it was probably contused. He also said that "in an experiment on an animal multiple hemorrhages into the stomach followed twisting of the omentum." The speaker gave details of four experiments upon dogs to determine whether it was possible to cause hemorrhage into the stomach by rapid and severe traumatism not applied to the stomach itself. In none of the experiments was any hemorrhage noted. He also wrote to fifty surgeons, of whom only nine replied that they had seen operative hæmatemesis. He made particular inquiries as to the frequency of hæmatemesis after hernia operations as Robson and Eiselberg had both seen it. Of the fifty surgeons written to, only two had encountered it, and one of the cases was a strangulated hernia with general peritonitis. The other was a case operated upon for ventral hernia, and in which death occurred from a demonstrated duodenal ulcer. In more than a hundred herniotomies—strangulated and non-strangulated cases—Dr. Rodman himself had never encountered gastric hemorrhage. The sum total of all the hernia operations done by these fifty surgeons was undoubtedly many thousands, and yet but two cases of post-operative hæmatemesis were reported, and each was satisfactorily explained—one patient dying of general peritonitis following strangulated hernia, the other from a duodenal ulcer demonstrated at autopsy. All of the cases seen by Robson and Eiselberg followed intra-abdominal operations, such being also the case with all post-operative hæmatemeses reported by American surgeons, excepting two cases in which nephrorrhaphy had been done. In doing nephrorrhaphy, the peritoneum might, in the first place, be incautiously opened by the most careful operator, and secondly there was always a considerable amount of traumatism necessary to force the kidney into the lumbar incision. It is not, therefore, difficult to understand how a hæmatoma might easily be produced by the great abdominal pressure oftentimes necessary to bring the kidney into view, and how, furthermore, this extravasation might occasionally cause sapræmia, septicæmia, or peritonitis, according to circumstances. All septic conditions favored disintegration of the blood corpuscles, and predisposed to hemorrhage from mucous surfaces. The gastric mucosa was particularly liable to congestion in conditions of sepsis, both on account of the marked tendency of the thin and more or less disintegrated blood to settle in the internal organs, and on account of the vomiting and retching so frequently present. This would give, the speaker said, a satisfactory explanation of the rare hæmatemeses following abdominal operations. The experiments upon dogs had shown that even violent traumatism to the omentum, intestines, spleen, pancreas, and liver did not produce immediate hemorrhage into the stomach; and it did not seem unreasonable to suppose that delayed hæmatemesis would usually depend upon disintegration of the blood due to sepsis.

Oration on State Medicine: Typhoid Fever among American Soldiers. — Dr. Victor C. Vaughan, of Ann Arbor, Mich., delivered this address, presenting therein some of the more important conclusions reached after a study of typhoid fever among the American soldiers in 1898. He said that in August of that year a board, consisting of Major Walter Reed, U.S.A., Major E. O. Shakespeare, U.S.V., and himself, was appointed at the request of the surgeon-general of the United States army for the purpose of ascertaining the causes of the existence and spread of typhoid fever in the national encampments, and of suggesting means for its abatement. After completing the tour of inspection, this board spent about eighteen months in going over the medical records of the various commands. The first conclusion arrived at was that every regiment in the United States service in 1898 developed one or more cases of typhoid fever, statements to the contrary notwithstanding. More than ninety per cent. of the volunteer regiments developed this disease within eight weeks after assembling in the State encampments, and most of the regular regiments—probably all—developed it in less than that time. Typhoid fever was so widely distributed in this country that one or more cases were likely to appear in any regiment within eight weeks after assembling. When war with Spain was proclaimed, the total strength of the standing army of the United States was twenty-seven thousand, scattered in about one hundred military garrisons, and with no epidemic at any post. Typhoid fever not only appeared in every regiment in the service, but became epidemic in the small as well as in the large encampments. There was abundant proof that the prevalence of typhoid fever among these troops was not due to geographical location. The chance of infected men being found in each regiment was shown by the following figures: In New York City, which is unusually free from typhoid fever, it was calculated that there were 3,986 cases of this disease in 1897. As at least four-fifths of the cases occurred in those of military age—eighteen to forty-five years—there were among this class in New York City 3,188 cases. Assuming the population to be 2,000,000, and that the number of persons of military age was one-half of the population, it followed that if these people were divided up into regiments of 1,300 each, they would have furnished 769 commands. If the estimated 3,188 cases of typhoid fever had been evenly divided among these regiments, each command would have contained at least four persons who, in all probability, would develop typhoid fever during the year. Another point, which the speaker substantiated by quotations from military authors, was that typhoid fever usually appeared in military expeditions within eight weeks after assembly. As many intelligent medical officers still clung to the old miasmatic theory of typhoid fever, it was worthy of note that this investigation brought out no fact more prominently than the demonstration that locality was not responsible for the epidemics. Neither was any support found for the pathogenic theory. Translated into terms of modern medicine, this theory was founded on the belief that the colon germ might undergo a ripening process by means of which its virulence was so increased and altered that it might be converted into the typhoid bacillus, or, at least, might become the active agent in the causation of typhoid fever. Moreover, all the known facts of experimental bacteriology were at variance with this theory. This investigation also made it clear that there was no ground for the belief that simple diarrhœa might develop into typhoid fever, or predispose to it—indeed, the men who had simple diarrhœa did not, as a rule, subsequently develop typhoid fever. Typhoid fever was disseminated by the transference of the excretions of an infected individual to the alimentary canals of others. It was more likely to become epidemic in camps than in civil life, because of the greater difficulty of disposing of the excretions from the human body. More than this, a man infected with typhoid fever might scatter the infection in every latrine of a regiment before the disease was recognized in himself. As it was probable that typhoid bacilli were eliminated from the bowels as soon as infection began, it was reasonable to assume that throughout the entire period of incubation an individual might be a source of danger to others. If this was true, the only way in which typhoid fever could be with certainty prevented in armies was by the complete disinfection of the stools of all, both the sick and the well. Camp pollution was the greatest sin committed by the troops in 1898. Some commands were also unwisely located, as, for example, at Chickamauga, where certain regiments were so placed that they received the drainage of other regimental camps. In some instances the space allotted the regiments was inadequate, and many commands were allowed to remain on one site too long. The placing of the regiments in unsanitary positions was done by the superior line officers, sometimes in the face of protests from the medical officers. As the medical officer could only recommend, the line officer having the authority to command, it did seem right that the line officers should at least know enough of this subject to be able to recognize the importance of reasonable requests and recommendations made by medical officers. It also seemed proper and expedient that greater authority should be given medical officers in matters relating to the hygiene of camps. A significant statement made by Dr. Vaughan was that, in a general way, the number of cases of typhoid fever in the different camps varied with the method of disposing of excretions. Thus, during a part of the stay of the First Division of the Seventh Army Corps at Miami, and during the entire period of its encampment at Jacksonville, water carriage was employed for the disposal of fecal matter. In the Second Division the tub system was employed, and by it the fecal matter was scattered all through the camp. In the Third division regulation pits were used. The number of cases of typhoid fever was smallest in the First Division and greatest in the Second Division. The tub system should be condemned, and the regulation pit system was far from satisfactory, particularly in hot weather. He was convinced that if epidemics of typhoid fever were to be prevented, some other method of disposing of fecal matter in camps occupied for a week or longer must be resorted to. The board of inspection recommended that in permanent camps, where water carriage could not be secured, all fecal matter should be disinfected, and then carted away from camp. Galvanized iron troughs containing milk of lime should be used for the reception of the fecal matter, and their contents should be removed daily by means of the portable odorless evacuator. The investigation showed that infected water was not an important factor in the spread of typhoid in the camps in 1898. The greater prevalence of typhoid fever in the Third Army Corps was attributed to the fact that the camp-sites furnished many wet-weather springs, thus favoring infection. These undoubtedly served as carriers of the infection, either by mechanically transporting adherent and infected fecal matter, or by the men swallowing the typhoid bacilli and voiding them afterward with the encrement. It was more than likely that the men transported infected material on their persons or in their clothing, and personal contact was undoubtedly one of the means by which the infection was spread. Blankets and tentage became soiled with typhoid discharges, and in this way the disease was carried by the command wherever it went. It was probable also that the infection was disseminated to some extent through the air in the form of dust. Men inhaled the fine dust from the roads, or it was deposited on their food and was then eaten. It was true that complete desiccation soon destroyed the typhoid germ, but dust was not always completely desiccated. It should be borne in mind that a badly infected command did not lose the infection by simply changing location, though such a step was desirable. Even an ocean voyage did not relieve an infected command of its infection, as was well shown in the case of infected regiments going from Chickamauga to Porto Rico. Except in cases of most urgent military necessity, one command should not be located on a site recently vacated by another, and the fact that a command expected to change its location did not justify a neglect of proper policing of the ground up to the very moment of vacating it. In some of the encampments the tents were too close together, and there were too many men in each tent. Malaria was not found to be a prevalent disease among the troops that remained in the United States, and the malaria that did exist in the camps in this country yielded readily to quinine. The continued fever that prevailed among the soldiers in this country in 1898 was typhoid fever. What was designated as a distinct disease under the name of "Chickamauga fever" had the typical temperature curve of typhoid fever and the death rate of that disease; the fever was not arrested by quinine, and in cases coming to autopsy the characteristic lesions of typhoid fever were found. While the investigations of the board showed that coincident infection with malaria and typhoid fever might occur, the resulting complex of symptoms did not seem to be sufficiently well defined and uniform to be recognized as a separate disease. About one-fifth of the soldiers in the national encampments in the United States in 1898 developed typhoid fever. Of the 9,660 cases of probable typhoid studied at Chickamauga, 4,068, or a little less than half, were diagnosed by army surgeons as typhoid fever. Of these 9,660 cases, 713 resulted fatally, giving a death rate of 7.38 per cent. It was probable that when a command was thoroughly saturated with typhoid, one-third to one-quarter of the men would be found susceptible to the disease. In military practice typhoid fever was often an intermittent disease. No support was found for the belief that errors in diet, with consequent gastric and intestinal catarrh, induced typhoid fever or predisposed to it. More than eighty per cent. of the men who developed typhoid fever had no preceding intestinal disorder. The deaths from typhoid fever were more than eighty per cent. of the total mortality. The shortest period of incubation in typhoid was probably something under eight days. One who had lived in a camp in which typhoid fever was prevalent was liable to develop this disease any time within eight weeks after leaving such a camp. The proof of this last statement was to be found in the history of the Fifth Pennsylvania.

Change in Name of Section.—The name of the Section on State Medicine was changed to Section of Hygiene and Sanitary Science.

A New Section Formed.—In accordance with the suggestion of the president, the association formally authorized the establishment of the Section on Pathology and Bacteriology.

A Permanent Committee on Exhibit.—Acting upon another timely suggestion in the president's address, it was voted to establish a permanent committee on exhibit, composed of five members, electing each year a chairman residing at the place selected for the next annual meeting of the association.

Report of the Board of Trustees.—This report showed the total receipts for the year 1899 to have been the largest in the history of the association, *i.e.*, $109,115.33. The total expenses of the *Journal* were $77,641.01, and of the treasurer's office $15,968.39, making the total disbursements $93,609.40.

American Medical Association Medal.—Dr. George M. Gould, of Philadelphia, presented the report of the committee having this matter in charge. He stated that the committee had carefully examined the six essays submitted, and had unanimously voted to award the prize to Dr. A. L. Benedict, of Buffalo, N. Y., for the essay entitled, "Quantitative Tests for Proteolysis." The gold medal was of about the diameter of a United States twenty-dollar coin, and about twice as thick, and was of handsome design.

The Senn Medal.—Dr. W. L. Rodman reported for this committee that this prize had been awarded to the author of an essay entitled "Exstrophy of the Bladder," and requested President Keen to break the seal and announce the name. This was done, and the author was found to be Dr. F. Gregory Connell, of Chicago. Dr. Keen, in presenting the medal to Dr. Connel, took occasion to thank him for the high standard of excellence which characterized this important contribution to surgery.

Rush Monument Fund.—Dr. James C. Wilson, of Philadelphia, reported that the contributions for the year amounted to $938.20, making the total fund at the present time $11,330.05. Drs. Billings, Bulkley, and Rodman were added to the committee.

New Officers.—The nominating committee selected the following officers to serve the association the coming year: *President*, Dr. C. A. L. Reed, of Ohio; *First Vice-President*, Dr. A. W. Calhoun, of Georgia; *Second Vice-President*, Col. Alfred A. Woodhull, U.S.A.; *Third Vice-President*, Dr. Philip Marvel, of New Jersey; *Fourth Vice-President*, Dr. W. E. Quine, of Illinois; *Treasurer*, Dr. H. P. Newman, of Illinois; *Secretary and Editor*, Dr. George H. Simmons, of Illinois; *Trustees*, Drs. M. F. Porter, of Indiana, E. Fletcher Ingals, of Illinois, W. L. Rodman, of Pennsylvania, and J. A. Matthews, of Kentucky.

Dr. John A. Wyeth, of New York, was mentioned as the one who is to deliver the oration on Surgery next year, and Dr. N. S. Davis, Jr., of Illinois, for the oration on State Medicine.

SECTION ON PRACTICE OF MEDICINE.

Second Day—Wednesday, June 6th.

Pseudo or Modified Smallpox.—Dr. T. J. Happel, of Trenton, Tenn., read this paper, in which he reviewed the salient points in the course of a normal case of variola vera, giving data to show that it could be prevented by vaccination. The clinical history of pseudo-variola was given, showing absence of a pustular stage and of secondary fever often occurring in those successfully vaccinated; the vesicles desiccating without crusting or scabbing, and not being followed by pitting. Vaccination seemed to give no protection, and in some instances vaccination was successful after the disease had run its course. The report was based upon an epidemic extending to about three hundred patients, mostly negroes; white patients seemed to suffer more. The eruption was unattended by itching. There were no swelling and no mortality. The disease ran such a mild course that it was preferred to vaccination, the early backache and headache being the chief subjective symptoms. There were no complications nor sequelæ, and no medicines were administered.

Dr. Walsh, of New York, thought the observation valuable as showing a connecting link between variola and varicella, observers now coming to acknowledge the connection between these extremes.

Dr. James, of Missouri, said that in Missouri they had had an exaggerated form of the same affection, which he thought was mild or modified or discrete smallpox. There had been over three thousand cases of a mild form of variola often mistaken for chickenpox.

Dr. Chapman, of Ohio, said that for a year or two an epidemic of this disease had existed; a third of the adult population of a region being sick at the same time. Vaccination had been practised in infancy in almost all cases. He had found vaccination successful, and in this he took exception to Dr. Happel's views. The disease was not varicella, which was not an adult disease. He had seen a number of deaths. Health officers should vaccinate and isolate and stamp out this affection just as though it were more virulent. It was smallpox.

Dr. Corlett, of Ohio, said different epidemics differed in virulency. In Cleveland a number of cases had proven fatal. The distinction between variola and varicella could usually be made readily. Vaccination was the only safeguard.

Dr. Woodward, of Ohio, spoke of one hundred and twenty-five cases with one death. Vaccination seemed to protect; the one vaccinated in one family escaping, and seven others not vaccinated contracting it. Some epidemics were as mild as chickenpox.

Dr. Stewart, of Philadelphia, said that the evidence presented did not show that the epidemic was either variola, or varioloid, or varicella. He thought it might be some exanthem.

Dr. McCormack, of Kentucky, offered a resolution expressing the sense of the section that the epidemic described was one of modified variola. The cases he had seen coming from Tennessee were variola.

The resolution was declared out of order, and this decision was loudly applauded.

Yellow Fever: Its Nature and its Cause.—Dr. Eugene Wasdin, surgeon in the United States Marine-Hospital service, went over the natural history of the disease, describing its endemic presence in some Southern cities and in inter-tropical countries; its epidemic invasion of more temperate climes, and its disappearance from these regions with the cessation of the epidemic at the advent of frost. The clinical features marking the disease as an entity and distinguishing it at certain stages were described. The variations of temperature giving the three characteristic stages furnished the chief distinctive feature of the affection. The organisms at different times charged with being causative had been shown by Sternberg to be without sufficient evidence to support them. There was at present sufficient evidence to establish the claims made for the bacillus icteroides discovered by Sanarelli. It was found in half the cases, and was pathogenic to animals when introduced experimentally into the blood. It explained the natural peculiarities of the disease, satisfactorily explained its clinical phenomena, and fulfilled the demands of modern bacteriology to warrant its acceptance as the true and proved cause of the disease. It attenuated rapidly in cold and lost its virulence at a temperature below zero, explaining the disappearance of epidemic disease at the onset of frost. It was first colonized in the respiratory tract, giving the first paroxysm. Invasion of the blood gave the second, and septicity the third stage. Domestic animals were susceptible. Recrudescence might be attributed at times to them. America had furnished the proofs and the scientific explanation of Sanarelli's important discovery.

Dr. Flexner, of Philadelphia, said Sanarelli had done much in the discovery, in the bodies of subjects dead of yellow fever, of a hitherto undescribed organism. He did not know that all the conclusions arrived at by the reader could be accepted, but the observations opened the way for further experimentation and confirmation. The mode of invasion must still be regarded in the light of hypothesis.

Dr. Gerry, of Boston, asked whether one who had had yellow fever was really immune. This was not true for variola.

Dr. Wasdin said in closing that he felt convinced that further investigation would prove the value of Sanarelli's bacillus. Animals reacted to small amounts and were not overwhelmed by large quantities of the bacillus, so that the experiments approximated a natural process. The conditions required by Koch, Sternberg, and others were fulfilled in the animal inoculations, so that they must be accepted. Black vomit and characteristic changes were present to prove the truth of the specific nature of the bacillus icteroides. He did not believe absolute immunity was conferred by one attack.

Resolutions of regret at the death of Dr. Whitaker, of Cincinnati, were offered by Dr. Osler and accepted by the section.

In opening a symposium on malaria the secretary read a paper presented by Dr. Jesse W. Lazear, U.S.A., of Havana, Cuba, with the following title:

Pathology of Malarial Fevers; Structure of the Parasites and Changes in the Tissues.—The methods of preparation of the blood and staining with methylene blue, the Romanowsky method and its modifications, were first given. The cycles of development of the parasites were described. The structure of gameti or sexually ripe parasites was given, together with the formation of crescentic bodies.

The Etiology of Malaria, with Especial Reference to Mosquitos.—This paper was read by Dr. W. S. Thayer, of Baltimore. He described experiments carried on along the eastern shore of Maryland, where malaria prevailed, and where mosquitos abounded. One variety of mosquito, the Culex, abounded in high regions where there was no malaria. Another variety, the Anopheles, on the other hand, was found where the disease prevailed. It had been proved that the malarial parasite possessed an extracorporeal cycle which took place in the mosquito just as was the case in birds. A single bite would transmit the disease, and when fed upon the parasites the mosquito would transmit the particular form (quotidian, tertian, or quartan) with which it had been originally fed. The speaker believed that mosquitos acquired the parasite exclusively from man. While there might be other methods of transmission by mosquito bites, this was the only one proven. It is highly probable that where Anopheles abounded malaria would prevail. In prophylaxis the mosquitos must be killed in their larval stage. Patients should be treated, in relapses, under mosquito netting.

The Structural and Other Differences between the Several Mosquitos of North America.—Dr. L. O. Howard, of the Department of Agriculture, gave a screen demonstration showing the differentiation between the Culex and the Anopheles, the latter being the transmitters of malaria. They were to be distinguished in the larval stage in their mode of development, and when fully developed. The wings of the Anopheles were spotted; those of the Culex were plain; the "feelers" protruding from the head of the Culex were much shorter than those of the Anopheles. The singing note of the Anopheles was not so high as that of the Culex; this was well appreciated by collecting a number of each variety in a jar and listening to their buzzing when the jar was tapped upon.

Inoculation of Malarial Fever through the Agency of the Mosquito.—Dr. A. E. Woldert, of Philadelphia, read this paper. The natural order, general species, and modes of identification and of distinguishing the male from the female mosquito were given, based upon sections, dissections, and gross study. He said that the Culex pungens was not capable of inoculating a human being with malaria, but the reasons for this were not known. The different species of Anopheles, however, did transmit the disease. The Anopheles maculipennis or claviger was of doubtful occurrence here, and there was no example in any museum. The speaker went over the cultivation of zygotes of proteosoma in the dapple-winged mosquito as described by Ross. He also discussed the etiology of malaria based upon studies made in the South.

SECTION ON SURGERY.

Second Day—Wednesday, June 6th.

Colostomy for Permanent Fecal Fistula.—Dr. John A. Wyeth, of New York, read this paper. He laid particular emphasis on the desirability of forming an artificial sigmoid. It was the natural storehouse of the rectum, and its presence, in great measure, did away with the fifteen-minute dejections and the tenesmus so distressing in the older form of operation. The technique of the operation, which was in part suggested by his former assistant, Dr. Bodine, was as follows: As much as ten inches of the sigmoid and descending colon was dragged into the wound, and two running sutures, four inches long, were passed from the enterostomy site down the bowel wall. Traction was made on the lower gut, so that there might be no slack whatsoever to the rectum. The knuckle was held in place by sutures—he believed these to be preferable to the glass rod.

Present Status of the Murphy Button, and Report of 1,620 Cases.—Dr. J. B. Murphy, of Chicago, presented this paper. Just eight years ago he used the button on the first human case. He cited many statistics showing the influence of the button in lowering the mortality of all anastomotic work. In detail, he considered then as follows: Entero-enterostomy, which formerly yielded a mortality of from fifty to one hundred per cent., now showed a mortality of but 19.7 per cent. This seemed to Dr. Murphy to demonstrate the great value of his button in gangrenous hernia when the mortality reached the ebb-figure of fourteen per cent. It was for the operation of cholecystenterostomy that the button was first devised. Prior to its introduction there had been but eleven cases recorded. While formerly he recommended it in every gall-bladder case, he would now restrict its use to conditions in which there was permanent obstruction to the common duct. The mortality was 14.7 per cent. Gastro-enterostomy and uretero-enterostomy presented very favorable statistics. Reviewing the history of gut approximation, he spoke of the early efforts of the French, as far back as 1802, and said that Senn's classic paper in 1888 gave a tremendous impetus to bowel surgery. In the eight years during which the button had been used, the following conclusions regarding it had been reached: (1) It approximated without suture. (2) The time of operation was much shortened. (3) The union was ideal. (4) There was no contraction of the scar. (5) The physiological function of the gut was not interrupted at any time. There were two great classes of objections to the use of the button: (1) The opening might be occluded by food or other particles, prior to the sloughing of its attachment. (2) There might be prolonged retention of the button in the gut or abdominal cavity. Both these matters were of small moment, there having been but three fatal cases, in the 1,620 considered, traceable to such causes. It was of little consequence whether the button was passed or not. The portions of the canal in which it had been found retained were enumerated as follows. in the stomach, 22 times; colon, 5 times; ileum, 2 times; jejunum, 1 time; cæcum, 2 times; rectum, 4 times.

The Treatment of Obstinate Constipation Based on New Points in the Anatomy and Histology of the Rectum and Colon.—Dr. J. R. Pennington, of Chicago, read this paper. He spoke of the great variability of the position of the sigmoid which, when distended, frequently extended to the right iliac fossa. Numerous paraffin casts, both of the adult and of the child, together with a series of charts, fully supported this statement. They also illustrated the depth to which Heuston's valves frequently indented this portion of the great intestine. Of the histological anatomy of these valves he spoke at length and showed the numerous epithelial glands which found a foothold within their walls. These valves seemed to him to be very potent factors in the etiology of chronic constipation, when, their epithelium diseased and their tissues sclerosed and thickened, they presented firm barriers to the passage of fecal matter. The speaker showed a specially contrived chair for the examination and operation of rectal cases, and a contrivance whereby a clamp could be attached to a portion of the offending valve by means of a sigmoidscope. In time the portion bitten upon sloughed away and was thus removed without fear of hemorrhage.

Dr. Tuttle, of New York, opened the discussion. He wished to say, in support of Dr. Murphy, that he recalled five cases in which the button had not been recovered, in all of which no ill effects had resulted. He emphasized the necessity of using Dr. Wyeth's operation only in those cases in which a permanent anus was to be established. Colostomy for transient conditions called for as much slack in the rectum as could possibly be obtained, and, furthermore, a fistula once established by Wyeth's method was exceedingly difficult to close. Indeed, in those cases in which resection of the spur was necessary, statistics showed a mortality of thirty-one per cent. But for a permanent anus Wyeth's operation was ideal, particularly when combined with one of the modern methods of making a new sphincter. He recommended a rectangular incision through the oblique muscles, and the carrying of the gut between the skin and the external oblique to an opening just below Poupart's ligament. Over the collapsed gut, and upon the firm surface of the abdominal wall, a truss pad could be applied with such success that the patient could not pass even gas without lifting the pad. By a union of these methods a patient could be made absolutely comfortable. He differed from Wyeth in that he always used the glass rod, rarely introducing a suture, for he believed that the suture alone was very apt to yield and allow prolapse, which was a frequent cause of death.

Repair After Resection of the Intestine.—Dr. W. A. Evans, of Chicago, read this paper. It consisted of a discussion of the histological characteristics of the scars in end-to-end anastomoses by the use of Murphy buttons and other methods. Dr. Evans dwelt on the rarity of strictures after such anastomoses, and said that if they were destined to appear, it would be before the tenth month. In those few cases in which stricture had been studied in the small gut, it had been found to be composed exclusively of circular fibres. He cited at length the histological arrangement of the gut elements. In intestinal scars the amount of cicatricial tissue was small; the fibres were very generally in one direction only, and bridged the wound. The important factor was, that they never ran circularly. There was a law that governed the direction of the fibres of scar tissue: they always ran in the direction of greatest tension. Of the small number of strictures which had been found in the lesser gut, the great majority were due to tuberculous lesions. Strictures due to other causes, however, were common in the greater gut, in the œsophagus, and in the urethra. Why? Probably because there was in these passages a lack of the longitudinal tension which was ever acting in the lesser gut. He advised the approximation of the deeper coats as well as of the serous, believing that a union so produced must be stronger. The Czerny-Lembert suture often resulted in the formation of a diaphragm which might produce obstruction, but we should not forget that these valves were physiological, at least in the lower gut. Concluding, he said that his investigations showed that the scar formation in these cases was so light and so harmless as in no case to contraindicate end-to-end anastomosis.

Dr. Wiggin, of New York, opened the discussion. He said that he cordially agreed with Dr. Evans as to the infrequency of scars in end-to-end anastomoses. He had watched patients for many years on whom he had operated when these procedures were still in their infancy. Years ago he had experimented on animals, using both the button and Monsel's suture. In some which were killed from one to nine months later, he had experienced the utmost difficulty in discovering the point of union. He strongly advised the use of horsehair in the Monsel operation, because of its elasticity. This factor obviated the danger of the stitches cutting through. He no longer invaginated the intestine, preferring to pass through and through, from inside to inside. This seemed undoubtedly the safest procedure.

Dr. Evans, in closing, said that much needless stress had been laid on scar formation after the button operation, but he now felt that this danger was much exaggerated.

Appendicitis: Colitis as an Etiological Factor, and the Operation of Removing the Appendix in All Cases Operated on.—Dr. Miles S. Porter, of Fort Wayne, Ind., read this paper. His special aim was to draw attention to the etiological relationship existing between constipation, colitis, and appendicitis. He cited a number of cases in which the appendicitis had been ushered in by an acute colitis, in many of which cases chronic constipation had long been a symptom. The second part of his paper treated of the important question whether or not incision and drainage, without removal of the appendix, was the operation of choice. He agreed that the appendix should be removed in a great majority of cases, but advocated a simple incision, with drainage, when speed was demanded and shock particularly to be avoided. Of two hundred and two cases thus treated, recurrence had been found in but thirteen per cent. In conclusion he said that no operator could do appendectomy in every case without raising the percentage of mortality.

Appendiceal Fistulæ.—This paper was read by Dr. J. B. Deaver, of Philadelphia. He spoke of the unfortunate frequency of this condition; important because of its sequelæ. Fecal fistulæ should be considered under two heads: the external, which might be simple or fecal, and the internal. The simple external fistula was readily cured by the removal of the gauze left by accident in the wound. Those fistulæ which discharged fæces were either in direct connection with a loop of the bowel or cæcum, or connected with the intestine via the lumen of the appendix. Pus was not essential to the formation of a fistula; microorganisms were important, while drainage tubes often caused it to persist. Speaking of internal fistulæ, he strenuously objected to the view that a happy outcome of an appendicitis was to have the pus cavity evacuate into the gut, and deplored the lack of surgical intervention which made such a condition possible. He tabulated the etiology of fistula as follows: (1) Abscess formation; (2) migration of bacillus coli communis; (3) separation of the appendix; (4) the use of too many sutures; (5) the prolonged use of the drainage tube; (6) pressure necrosis. He continued by urging the abolition of those factors, which could largely be accomplished by immediate action. The treatment of fistulæ was largely dietetic. They should not be frequently washed out, but left severely alone. In closing, he summarized as follows: (1) Fistula was one of the most important sequelæ of appendicitis. (2) Some cases closed spontaneously. (3) When they produced marked symptoms they should be operated on. (4) They should be avoided by early operation. (5) Fistulæ were generally curable by dietetics. (6) They did not always occur soon after the operation, but might come late in the convalescence.

Dr. Senn, of Chicago, opened the discussion. He said that operation should be considered as a preventive and as a curative measure. Both the immediate and the remote causes should be removed. He felt that Dr. Deaver was an extremist, who, while he had done incalculable good, had probably wrought greater harm. Fortunate it was that Dr. Deaver did not teach. He advanced the expectant treatment; eighty per cent. of cases so governed resulted in recovery. Fistulæ operations were extremely dangerous. He urged the subperitoneal method of enucleation. Lastly, he urged the section to beware of operating in those cases in which one had reason to suspect that the abscess had opened internally.

Dr. Mordecai Price, of Philadelphia, was glad to take Dr. Deaver's side. He opposed Dr. Senn's view very strongly, and felt that he had treated the very class of cases to which Senn referred. But twice in one hundred and twenty-five cases had he operated without pus, and he had yet to repent in a single case. His method was, not to close the head of the bowel if it was badly broken through. He simply opened the pus cavity, washed it out, and broke down adhesions. The most important part of his technique he felt to be the placing of the ruptured colon deep in the wound, and the use of gauze dressing. He operated on everything that would leave the table alive. He disagreed with Porter's statement that appendicitis was common in children, having found it most frequent after the age of twenty-one.

Dr. Dawbarn, of New York, regretted the futility of the discussion, which he felt would be repeated for the next twenty-five years without show of progress. At least that long would the archaic side persist which opposed early operation. He called particular attention to the prevention of fistulæ, believing them to be due, in almost all cases, to faulty technique. In those cases in which the cæcum was gangrenous, he cut away the appendix, and, without waiting to invaginate the stump, cast a purse-string suture about the gangrenous area and quickly inverted this, together with the stump, into the copious lumen of the cæcum. This procedure, repeated at all points of weakness in the gut, precluded the possibility of fistulæ.

Dr. Hamilton, of Columbus, said that no sweeping rules could be established. He criticised Dr. Price's method of breaking down adhesions and washing, believing it to be permissible in very infected cases only. Fistulæ usually yielded to medical treatment. He referred to what Dr. Senn had said as to the frequent posterior position of the abscess, and advocated a backward draining through the loin.

Dr. Mynter, of Buffalo, was first, last, and at all times with Dr. Deaver. He was surprised at Dr. Senn's point of view. He should have said that eighty per cent. of the cases end in recovery in spite of medical treatment. He thought incision and drainage the proper course in most cases after the sixth day. He found that fistulæ healed in most cases without intervention, and noted that, should operation be necessary, Dr. Deaver's method of curettage would not cure. End-to-end anastomosis was necessary.

Dr. Keen, of Philadelphia, said that, like the poor, we have appendicitis always with us. The two important questions were: (1) Should we operate coincident with diagnosing? (2) Should the appendix always be removed? He felt that we should not try to practise surgery by aphorisms. Dr. Deaver, he was sure, in spite of his theoretical assertions, did not operate in every case. He urged a conservative course: no case should be allowed to pass beyond the second attack. He pointed out that the section was making surgical standards for the country, and feared that evil would result from its taking a too radical stand. In general, operation was best. In general, removal was best. Fistulæ healed, as a rule, spontaneously. This failing, he advocated excision of the tract, invagination of the stump, and gauze dressing in the wound.

Dr. McCrae, of Atlanta, Ga., urged the removal of the appendix. Otherwise seventy-five per cent. either recurred or had fistula. He criticised very emphatically Dr. Price's suggestion that the abdominal cavity should be washed out, as very dangerous to life. He used the purse-string suture for closing fistulæ.

Dr. Murphy congratulated Dr. Deaver on his point of view. Granted that eighty per cent. resulted in recovery when medically treated; was there any operation with a mortality of twenty per cent. of which surgeons spoke with pride? He used to operate on all cases. Now, however, those already moribund he left to the physician who caused them. Diagnosis should be made within the first twenty-four hours. In these early cases the mortality of one per cent. was due entirely to fulminating cases which had perforated.

Dr. W. H. Walthen, of Louisville, advocated the conservative course.

Dr. Grey, of Jersey City, said he had had seven fatal cases out of one hundred and seventy-five. This experience had taught him to operate early and to excise the appendix.

Dr. Hall, of Cincinnati, felt that the discussion should not be closed without protesting against the advice of Dr. Murphy, who leaves the moribund cases in the hands of those who allowed them to fall into that state. Simple incision might here save a life.

Dr. Boldt, of New York, agreed with Dr. Murphy in every detail.

Dr. Fenger, of Chicago, urged the conservative treatment, agreeing with Dr. Senn.

Dr. W. E. Ashton, of Philadelphia, agreed with Dr. Deaver, for no one could foretell the pathological changes which come so quickly in the appendix.

Dr. La Place, of Philadelphia, said that in every fatal case there had been a moment when operation was indicated. Either the physician or the surgeon was directly responsible for this death. He felt that we should have to turn to the physiological chemist, who might one day reach a method of determining conditions by an analysis of the relationship between the effects on the heart and temperature of the toxins of the different germs causing the disease, thus reaching an early diagnosis.

Dr. Ochsner, of Chicago, made special reference to the importance of maintaining absolute rest for the bowel until the omental and other adhesions had become firmly fixed. To this end he would forbid all food by mouth and all cathartics.

Dr. Porter said, in closing, that incision and drainage were sometimes absolutely necessary. He criticised Price's method of irrigation very keenly. He would also try to save the moribund cases.

Dr. Deaver said that if he looked tired he only showed what he felt. It was distressing in this advanced age to listen to those who opposed the radical view. He was glad and proud to be an extremist in so good a cause. He claimed but two points: (1) that the diagnosis could be made early; (2) that this once established, the appendix should come out.

Officers Elected.—The officers chosen at the close of the meeting were: *Chairman*, Dr. A. J. Ochsner, of Chicago; *Secretary*, Dr. Martin B. Tinker, of Philadelphia.

(To be concluded.)

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, May 28, 1900.

George B. Fowler, M.D., Chairman.

Dr. William E. Bullard resigned the secretaryship of the society on account of absence from the city. Dr. J. V. D. Young, the assistant secretary, was appointed to the position of secretary for the remainder of the year.

The Governor and his Staff: Being a Glance at the Personnel of a Modern Hospital, and a Plea for a Permanent Resident Staff.—Dr. Thomas J. Hillis read a paper with this title. He dwelt principally upon the incompetency of the internes, ridiculing the hospital governor and his staff, but he failed to offer any remedies for the alleged evils.

Infantile Amaurotic Family Idiocy.—Dr. John Claiborne read this paper. In 1881 Tay, of England, described a case of symmetrical changes in the macula lutea. The child held itself upright with difficulty. Intellectual development was very backward. At the first examination the optic disc was normal, but at the macula there was a white, more or less round, area in the centre of which was a brown spot. The picture was similar to that seen in embolism of the central artery of the retina. Tay at first thought it was a congenital change. Five months later he noticed the optic disc was atrophied. Three months later he observed three other cases in the same family. In all the ophthalmoscopic picture was the same, and all these persons died before the end of the second year of the disease. Between the years 1885 and 1886 the same ophthalmoscopic picture was described by Magnus, Knapp, and others. In 1887 Dr. Sachs reported a case which impressed him as being one of idiocy; this was particularly interesting on account of the changes observed in the cortical cells. The family character of the affection was suggested to him after observing four cases in two families. Kingden, of England, published a case and showed a picture which eye surgeons said belonged to the disease which Sachs had elucidated. In 1898 Sachs reviewed the subject, tabulating twenty-nine cases. The speaker's analysis was based on ten cases. Six cases observed tallied nearly with those of Sachs. At birth and for days and weeks after the children were apparently normal: at the age of nine months they ceased to take any interest in their surroundings. The eyes seemed to roll about; they could not hold up their heads; there were purposeless movements of the head and body; there was a great tendency to sleeplessness. The children either fell forward or slipped down on their backs when the parents attempted to make them sit in the lap. The children slid backward more often than forward. The appearance of the fingers suggested the notion of athetosis. He laid stress on the fact that somnolence was more marked than idiocy. In one case he observed distinct hydrocephalus. There was weakness of the extremities which seemed to increase slowly until diplegia appeared. The electric excitability of the nerves and muscles, as a rule, was normal, although Koplik reported the reaction to the faradic current to be slightly diminished. By the end of a year these children were totally blind; the optic nerve was dead and idiocy was pronounced; at the end of two years marasmus usually closed the scene. He did not agree with Sachs that the change in the macula was the most striking symptom; idiocy was the most striking. Yet the existence of the macular changes was necessary to establish the diagnosis. In January, 1898, Chamberlain referred to the case of D. D——, a female, aged eleven months, upon whom the diagnosis was made and treatment carried out for double ophthalmoplegia completa of the third nerve. The mother was healthy, but the father was tuberculous. There was no consanguinity. The child was carried to the ninth month and delivered normally. Nine months after birth the mother noticed that the left eye turned outward and the upper lid drooped. Three weeks later Dr. Chamberlain saw that the right eye turned outward and the lid drooped. Both pupils were moderately dilated. Both optic discs were normal. The child was given mercury by inunction, and the patient was brought again to the doctor a trifle less than four months after the first visit. After the use of the inunctions the lids elevated and the eyes became straighter. Then there developed great somnolency and nervous movements of the head and body. In each eye were marked areas, more or less round, in the centre of each macula lutea, showing as cherry-red points. The intelligence of the child diminished. Amaurotic idiocy was diagnosed and an unfavorable prognosis given. The doctor left the city for six months. On his return, May 5, 1899, the child died with symptoms that pointed to tumor of the brain. There was found a tuberculous tumor of the tubercula quadrigemina the size of a hickory-nut, and various organs were affected.

Dr. Pooly related a case of a child eight months of age. Soon after birth the eyes began to twitch and move constantly. Within three months, however, this improved. The intelligence was very backward. There was great restlessness. There was constant nystagmus. The pupils were contracted. There was a cherry-red spot in each eye. The optic disc was yellowish-white. Carter was the first to point out the fact that the victims of this disease were children of Hebrew origin. Sachs corroborated this view. It had been suggested that blood-relationship, trauma at child-birth, etc., might lie at the bottom of the affair. Sachs' and Tay's cases lent considerable color to this view. The speaker's own case showed very conclusively that the disease was associated with tuberculous tumor of the tubercula quadrigemina, with tuberculous deposits in the bronchial glands, the liver, the spleen, and the kidneys; in short, a general tuberculosis. Similar changes were found in the central nervous system. He failed to find grounds for the statement that syphilis might lie at the root of the trouble. So far as he was aware no one had suggested tuberculosis as a possible cause. Similarly hereditary spastic paralysis had been mentioned. The fundus picture tended to settle the diagnosis. He thought it was only just to regard the matter as yet *sub judice*. Many doubted that the marasmus of tuberculosis was a factor. Pathologically we were directed to the central nervous system. According to Sachs the external configuration of the brain exhibited a distinct picture of a lower order of development. He thought it was a question whether these changes were to be considered as primary degenerations or due to an arrest in development. In the speaker's opinion they were due to an arrest of development in the central nervous system, which invariably led to a fatal termination. The clinical features were rather clearly outlined, and he thought a name should be applied to the disease which indicated clinical features. The name "infantile cerebral degeneration" was not satisfactory. Sachs suggested the name "amaurotic family idiocy." In view of the blindness that follows, amaurotic was distinctive and correct. A better name he thought would be "infantile amaurotic family idiocy." The disease, in a large number of instances, occurred in more than one member of a family. Among twenty-seven of Sachs' cases seventeen occurred in families in which there had been other cases. Tay recorded three cases in the same family. The definition of the condition of idiocy should be one thing when applied to adults and another when applied to infants. Idiocy, when applied to adults, was a mental condition characterized by more or less complete abolition of intelligence and moral faculties. Among infants there must be some modification either in the direction of excess or in diminution of instinctive and physical reflexes. In 1895 Sachs tabulated twenty-eight cases. At the Vanderbilt Clinic seven cases were seen. Five of these the speaker had seen. The disease was not so rare as it was supposed to be. All cases brought to the Vanderbilt Clinic were Polish-Jew in origin. In studying this disease certain features had been grouped which were distinctive. Children at birth were apparently healthy and remained so for several months. Then the parents noticed that the children were sleepless and could not hold themselves erect on the lap; they fell forward or backward. Purposeless movements of the head, body, and legs were noted, which increased as the disease progressed. There was found in the macula of each eye a picture strongly resembling embolism of the central artery of the retina. Around the central artery there was a grayish-white area the edges of which were not sharply outlined; in the centre of each macula there was a cherry-red spot in blonds, but slightly different in color in brunettes. The disc was normal at first but later became atrophied. Nystagmus, hyperacusis, double third-nerve paralysis, etc., were concomitants. A fatal termination occurred before the end of the second year. The majority of cases occurred in children of Hebrew parentage, though a number did occur among those of Polish-Hebrew blood. A number of cases had been shown among members of the same family. The macroscopical and microscopical examination directed attention to the central nervous system. The brain seemed to be in an arrest of development. The microscopical examination showed changes in the pyramidal cells; changes were also found in the retina and in the spinal cord. It was reasonable to regard the alterations that occurred in the central nervous system as due to an arrest of development. The etiology of the disease was not established. From the findings in the case he reported, in which there was found a tuberculous tumor in the tubercula quadrigemina, tuberculosis might be considered a causal agent.

Dr. Henry Koplik said he had had experience with eight cases, and that very little had been added to the clinical picture that was described by Tay. These cases came under observation for blindness. He agreed that it was not the ocular symptoms but the other symptoms that were the most striking. The mother brought the child with the story that she noticed the baby was stupid and could not hold its head up, could not sit up; but the doctor noticed nothing. The clinician then had the child taken to the oculist. In one case the child cried incessantly, and the physician in charge thought the child had an ordinary colic. The mother called attention to the fact that the child did not notice anything; that he could not sit up, that he did not play. This was a case of amaurotic idiocy. On the other hand, cases that were well marked did not show changes in the macula lutea. Dr. Sachs called attention to those cases which seemed to develop very late. The speaker had seen three such cases. In regard to the tuberculous element, there were no marked cases of tuberculous meningitis in which the changes in the fundus resembled those seen in amaurotic idiocy; the fundus examination often confirmed the diagnosis of meningitis. He did not think tuberculosis was a causal element in these cases; it might be accidental complication.

Dr. William Hirsch said that two years ago he published the findings in an autopsy on one case in which he could prove that the disease was not confined to the cortical cells; but he could prove exclusively that the entire nervous system was affected in a somewhat typical manner. In 1898 specimens were obtained that showed that all the nerve cells of the spinal cord, in the anterior as well as the posterior horns, all the nerve cells of the pons, the medulla, the optic thalamus, the corpus striatum, and all the cells of the cortex had the same typical changes. The changes that took place in the cells were such that they were immensely enlarged; they were not only enlarged but showed very marked changes in the nasal bodies; the nucleus was invariably displaced, and in a great many cases it was pushed entirely out of the cell. This enormous increase and enlargement of all the nerve cells of the spinal cord gave an appearance as if there was an increase in the cells in vast numbers. In a great many instances these cells appeared as large white masses without any configuration at all, and often the nucleus belonging to one cell was found in other sections. The same changes described in the spinal cord and brain took place in the cells of the retina, and so gave the picture on the retina of a white rounded area with a red spot in the centre. Besides these changes there were absolutely no other alterations. The internal organs were found to be perfectly normal. The blood-vessels and other parts of the nervous system were also perfectly normal; so syphilis and tuberculosis and other diseases of this kind could be excluded. There was a theory that, in these instances, there was an intoxication of some kind; the reason for this theory was that there was an affection of all the nerve cells, and nothing else but nerve cells. The anatomical picture of the nerve cells resembled the picture which was to be seen in experimental poisoning. This was offered as a theory as yet to be substantiated. Children were never born, he said, with changes in the macula lutea. There was no one special part affected, but the entire nervous system was involved. We had to deal, not with an arrest of development, but with an acquired disease. He considered tuberculosis to be but an accidental complication.

The Effect of Summer Heat upon the Public Health.—Dr. Henry Dwight Chapin read this paper (see page 984).

Dr. Abraham Jacobi said there was one part of the subject that he wished to allude to, and one that he believed Dr. Chapin had meant to avoid. Certainly commercial enterprises should not be debarred; but, when commercial enterprise went so far as to endanger public health and destroy lives, then it was a danger to the community and should be interfered with. When commercial enterprise killed thousands of children and adults, it should not be considered legitimate, and should be interfered with. Here the doctors should be politicians, they should be statesmen, or else they could not be good citizens. It was true that our professional duties prevented us from taking part in the primaries, but doctors should raise their voices in protest when any obstacle is placed in the way of pure milk and plenty of ice reaching the poor of this great city.

THE NEW YORK PATHOLOGICAL SOCIETY.

Special Meeting, March 29, 1900.

Eugene Hodenpyl, M.D., President.

A Case of Epithelioma of the Œsophagus with Stenosis of the Trachea and Suffocation.—Dr. J. H. Larkin presented specimens removed from a man, sixty-three years of age, who had always been in excellent health up to five days before operation. At that time he had experienced a slight dyspnœa at first, and this had increased rapidly until at the time of his admission he was deeply cyanosed. Tracheotomy had been done immediately. On opening the trachea and endeavoring to pass in a tube, some difficulty had been encountered. A small tube had been passed without giving him much relief. On the following day the tube had caused so much distress that it had had to be removed. The man only lived forty-eight hours after the tracheotomy. At the autopsy all of the abdominal viscera had been found normal, and the lungs also with the exception of a slight œdema. About three inches above the cardiac end of the œsophagus was a small, slightly raised area which, on microscopical examination, showed epithelioma. High up in the trachea, and about one inch below the tracheotomy wound, and about one inch and a half above the bifurcation of the bronchi, was a marked stenosis of the trachea. The cause of this was a tracheal lymph node which had enlarged and grown through the tracheal rings and had occluded the trachea at that point. Microscopical examination had shown this to be a metastatic epithelioma of the lymph node. On account of the pressure on, and erosion of, the tracheal rings a secondary suppurative process had taken place in the lymph node. Death had resulted from slow asphyxia and œdema of the lungs.

Osteocarcinoma of the Breast.—Dr. Larkin also presented a tumor which had been removed from a woman of middle age by Dr. Kammerer. Five months ago she had first noticed a slight enlargement of the breast. At the time of the operation the growth was supposed to be carcinoma, but after its removal it was found exceedingly difficult to cut into the tumor. Further examination showed the tumor to be a well-circumscribed growth, and to have a limiting wall. At the periphery it was somewhat spongy, but toward the centre was a large and somewhat grayish elastic area which was undoubtedly cartilage. In the centre were nodules made up of true bone. Microscopical examination showed at the periphery a typical picture of carcinoma, but the carcinomatous element diminished as one proceeded toward the centre. In the latter location were bone and cartilage. A search through the literature showed that few tumors of this kind had been reported. The speaker said that cases of calcification of tumors of the breast had been reported in Virchow's *Archiv* for 18[illegible]7. Osteosarcomata of the breast had also been described, but very few osteocarcinomata had been reported. Coën, of Boulogne, had reported a case almost identical with the one just described. In that case the woman was forty-five years of age, and the clinical history had presented nothing unusual. A case of osteochondrocarcinoma had been reported by Hacke. Lesser had also reported a similar case, as had Leon, of Paris. Astley Cooper, in his book on "Diseases of the Breast," also reported such a case, but there was some doubt about the correctness of the diagnosis. Dr. Larkin raised the question as to whether this tumor had been at first an osteochondroma, or a combined growth of carcinoma with a secondary metaplasia of the stroma into osteoid tissue. As in the periphery metaplastic changes could be seen in the alveoli, it seemed to him reasonable to look upon this tumor as having been first a carcinoma, and that secondarily there had been a metaplasia of the fibrous tissue, resulting first in cartilage, and ultimately in bone.

Dr. Lartigau said that pathologists had hesitated to accept the belief that true osteoid tumors of the breast existed primarily as such. The tendency was to regard these neoformations as ossifying enchondromata. A study of the literature showed that enchondromata were very common in the mammæ of bitches.

A Case of Actinomycosis.—Dr. F. S. Mandlebaum exhibited under the microscope a section from a case of actinomycosis removed from a woman of thirty-four years, a Russian, who had been admitted to hospital on January 25, 1900, with a history dating back five months, and beginning with the development of two localized points of tenderness on the back to the right of the spine. Three months after the onset of pain, small swellings without redness had appeared at these points. Three weeks later, or five weeks before admission, these had been excised, and in one week a swelling had appeared in the right axilla and above the clavicle on the same side. On admission, these tumors had been the size of a small apple, and tender and painful, but the skin had not apparently been involved. Near the right scapula was a discharging sinus, and two inches below this another sinus. The entire supraclavicular triangle was occupied by a mass, in places fluctuating. Physical examination of the chest showed anteriorly dulness over the first right interspace, with exaggerated breathing, and posteriorly marked dulness and tenderness on percussion from the apex downward to the spine of the scapula. Over this vocal fremitus was increased. The woman was emaciated and was six months pregnant. One week after admission abscesses in the neck and axilla had been incised, and a large quantity of pus, streaked with blood and containing numerous small, yellowish particles, had been evacuated. She had received iodide of potassium internally, and had improved considerably while in the hospital. Dr. Mandlebaum said that he had taken small drops of the pus and fixed them in five-per-cent. formalin solution. The small pieces were then hardened in alcohol, embedded in celloidin, and sections made. The microscope showed these small particles to be actinomyces. He had stained them with many different stains, and had found that the best results were obtained with Plant's stain. This consists in staining the section for ten to fifteen minutes in a solution of carbol-fuchsin; then washing in water; transferring to a saturated alcoholic solution of picric acid for five minutes; decolorizing in fifty-per-cent. alcohol for fifteen minutes, and finally passing through absolute alcohol, oil of cloves, and into balsam. With the Gram method in only one instance had he been able to demonstrate the clubbing, although this was brought out well by following with eosin. The teeth and mouth were normal, and the primary focus was supposed to have been somewhere in the chest.

Hæmatoma of the Right Suprarenal and Rupture into the Peritoneum in a Child of Ten Days, with a Patent Foramen Ovale, Patulous Ductus Arteriosus, and Stenosis Isthmi Aortæ.—Dr. Charles Norris reported this case. The child had been brought to Bellevue Hospital with no further history than that it had been blue since birth. It had died very suddenly a few minutes after entering the hospital. On autopsy, the abdominal cavity had been found filled with blood, and the intestines all matted together by fairly firm adhesions. On the superior surface of the suprarenal, represented by a more or less organized blood-clot of a considerable size, was an opening two inches in diameter, through which the blood had escaped into the abdominal cavity. On examining the foramen ovale it had been found nearly closed. The ductus arteriosus as it entered the aorta presented a funnel-shaped opening. The speaker said that hæmatomata of the suprarenal were rarely as large as the one just presented. This was the second case of the kind that he had met with. He had been able to find only one or two instances reported in the literature in which rupture had taken place into the peritoneal cavity. One observer had reported twenty-six cases in which there had been small hemorrhages into the suprarenal in a series of over one hundred autopsies on still-born infants. In two of the cases the hemorrhage had started in the cortex. The blood more commonly escaped into the perinephritic tissues. It was more often met with after pelvic than podalic presentations, and after difficult labor.

Dr. Larkin said that having had an opportunity of examining a number of still-born children he had met with four or five such hæmatomata. His experience confirmed what had been said about their being more frequent after difficult labors, and with pelvic presentations. He had never before seen one rupture into the peritoneum, but had seen the blood escape behind the peritoneum, and had dissected out the latter down as far as the bladder.

Dr. E. Hodenpyl presented several specimens, as follows:

A Portion of the Œsophagus Showing Varicose Dilatation of the Veins.—This specimen had been taken from a man who was suffering from cirrhosis of the liver, and who died of a profuse gastro-intestinal hemorrhage. The œsophagus in the fresh state showed a number of very large and tortuous veins in the lower portion, at least one of which was ruptured. Preble, of Chicago, had found that in about eighty cases of fatal hemorrhage occurring in the course of cirrhosis of the liver, the bleeding arose from the varicose veins in the lower two-thirds of the œsophagus. This accident occurred in atrophic cirrhosis rather than when the liver was of normal size or enlarged. Attention was called to the fact that the venous circulation of the œsophagus was part of the systemic circulation, while that of the cardiac end of the stomach belonged to the portal system, and that there was a poor collateral circulation between the two. There might also be a negative pressure on the œsophageal veins during expiration.

Pneumothorax.—The next specimen had been taken from the gripman of a car who had been suddenly seized with severe pain in the right chest while at his work. He had been hurriedly removed to a hospital, and examination had revealed the presence of air in the right pleural cavity. He had died in a few hours. In spite of the man's excellent physique the autopsy showed quite advanced tuberculosis of both lungs, and the kidneys were studded with miliary tubercles. There was also a moderate tuberculous enteritis. The liver was found forced almost entirely below the free border of the ribs, and the diaphragm bulged downward. On puncture of the diaphragm below a water level, a considerable quantity of air escaped. The right lung was forced into the bottom of the pleural cavity against the vertebral column. This lung was entirely free from adhesions, although the pleura over the posterior portion of the apex was markedly thickened. The opening was so minute as to be discoverable only after forcing air through the bronchi.

A Tuberculous Appendix.—The third specimen had been taken from a man who had died of pulmonary tuberculosis with quite marked tuberculosis of the intestine. The latter was very markedly dilated, and it was so dark as to suggest gangrene. There were two constrictions in it. The miliary tubercles could be distinctly seen through the serosa. In tuberculosis of the appendix, as well as in typhoid ulceration of the appendix, the speaker said, it was worthy of note that the usual symptoms of appendicitis were not present.

Primary Carcinoma of the Pancreas with Secondary Carcinomatous Nodules in the Liver.—The specimens from this case had been taken from a person who had suffered but slightly, and had been ill only a few weeks. He was an alcoholic subject who had presented but few symptoms, but had died shortly after entering the hospital. At the autopsy immense deposits of fat were found throughout the body. Occupying the head of the pancreas was a large carcinomatous mass. The liver was studded with carcinomatous nodules. Examination of the heart showed dilatation of the right side of this organ and incompetence of the tricuspid valve.

Two Cases of Multiple Spurious Diverticula of the Intestine.—The specimens from two cases of this kind were exhibited. In the first, the duodenum and upper portion of the jejunum was the seat of a number of thin-walled cysts varying in size from that of a pea to that of an egg. The second specimen was from a case of papilloma of the peritoneal cavity. There were strictured areas in various parts of the colon, and seventy-nine diverticula were found in the intestine, principally in the lower end of the colon. Roth, in 1872, had described five cases of diverticula of the duodenum, in all of which the diverticula had been small and not over three in number. In 1894, an article on this subject had been published in Virchow's *Archiv* by Edel. Here the cases had been divided into two classes—congenital and acquired. Meckel's diverticulum alone constituted the first class. All three coats were present in the congenital form, whereas the muscular coat was missing in the acquired variety. The most common situation for these false diverticula was in the colon; next in order of frequency, and usually along the attached border, came the duodenum. The number of these diverticula varied from one up to two hundred or more. As a rule, they were small. The cause of the condition seemed to be a separation of the fibres of the muscular coat, so that, in one sense, they might be regarded as herniæ of the mucous membrane into the serosa. The pressure of scybalous masses, the presence of gall stones, circumscribed or diffuse peritonitis, constipation, and carcinoma were all causes. It had been noted that these diverticula were almost always found empty at autopsy.

Hypertrophic Tuberculosis of the Intestine.—Dr. A. J. Lartigau read a paper on this subject. He said that very few cases of hypertrophic tuberculosis had been studied outside of the ileo-cæcal region. In 1888 Hacker had reported a tuberculosis of the ileo-cæcal region simulating a tumor mass, and leading to operation. The new formation proved to be tuberculous. In 1893, twenty-one cases had been collected. In almost all of these cases the clinical diagnosis had been carcinoma. The amount of reduction of the intestinal lumen was quite variable, and was not in proportion to the increase in the size of the intestinal wall. The author then reported a case of this affection. According to the clinical history there had been brown pigmentation of the skin without vomiting, and slightly failing health. The bronzing was most marked on the exposed surfaces. The left adrenal gland was enlarged and soft, and contained a small cavity filled with brownish fluid. The right adrenal gland was also enlarged, and showed a diffuse tuberculous lesion. The retroperitoneal and mesenteric glands were enlarged and caseous. The mucous membrane of the duodenum and jejunum was normal, while that of the ileum showed thickening, increasing from above downward. In the lower two or three feet of the ileum the lumen was reduced to about one-third. The cæcum was thickened, and its walls measured 1.5 cm. The thickening in the colon was noticeable, but diminished until it became normal at the sigmoid. Tubercle bacilli were found in great numbers throughout the intestinal wall. Small round-cell infiltration was present in the submucosa. This case was undoubtedly one of primary tuberculosis of the intestine in an adult.

Stated Meeting, April 11, 1900.

EUGENE HODENPYL, M.D., PRESIDENT.

A Pronounced Case of Arterio-Sclerosis.—DR. D. H. MCALPIN, JR., presented specimens from a patient who had been admitted to hospital on March 19th suffering from dyspnœa and pain in the epigastrium. He was fifty-four years of age, and had been a sailor until a short time ago, when he had been compelled to give up this occupation because of shortness of breath. His past history was not a good one, having had syphilis and gonorrhœa, and having been accustomed to indulge in alcoholics to excess. Ten years previously he had fallen from a height and had fractured his clavicle. The present illness had begun with pain in the stomach and continued vomiting, shortness of breath, and some cough. Shortly after admission he had become delirious and had remained so until death. A few hours before death there had been complete suppression of urine. His temperature had ranged between 100° and 102° F.; the pulse had been 80, and the respirations between 28 and 40. There had been signs of consolidation of the lungs, and the apex of the heart was at the sixth interspace, to the left of the nipple line. There was a murmur heard indicating aortic insufficiency. The diagnosis had been chronic endocarditis and nephritis, pneumonia or possibly infarctions of the lungs, and arterio-sclerosis. At the autopsy, on opening the chest the heart had been found greatly enlarged. It weighed nearly fifty ounces. All of its cavities were greatly distended, and contained large, dark clots, and the coronary vessels stood out very prominently but were not tortuous. On opening the heart, several thrombi were found at the apex of the left ventricle, and a number of thrombi were attached behind the columnæ carnæ. The mitral orifice admitted four fingers, yet the valve curtains were greatly enlarged and appeared to be perfectly competent. The aortic orifice was very large, and the curtains of the valve were also very large and free. There was calcification of the aorta beyond the aortic valve, but no visible disease of the curtains. The walls were considerable hypertrophied, and the cavities greatly dilated. On the right side there appeared to be no disease of the valves. The foramen ovale was patent. The liver was about normal in size, and on section it showed a distinctly nutmeg character. There was an immense amount of passive congestion in the central zone of the lobule. The small hepatic arteries and hepatic veins were very thick and easily seen. The kidneys were of the characteristic stony hardness of the cardiac kidney. The small arteries were very prominent. The lungs exhibited areas which were firm, more or less granular, and of a gray color. The vessel walls were greatly thickened. The same uniform thickening of the vessels was observed in the brain.

A Case of Perforation of the Stomach by a Toothpick.—Dr. McAlpin also presented the case of a man, aged fifty years, a chronic alcoholic. Four months before admission he had been hit in the epigastrium with a base-ball. Two months later his abdomen had begun to swell, and he had then begun to lose flesh very perceptibly. His temperature on admission had been 100° F., but had quickly fallen to normal. The abdomen had been found distended with fluid; the heart was normal; the lungs were the seat of emphysema. On February 15th he had been so much better that he had left the hospital for the day, and had not returned until March 10th. At that time he had been jaundiced and feverish, and his urine showed hyaline and granular casts. He had died on March 14th, three hours after one gallon of dark, foul-smelling fluid had been removed from his abdomen. This fluid contained a variety of germs and leucocytes. At the autopsy, the intestines had been found greatly distended and heavily coated with fibrin, and the omentum hemorrhagic and drawn over the liver. The starting-point of the peritonitis had been traced to a point underneath the liver. On separating the adhesions here, a cavity one and a half inches in diameter had been laid open. This cavity was formed by the stomach and the liver. It contained dark greenish, viscid pus. In this cavity, sticking into the stomach, was a piece of a wooden toothpick, one inch in length. The opening through which the wooden spicula had entered the peritoneal cavity could not be found, evidently having closed by muscular contraction as soon as the wood had passed.

A Specimen of Uterine Mole.—DR. F. R. BAILEY presented this specimen, which had been removed from a colored woman, about fifty-five years of age. She had been married about five years, and had had no children and no miscarriages. Her last menstruation had been on July 17, 1899. On November 29th she had had a severe hemorrhage, and on February 1, 1900, she had had what she called a miscarriage, *i.e.*, a discharge of a fœtus of five or six weeks embedded in a mass of tissue, for the most part placental.

The Duration of Life of Typhoid Bacilli in Ice.—DR. W. H. PARK said that he had been making some experiments on the duration of life of typhoid bacilli in ice. He had been led to do this because of some statements made recently by Dr. Sedgwick as to the rapidity with which death occurred. He had experimented with twenty cultures. They had been made from twenty-four-hour agar cultures, one loop of each culture being put in a separate lot of 300 c.c. of filtered Croton water. The average number of bacilli in the water of the twenty lots was 2,500,000 in 1 c.c. At the end of three days' freezing the average number was 1,089,000; at the end of one week, 361,000; at the end of two weeks, 203,000; at the end of three weeks, 10,000; at the end of four weeks, 4,000; at the end of five weeks, 3,000; at the end of seven weeks, 2,000; at the end of nine weeks, 127. Three of the cultures had become sterile at this time. In general, then, it might be said that at the end of nine weeks the ice from a certain proportion of the cultures was sterile and the living bacilli from all the cultures were greatly reduced in number.

DR. T. M. PRUDDEN asked if any cultures older than twenty-four hours had been tested. He asked this because he thought it not improbable that at this age the bacilli were more vulnerable than older ones.

DR. PARK replied that the cultures differed greatly as to the lapse of time since they were obtained from the case. Of some interest was the fact that in thirty specimens of ice taken at random neither colon nor typhoid bacilli had been found, though the ice was the ordinary ice found in the market.

DR. A. J. LARTIGAU said that last year he had had occasion to investigate the ice supply of the city of Albany. From one specimen he had obtained an organism which responded to all of the culture tests for the typhoid bacillus. Unfortunately this specimen had been destroyed before it could be tested with typhoid serum. There was every reason to believe that this ice was over three months old. He had tested pure cultures of typhoid bacilli at various temperatures. At the end of twenty-four hours nearly fifty per cent. had been destroyed—in some specimens a still higher percentage were killed—and at the end of ten to eighteen days practically all had been destroyed (ninety-seven to ninety-eight per cent.). The water used was the Hudson River water. He had also tested the viability of the bacilli in water just above the freezing-point, and had found this temperature about as effective as when the water had been frozen. Alternate freezing and thawing had been somewhat more destructive to the life of the bacilli.

A Peculiar Streptococcus.—Dr. E. Libman presented a streptococcus which had been isolated from the stools of a child suffering acute entero-colitis. The stools had been placed in sugar bouillon for twenty-four hours, and this had yielded a pure culture of this organism. This streptococcus was peculiar especially in one respect. In its growth on lactose agar and glucose agar it made the medium white, which it did not do in its growth on the other preparations of agar. The peculiar action was found to be due to a precipitation of the albumin in the medium by the acid formed by the splitting up of the sugar. The organism was pathogenic for mice.

Sarcoma of the Small Intestine with Special Reference to Cases Resembling Appendicitis.—Dr. E. Libman said that he had seen four cases of intestinal sarcoma, notwithstanding the comparative rarity of the disease. Compared to carcinoma of the intestine sarcoma was uncommon. Sarcomata had their seat by preference in the small intestine. They might occur at any age, cases having been recorded from the age of five days up to seventy years. In a series of thirty-four cases he had found twenty-one males and thirteen females. These sarcomata might be single or multiple, and might be localized or diffused. The lymphosarcomata were the most common. In most cases the growth was confined to the mucosa and muscularis. The latter was early infiltrated and paralyzed, and the intestine was then dilated by the fæces. Spindle-celled sarcomata had very few metastases. In intestinal sarcomata the superficial nodes were not usually involved. The growth showed a marked tendency to extension to the pelvis, or to the formation of metastases there. Ulceration was very common, and might result in perforation, or in exposure of the vessels. The vena cava, bile ducts, pancreatic ducts, or the ureters might be obstructed by the growth. An important point was the frequency of the association of lymphosarcoma with tuberculosis. If the sarcoma was in the small intestine, there was very early a marked affection of the whole system, with but few local symptoms. At first, there were pain in the abdomen, loss of appetite, nausea, and vomiting, and the abdomen was distended. A tumor was found in most of the cases. The duration of the disease was from a few weeks to one year and a quarter, though most patients succumbed in nine months. The first case was that of a boy who had had pain in the abdomen to the right of and below the umbilicus. In a few days the abdomen had become distended; then the pain had increased and the constipation had been obstinate. The operation had been done on October 1st by the late Dr. Van Arsdale. It had revealed a large growth in the duodenum, encircling the gut and projecting into its lumen, and there were nodules in the mesentery, omentum, spleen, pancreas, and liver. The tumor was a lymphosarcoma beginning in the submucosa. The case had been sent to the hospital as one of appendicitis. The second case was that of a boy three and a half years old, and the symptoms were of eight days' standing. On the right side of the abdomen was an irregular-shaped mass. On January 5th an operation had been done by Dr. Gerster. This had shown a thickening of the peritoneum and omentum, and the intestine was infiltrated with new growth. The patient died in twenty-four hours. The autopsy showed the main tumor mass to be situated in the beginning of the ileum. Mesentery, omentum, intra-abdominal lymphatics, spleen, gall bladder, pancreas, and bronchial lymph nodes were also infiltrated. The left adrenal was almost replaced by a new growth. The microscope showed it to be a lymphosarcoma. The third case was that of a boy aged eighteen years, and the illness had begun with an attack of pain and vomiting. The pulse was rapid, small, and weak; the abdomen hard and tympanitic. It was thought to be a case of perforation of the appendix. The patient was almost moribund, so an infusion was given, but he died shortly afterward. Near the duodenum was found a perforation the result of an infiltration by a new growth. The latter was white and soft on section. Microscopical examination showed the growth to be lymphosarcoma. The fourth case was that of a man forty-two years of age, who came with a history of two weeks of irregular abdominal pain. Four days before admission there had been violent and diffuse abdominal pain. There was an irregular, hard, and sensitive tumor in the hypogastric region, especially on the right side. The operation was done by Dr. Brewer, and revealed a very large hemorrhagic tumor springing from the ileum about 70 cm. from the valve. The patient died three days later from acute peritonitis. The tumor measured 15 by 13 cm. It had begun in the submucosa and reached to the mucosa. Microscopical examination showed the growth to be a spindle-cell sarcoma. This clinically resembled a subacute appendicitis.

Dr. Harlow Brooks said that he had seen only one case of this kind, occurring in a stoker on an ocean steamer. He had felt slightly ill on reaching port, and had gone to St. Vincent's Hospital, where he died three days later. The autopsy had shown a very extensive involvement of the small intestine, and some involvement of the liver.

Notes on Acid Intoxications.—Drs. C. A. Herter and A. J. Wakeman presented a paper on this subject, which was read by Dr. Herter.

Treatment of Epilepsy in its Incipiency.—W. P. Spratling concludes as follows: (1) Make an early differentiation of the type of epilepsy from which the patient is suffering. (2) If it be reflex epilepsy, or if the child be suffering from epileptic phenomena, the chances of cure are much greater than if the case be one of genuine epilepsy. (3) If genuine epilepsy be present we are in a position to give a much more accurate prognosis as to the ultimate outcome and to apply better principles in the treatment of the case. (4) Remove as far as possible parental sympathy from the treatment of the child, for if allowed to assert its way this usually does more harm to the child than good. (5) Endeavor to keep from the young epileptic the many patent nostrums that, when taken by him, only aggravate the disease by first masking the true symptoms of the same; second, by destroying or impairing the functions of the gastro-intestinal tract. (6) If the seizures are localized and a given part of the body is chiefly involved at the time of convulsive phenomena, and suffers therefore exhaustion or partial paralysis as the result of same, apply physical means for its correction as soon as possible, for it will only be by these means that such a difficulty can be overcome. (7) We must learn to place great value on little things in studying the etiology and treatment of this obstinate malady, as, for instance, the occurrence of capillary hemorrhages in the brain.—*Buffalo Medical Journal*, June, 1900.

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THE SIGNIFICANCE OF THE DIAZO REACTION IN CASES OF TUBERCULOSIS.

ALTHOUGH the property of diazo bodies to yield striking color reactions with organic substances had been noted previously, Ehrlich was the first, nearly twenty years ago, to apply this principle practically in clinical diagnosis. It was found that this diazo reaction was yielded by the urine only in disease and not in health, and then only in connection with certain diseases and under certain conditions. It is rarely present in cases of chronic visceral disease, but it is with especial frequency a concomitant of typhoid fever and of measles. It does not occur, as a rule, in cases of uncomplicated diphtheria and pneumonia, and its presence under such conditions is rather of grave prognostic omen. The reaction has been found to be of considerable diagnostic significance in cases of tuberculosis, and in cases of pulmonary tuberculosis it is of grave prognostic significance. It is not dependent upon fever, as it has been marked in cases without fever.

The reaction consists in the development of a rose or a red color when urine and the test agent are shaken together. Two test solutions are prepared and should always be fresh, one consisting of 0.5-per-cent. solution of sulphanilic acid in a five-per-cent. solution of hydrochloric acid, and the other of a 0.5-per-cent. solution of sodium nitrite. When used, one part of the latter is added to forty-nine parts of the former. To equal parts of urine and this mixture is added ammonia in the proportion of 1 to 10, and the whole is agitated.

Michaelis (*Berliner klinische Wochenschrift*, 1900, No. 13), who has devoted special attention to the test for the past five years at the clinic of Professor Leyden in Berlin, speaks most highly of its diagnostic and prognostic utility, particularly in cases of tuberculosis. The occurrence of the reaction is independent of fever, of the number of tubercle bacilli present in and the amount of the sputum, but often a parallelism is observed among all of these. The reaction cannot be obtained, as a rule, in mild cases, although it does appear when acute complicating infections supervene that do not themselves give rise to the reaction, such as pleurisy, pneumonia, and influenza. When the reaction is marked in cases of incipient tuberculosis, the disease must be considered serious and the prognosis grave. On the other hand, in advanced cases even with cavities, when the reaction is absent the course of the disease appears to be stationary or slow. The reaction may disappear after it has been pronounced and the condition of the patient has improved, but usually subsequent aggravation takes place. The administration of preparations containing tannic acid or gallic acid interferes with the development of the reaction, but without influencing the prognosis. Among 167 cases of pulmonary tuberculosis in which the diazo reaction was studied it was found present in 111 patients and absent in 56. Of the latter 5 patients were discharged cured, 43 improved, 5 not cured, and 3 died; while of the former none was cured, 15 improved, 3 were transferred, 13 were not cured, and 80 died.

THE PUBLIC-HOLIDAY QUESTION.

EVERY worker, be it with brain or hand, requires occasionally a change. Indeed a break in the monotony of every-day existence and a cessation, however brief, from toil and worry are absolutely essential to the health of those who live under the high-pressure conditions of this twentieth-century age. Time was when civilized life was not so strenuous as now, and when, in the opinion of many, the manner in which men passed through their earthly pilgrimage was more in accordance with the laws of nature and the rules of common sense. But even in the far-back days the necessity of a periodical term of intermission from labor was clearly recognized, and thus it came about that—putting aside the religious aspect of the question—the Mosaic law appointed for the Jews one day of rest in seven. The strain placed upon the mental and physical resources by the exigencies of our present-time mode of living have rendered more frequent and more lengthened intervals of relaxation indispensable.

These remarks apply with especial force to brain workers, and if such a course be not pursued a complete collapse of the vital powers must be the inevitable result. However, it is not only those who use their brains to an excessive degree who stand in need of recreation from time to time, but also those unfortunates who are cooped within the four walls of a factory or store, or condemned to sit upon an office stool ten hours in the day throughout the week, and who in too many instances earn scarcely enough to keep themselves and family from the grip of want. These are the people who are really deserving of the most sympathy and for whose benefit public holidays were mainly instituted. The presumable object, then, of a holiday is to recuperate exhausted energies and to relieve the sameness of ordinary daily life, and the outcome anticipated is that it will fit a person better to fulfil his duties. In fact a holiday may be rightly designated as a requisite safety valve.

In the case of public holidays there is a serious doubt if this result is often attained. Rather than being utilized as a means of gaining health they are, it is to be feared, more frequently made the excuse for indulging in disgraceful orgies, with the consequence that instead of being invigorated by his outing the worker returns to his appointed task with aching head and impaired digestion, a sadder if not a wiser man. Of course among the young of this class released from grinding toil on such rare occasions some exuberance may be forgiven, but when this superfluity of animal spirits is caused by an over-indulgence in strong drinks and takes the forms of obscenity and of objectionable horseplay, the questions may be fairly asked whether public holidays are an undeniable good or whether they are as beneficial as their founders expected to that grade of workers for whose especial behalf they were instituted. It must not be supposed that in saying this there is any intention to rail against public holidays; it is only against their abuse that a protest is made. With the advance of education, with a wider knowledge of sanitary laws, and above all with the creation of better homes, will come a more intelligent understanding of the advantages to be derived from spending the public holidays in a rational and healthful manner.

DECISION IN THE CASE OF WARD *VS.* ST. VINCENT'S HOSPITAL.

On May 12th ult., in the supreme court, before Justice Gildersleeve, the suit of Ward *vs.* St. Vincent's Hospital resulted in a verdict for the plaintiff with damages of $10,000. This case has been noticed editorially in the Medical Record (August 12, 1899, and again on December 23, 1899), but as the matter is one of the very greatest interest to the medical profession, and as by the verdict a precedent has been established, it may be as well to run over briefly the leading facts. In February, 1894, Miss Ward entered St. Vincent's Hospital as a pay patient in order to have an operation performed. The sister in charge, at Miss Ward's request, agreed to provide a skilled nurse at $3 a day, which charge was additional to that asked for the room. While she was still under the influence of ether an unsheathed hot-water bottle was applied to Miss Ward's leg, injuring that member to such an extent that she has been more or less lame since. After this accident had occurred the discovery was made that the person who laid on the bottle was not a trained nurse, but a pupil in the defendant's training-school.

An action was brought against the hospital for large damages. In the first trial Justice Cohen decided that a hospital was not liable for damages sustained through negligence of its servants. The appellate division of the supreme court reversed this decision, taking the common-sense view that if a charity hospital takes in paying patients, furnishing them with private rooms and nurses, it enters into an express contract, and for any breach of that contract the sufferer thereby is entitled to the same damages as though the action had been for negligence pure and simple, and is entitled to an adequate compensation for injuries. The person furnished as a nurse in Miss Ward's case not being trained, it was for the jury to say whether in furnishing a careless pupil of limited experience the defendant fulfilled its contract obligation to the plaintiff, and if it did not, and injury resulted from the breach of contract, to award the adequate compensation for such injury.

In the following trial before Judge Leventritt, the jury failed to agree, one man standing out for the hospital upon the grounds that there had been no contract made, but, as before stated, the supreme court on May 12th decided for the plaintiff with damages. This ruling appears to be a perfectly sound one. The mere fact of accepting money for services rendered implies in itself that a contract has been entered into, carrying with it pecuniary obligations for a breach thereof. If the hospital had been purely and solely a charitable institution no suit could have been brought against it, for the simple reason that, only a moral obligation being involved, and money not entering into the question, it would be impossible to make a contract incurring pecuniary responsibility. While sympathizing with St. Vincent's Hospital for the loss it has sustained, we cannot but think it is well that the matter of liability of pay hospitals should be established.

News of the Week.

Yellow Fever in Manila?—The *Boston Medical and Surgical Journal* states that there have been only three months in the past ten years in which there were no deaths from yellow fever in Manila. Our esteemed contemporary has been misinformed, for whatever drawbacks there may be to a residence in Manila, the prevalence of yellow fever is certainly not one of them.

The Pan-American Medical Congress.—The international executive commission of the Pan-American Medical Congress announces that the third meeting of that body will be held in Havana, Cuba, on the 26th, 27th, 28th, and 29th of December, 1900. The original intention was to hold the congress at Caracas, Venezuela, in December, 1899, but on account of the disturbed political conditions in that country the medical profession there first advised that the meeting be postponed to December of this year, and now have requested that some other country be selected. Owing to the lack of adequate hotel accommodation in Havana, it has been suggested that an entire hotel be reserved for the foreign visitors, especially those from this country and Canada, of whom it is believed many will be in attendance. The second congress of Cuban physicians, which was to have been held this year, will probably be postponed to some time in 1902.

Inspection of the City Hospitals.—The grand jury on May 23d made a tour of inspection of Bellevue Hospital, the Morgue, the City Hospital, the New York City Training-School for Nurses, the County Penitentiary, the Workhouse, the Almshouse, and the other public institutions on Blackwell's and Randall's islands. "Without a single exception," the report says, "the various buildings, outhouses, and offices connected with all these institutions were found to be in an exceedingly good condition. In the hospitals, the patients appeared to be well cared for, and the sanitary conditions of the hospitals were as nearly perfect as modern appliances could make them." The grand jurors also visited the Harlem Hospital and Dispensary, and found less to praise there. They report that the dispensary is absolutely unfitted for the use to which it is put, and that the hospital accommodations are inadequate to the great demands made upon them. In concluding their report, the grand jurors "congratulate the people of the city of New York upon the admirable way in which the interests and welfare of the poor and unfortunate of this great city are protected."

The Associated Physicians of Long Island.—The spring meeting of the "Associated Physicians of Long Island" will be held June 16th at Northport, L. I. The association will be the guests at dinner of the Northport Yacht Club and the village of Northport.

Omega Upsilon Phi.—The annual banquet of the Epsilon chapter, at the University and Bellevue Hospital Medical College, of the Omega Upsilon Phi Medical Fraternity, was held May 28th at the Hotel Marlborough.

The Maine Medical Association.—The forty-eighth annual meeting of this association will be held at Portland, Me., on Wednesday, Thursday, and Friday, June 13th, 14th, and 15th, under the presidency of Dr. B. T. Sanborn, of Augusta. The annual oration will be delivered by Dr. J. Collins Warren, of Boston, the subject being "The Etiology of Cancer."

The Medical Club of Philadelphia gives a reception at the Hotel Bellevue on Saturday evening, June 9th, in honor of Drs. Abraham Jacobi, of New York, Alonzo Garcelon, of Maine, George H. Simmons, editor of the *Journal of the American Medical Association*, James Morrison Bodine, of Louisville, Frank Billings, of Chicago, and the president-elect of the American Medical Association.

The American Academy of Medicine.—At the annual meeting of this society, held at Atlantic City on June 2d and 4th, the following officers were elected to serve for the ensuing year: *President*, Dr. Samuel D. Risley, of Philadelphia; *Vice-Presidents*, Drs. C. M. McCulver, of Albany, N. Y., Rosa Engell, of Chicago, Ill., G. G. Graff, of San Juan, Porto Rico, Charles T. McClintock, of Detroit, Mich.; *Secretary and Treasurer*, Dr. Charles McIntyre, of Easton, Pa.; *Assistant Secretary*, Dr. Alexander R. Craig, of Columbia, Pa.

A Chicago Diploma Mill, known variously as the Metropolitan Medical College, the Independent Medical College, and the National Law School, was raided on Monday by agents of the Post-Office Department, and four of the "professors" were arrested. The charge was that of using the mails to defraud. The diplomas of medicine or law were sold at prices varying from $3 to $200, according to the amount that could be squeezed out of the candidate in each individual case. The mill was grinding out "physicians" at the rate of ten or twelve a day. The diplomas contained an array of names of the learned men who constituted the faculty, but all the signatures were made by two young women who were employed for their ability to vary their handwriting to fit each name.

The Electrocution of Germs.—It is reported that a Viennese dentist has discovered a means of killing bacteria in a human body by a current of electricity so weak as to be barely perceptible.

An Ambulance Makes Patients.—An ambulance racing at high speed, early one evening last week, ran into a crowd of people who did not hear the gong, and knocked a number of them down. Two were so severely injured as to require the attention of the surgeon of the ambulance that ran over them.

Attack on a Dispensary.—A mob recently attacked a Chicago dispensary and nearly demolished the building before the rioters were dispersed by the police. The disturbance was caused by a story being circulated to the effect that the physicians had carried a neighbor's child into the dispensary and were cutting him to pieces for medical purposes. After the disturbance the missing child was found. The rioters were mostly ignorant Bohemians and Lithuanians who had been worked up to a high pitch of excitement by stories of dissections at dead of night and experiments upon kidnapped children.

The Beth Israel Hospital.—The ceremony of laying the corner-stone of the new Beth Israel Hospital, at the corner of Cherry and Jefferson streets, took place last week. The programme of exercises consisted of an opening prayer and address by the Rev. Dr. Bernard Drachman; the laying of the corner-stone by Harris Cohen, president of the Beth Israel Hospital; a dedicatory prayer by the Rev. Dr. G. Gottheil; and addresses by Kaufman Mandell, Abraham Nelson, the Rev. Samuel Schulman, the Rev. Dr. H. Pereira Mendes, Randolph Guggenheimer, John W. Keller, Isidor Straus, Dr. Abraham Jacobi, the Rev. L. Zinsler, and the Rev. Philip Jaches. The hospital building is to be seventy-eight by one hundred and twelve feet on the ground, five stories high, in the Renaissance style of architecture, and is to be of steel and buff brick, with trimmings of Vermont marble and terra cotta. It will be completed by January 1st next, and will contain one hundred beds.

The American Association for the Advancement of Science, which includes many of the most important non-medical scientific societies in America, will meet in this city during the last week in June. The general meetings will be held at Columbia University. On Saturday afternoon, June 23d, the annual meeting of the association council will be held at the Hotel Majestic, and a second meeting will be held early on Monday morning in Schermerhorn Hall, Columbia University. The general meeting will be opened on Monday by President G. K. Gilbert, of Washington, D. C., who will introduce Prof. Robert Simpson

Woodward, of Columbia, the president-elect. Governor Roosevelt will then deliver the address of welcome, and President Seth Low, of Columbia, will follow him. Dr. Woodward will then reply for the association. A general session will again be held on Tuesday evening in the American Museum of Natural History, at which President Gilbert will deliver his retiring address, after which a general reception will be held for the members of the association and invited guests. General sessions will be held on every succeeding morning during the week at 11 o'clock, and on Thursday evening the general committee will meet at the Hotel Majestic for the election of officers and the determination of the time and place of the next convention.

Succi, the Italian Faster, has been declared to be insane and is now under confinement in an asylum.

The Plague.—Six new cases of bubonic plague and two deaths were reported in Cairo on June 4th. In San Francisco a case is reported from time to time, and the quarantine of Chinatown is still maintained. In Sydney, N. S. W., the disease is believed to be well under control.

Cape May County (N. J.) Medical Society.—At a stated meeting held at Cape May on June 1st. the following officers were elected: *President*, Dr. A. L. Leach; *Vice-President*, Dr. J. S. Douglas, of Tuckahoe; *Treasurer*, Dr. Randolph Marshall, of Tuckahoe; *Secretary*, Dr. C. B. Corson, of Seaville.

Association of Baltimore and Ohio Railway Surgeons.—At the annual meeting of this association, held at Atlantic City on June 2d, the following officers were elected: *President*, Dr. R. B. Short, of Union Mills, Ind.; *First Vice-President*, Dr. F. J. Evans, of Chester, Pa.; *Second Vice-President*, Dr. J. W. Hays, of Albion, Ind.; *Secretary and Treasurer*, Dr. G. A. Davis, of Summit, W. Va.; *Assistant Secretary*, Dr. W. A. Bailey, of Leisenring, Pa.; *Executive Committee*, Drs. John E. Russell, of Mount Vernon, Ohio, and W. W. Weaver, of Philadelphia.

The Association of Military Surgeons of the United States met in their ninth annual session at the Academy of Medicine in this city on May 31st and June 1st and 2d, under the presidency of Col. Charles H. Alden, of the Army Medical Corps. The address of welcome was made by Dr. Albert H. Briggs, of Buffalo, major and surgeon of the Sixty-fifth New York Regiment. Dr. Alden, in the presidential address, suggested the advisability of the publication of a medico-military journal under the auspices of the association. Such a publication, he said, could be made self-supporting, and could be made a magazine for the permanent preservation of many facts that had been gathered by army surgeons during the wars in Cuba and in the Philippines. On motion of Dr. Daly, of Pittsburg, a committee was appointed to take steps toward the establishment of such a journal. The award of the gold medal offered by Dr. Eno Sanders, of St. Louis, for the best essay on "military surgery" was made to Capt. W. C. Borden, assistant surgeon United States army. Among those present were Major Narciso del Rio, surgeon in the Mexican army and delegate from the government of Mexico, and Colonel-Surgeon W. McWatters, of the British army. The following officers were elected: *President*, Brig.-Gen. A. J. Stone, of Minnesota; *First Vice-President*, Medical Inspector John G. Wise, of Washington, D. C.; *Second Vice-President*, J. F. Calef, of Connecticut; *Secretary*, Col. Charles Adams, of Illinois; *Treasurer*, Lieut. Herbert A. Arnold, of Pennsylvania. St. Paul, Minn., was selected as the next place of meeting, and it was recommended that the meeting for 1902 be held in San Francisco. A motion was made and adopted that all ex-surgeons of the Civil War, both Federals and Confederates, be eligible for membership in the association.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending June 2, 1900. May 2d.—Assistant Surgeon W. H. Barber detached from the *Alliance* when placed out of commission, and ordered to duty at the naval hospital, New York. May 31st.—Assistant Surgeon C. N. Fisk commissioned assistant surgeon from May 15, 1900. Surgeon O. D. Norton detached from the *Monadnock* and ordered to the *Bennington*. Assistant Surgeon J. S. Taylor detached from the *New Orleans* and ordered to the *Culgoa*. Assistant Surgeon F. J. Grow detached from the *Richmond* and ordered to the *Monadnock*.

Obituary Notes.—Dr. Truman W. Miller died at his home in Chicago on June 1st, of sequelæ of influenza. He was born in Seneca, N. Y., March 2, 1840. He attended Hobart College, and later studied at the Geneva Medical College, where he received his degree in 1863. He was connected with the United States army medical staff during the Civil War, and became post-examining surgeon at Chicago in 1864. From 1877 to 1886 he was surgeon in charge of the Marine Hospital at Chicago, and was for six years surgeon at the Cook County Hospital. He was professor of general and genito-urinary surgery at the Chicago Policlinic, and was surgeon to several hospitals and railways.

Dr. Joseph Davis Osborne, of Newark, died in that city on June 2d, at the age of sixty-seven years. He was born in Morris County, N. J., and was graduated from the College of Physicians and Surgeons in this city in the class of 1859, subsequently studying under Dr. Abram Coles, of Newark. He was a surgeon in the Fourth New Jersey Volunteers during the Civil War. A widow and two daughters survive him.

Dr. Theodore Menges, a well-known dentist in Chicago, is dead as the result of an operation for appendicitis. Dr. Menges was secretary of the faculty of the Northwestern University Dental School.

Dr. Gerald C. Hopkins died at Philadelphia on May 27th at the age of thirty-six years. He was graduated from the medical department of the University of Pennsylvania in 1886.

Dr. Edwin O. Shakespeare died at Philadelphia on June 1st, of angina pectoris, at the age of fifty-four years. He was born at Dover, Del., where he obtained his preliminary education. He subsequently entered Dickinson College and received the degree of bachelor of arts in 1867, and of master of arts in 1870. He was graduated from the medical department of the University of Pennsylvania in 1869. In 1885 he was commissioned by President Cleveland to investigate the cholera in India, and he devoted a year to the study. His report, a voluminous one, was published in 1889. In 1898 he was appointed a brigade surgeon with the rank of major of volunteers, and at the time of his death he was a member of a commission appointed by the surgeon-general to investigate the causes of typhoid fever in the army.

Progress of Medical Science.

New York Medical Journal, June 2, 1900.

On a Little-Known Method of Treatment of Furunculosis.—G. Langmann believes that the growth of boils as commonly seen is the result of a trophoneurotic disturbance. He advocates for purposes of treatment the galvanic current, describing his method in the following words: "The cathode, exhibiting more intense reaction upon the tissue, is placed upon the furuncle, the anode somewhere in the neighborhood, and a current of about two to five milliamperes is applied for from five to ten minutes. As a rule, one sitting daily is sufficient. The intensity of the current ought to vary both with the stage of development of the boil (the earlier stages being more sensitive) and with individual sensitiveness. Whoever has no galvanometer on his battery may regulate the current according to the sensations of the patient; the feeling of a lively sting, entering, as it were, the centre of the boil, just enough to be tolerated, indicates about the proper strength of the current."

Microbes—What Are They?—H. G. Graham details a series of experiments undertaken upon the lower forms of life in order to determine the nature of microbes. He comes to the conclusion that bacteria are low forms of life derived from the protozoa, and that in turn they are also elementary forms of higher organisms. Protozoa are constantly being taken into the body, and the possible fact of their becoming virulent is conditioned on two things: (1) whether they will by their own motile powers penetrate the walls of the alimentary tract and so reach tissue beyond; (2) whether they will adapt themselves to a new and ever-changing environment that gradually becomes more and more toxic for the host.

The Diseases of the Blood in their Relation to Surgery and their Treatment.—G. C. Van Schaick makes a plea for the systematic examination of the blood in all cases requiring surgical intervention in which the nature of the patient's malady does not require immediate operation. If a condition of anæmia is found, the patient should first be brought up to a proper blood condition. He thinks it is generally possible to do this by the administration of a certain organic preparation of iron now on the market.

A Case of Mediastinal Growth with Subsequent Tuberculous Disorganization Mistaken for Aneurism of the Arch of the Aorta.—This case is reported by F. Griffith. His patient was a woman aged seventy years. The nature of the case is sufficiently indicated in the title. The author discusses the question of differential diagnosis between the two conditions suggested therein.

Æstivo-Autumnal Fever in New Orleans, Summer and Autumn, 1899.—By H. A. Veazie.

Some Desultory Remarks concerning Diphtheria.—By J. W. Jervey.

Philadelphia Medical Journal, June 2, 1900.

Asthma.—Richard B. Faulkner defines asthma as a condition of spasm of the bronchial tubes with bronchial and peribronchial hyperæmia, approaching or amounting to inflammation, accompanied by râles upon both inspiration and expiration, with great difficulty in breathing. A second form exists as an affection of the vagus, either at its root or at some remote part of its course, or of the fibres of other nerves that connect with the vagus, without apparent bronchial lesion or other lesion. In the treatment of the paroxysm he advises counter-irritation over the course of the vagus, and also the use of strychnine. For the general condition and to prevent a return of the paroxysms he advises exercises adapted to the physique of the patient. To prevent the return of the paroxysms, other important indications are: (1) Removal of all exciting causes; (2) removal of all toxic influences, rheumatic, gouty, renal, malarial, irritating plants (ragweed, goldenrod, ailanthus, honeysuckle), irritating dust (hay, feathers, Chinese matting, ipecac), irritating animal odors (horses, dogs, cats, rabbits), acid fumes, the atmosphere of close, warm rooms; (3) restoration of general good physiological conditions of digestion, respiration, circulation, nervous system, cutaneous surface; (4) removal of reflex irritations, nasal, rectal, uterine; (5) relief of bronchial hyperæmia, bronchitis; (6) repair of emphysema; (7) climatic suggestions.

Prognosis in Fractures.—Clinton B. Herrick insists upon the importance, in every case of fracture, of making the patient acquainted with the exact state of affairs at the outset, and also aware of the complications, in order that a perfect understanding may exist and the possibilities of censuring the surgeon may be eliminated. He hold that fractures should take their place with the more serious, rather than be classed as simple injuries, for if so regarded an increased degree of diligence will be accorded, results will be improved, and the odium of failure will be removed. He refers to the various complications and sequelæ that may occur, from slight atrophy even to death, and says that the surgeon should in every instance give a guarded prognosis to the end that the patient and his friends may understand the uncertainty of a positive result, and the surgeon preserve his reputation against distrust, censure, and malpractice suits. Especially should the surgeon refrain from saying to the patient that his leg or his arm will be just as good as ever, for that cannot be and will not be.

Siphonage of the Partitioned Bladder for the Individual Kidney Urines.—By Andrew J. Downes.

Diagrams of the Genito-Urinary Tract, with a Table for Keeping Records.—By Ramon Guitéras.

The Hospitals for the Insane and the Study of Mental Diseases.—By Stewart Paton.

The Registration of Tuberculosis.—By Lawrence F. Flick.

The Boston Medical and Surgical Journal, May 31, 1900.

Some Advances in Medical Instruction.—President C. W. Eliot of Harvard, in an article entitled "The Inductive Method Applied to Medicine," says that education in general comprehends just three things: accurate observation, the foundation of all; an exact record, and the exactly limited inference from recorded facts. The lecture system in medicine has been greatly modified, and is now mixed with question and answer, with conference, and with the writing of themes and theses. Another improvement should be made at once in preparatory medical education, and that is, a study of animal life. We have found out that diseases are pretty well mixed up between animals and man; we know that the sources of some diseases that afflict human beings are to be found in animals, and that some diseases are transmitted through animals to man; and also we know happily that we can get treatment for some human diseases out of animals. We should do well to secure to the medical student a comparative study of medicine in other animals as well as in man.

William J. Councilman, speaking of "The Course in Pathology at the Harvard Medical School," says that certain things which seem evident have been brought out in this course: (1) That the mind of the student must be active and not passive; that he can acquire knowledge only by his own powers of observation and deduction; he cannot acquire it by being told things. (2) That teaching should be individual as far as possible; that the central idea should be to give opportunities to the student, and to assist him in the effort which he himself makes. (3) That medical education should not be directed solely to teaching the medical art, but education in its true sense, the development of the individual, must not be lost sight of.

Discussing "The Case System in Medicine," W. B. Cannon speaks of the practicability of the method; its value from the point of view of the medical student; and what seems to the author its place in a medical curriculum. As to the first point, in the past two years he and other instructors have used printed records of cases as centres of interest in the study of medicine, and there has not been the slightest difficulty in applying the plan. As to its value, it arouses much enthusiasm in the students; teaches them the judgment of clinical data, the estimation of the value of evidence, fixes symptoms in the mind by their vivid presentation, and gives the students a training in being required to adapt themselves to actual difficulties in practice. The place in the curriculum of the study of case histories is in the central position between the scientific work of the first two years of training which provides principles and theories, and the practical work of dealing with actual problems.

Giving "A Personal Experience in the Teaching of Surgery," Herbert L. Burrell thoroughly indorses Mr. Cannon's suggestion of the case method of teaching systematic medicine. In surgery he considers it imperative. There is a tendency for surgeons to work more with their hands than with their heads—which is fraught with danger to the true advancement of surgery on a secure scientific basis. The "case-method" system and sectional teaching will counteract this danger and will oblige students to use their brains. The advance of teaching in the first and second years has been along the lines of concentration and sequence. The advance of teaching in the third and fourth years should be along the same lines, plus electives and coordination of teaching subjects. The students are taught in their case-taking and section work continually to go back to the foundation principles of anatomy, physiology, and pathology, in interpreting clinical phenomena. This will make a race of physicians whose knowledge is drawn from known scientific facts, and not mechanical operators, or "up-to-date," "last-remedy" practitioners.

A. H. Wentworth answers the objections made to "section teaching" and considers its advantages. Its chief aim should be to oblige the students to do most of the work. They should learn systematic methods of physical examination, and should be required to state the results of their examinations. They ought to be able to make provisional diagnoses and to give their reasons for the same. The instructors should correct and criticise, and the entire section should take part in the discussion. One of the best ways for gaining a clear idea of a subject is to try and explain it to some one else. It stimulates ideas and teaches accuracy and clearness in description. The students take the greatest interest in the work and improve with wonderful rapidity.

Journal of the American Medical Ass'n, June 2, 1900.

Removal of the Cervical Sympathetic in Glaucoma and Optic-Nerve Atrophy.—James Moores Ball reports several cases of this operation and discusses its technique. From a study of the cases of sympathectomy made by Jonnesco and others, and from the observation of his own cases, he reaches the conclusions that excision of the superior cervical ganglion is a valuable procedure in glaucoma, more so in glaucoma simplex than in inflammatory glaucoma. In inflammatory glaucoma, when iridectomy has been done without benefit, this operation should be tried. In cases of absolute glaucoma with pain, sympathectomy is to be tried before any operation on the eyeball. In simple optic-nerve atrophy, the operation may possibly be beneficial if done before vision is entirely lost. In unilateral glaucoma excision of the sympathetic ganglion is to be done only on the corresponding side. In the hands of a careful operator, excision of the superior and middle ganglia is a safe operation, but removal of the inferior ganglion can be done safely only by the most skilful surgeons. The fact that glaucoma is improved by sympathectomy and the finding of pathological changes in the excised ganglia suggest that this affection is due either to a permanent irritation of the cervical sympathetic, or to an irritation located elsewhere and transmitted by means of this nerve.

Intralaryngeal Insufflation for the Relief of Acute Surgical Pneumothorax.—Rudolph Matas refers to the danger of opening the pleural cavity and thereby inducing acute collapse of the lung, and reviews the methods which have been employed to counteract the disastrous effects of acute pneumothorax so brought about. The most effective of these procedures, he says, is artificial inflation of the lungs and the rhythmical maintenance of artificial respiration by a tube inserted in the glottis and directly connected with the bellows of an air-pump. The idea of insufflation of the lungs is an old one, the author says, although its application for the maintenance of the pulmonary function in thoracic operation is an essentially modern and very recent conception. The article is a continued one.

Gastro-enterostomy for Carcinoma of the Pylorus.—J. Henry Barbat reports a case of this operation performed on a woman forty-five years old. She had a tumor at the pylorus which was found at the time of the operation to be so extensively bound by adhesions to neighboring parts as to make removal impossible. The author then resorted at once to a gastro-enterostomy. The result was brilliantly successful, the patient being, at the time of the report, able to eat and digest large quantities of food. Before the operation the woman weighed eighty-three pounds, and six weeks later her weight was one hundred and one pounds, and was constantly increasing.

Functionally Good Results in Treatment of Fractures as Viewed by Skiagraph and Photograph.—By B. N. Torrey.

Tuberculosis in Colorado. Methods of Dissemination and Measures for its Restriction.—By G. E. Tyler.

Medicine as a Business Proposition.—By G. Frank Lydston.

Regulation of Practice of Medicine.—By John I. Dille.

The Doctor in the Public Schools.—By G. W. Hiett.

Intubation of the Larynx.—By Charles J. Whalen.

Medical News, June 2, 1900.

The Sanatorium Treatment of Incipient Pulmonary Tuberculosis and its Results.—E. L. Trudeau describes his method of combined climatic and sanatorium treatment. A study of the gross results in the twelve hundred patients admitted during the past fifteen years shows the result to be as follows: Twenty-three per cent. were discharged as apparently cured; fifty-six per cent. were discharged with the disease arrested or much improved; nineteen per cent. were discharged stationary or unimproved; two per cent. died in the institution. Of the eleven hundred and seventy-six patients discharged alive, about one-half are still living, and one-half of this number have been heard from as being perfectly well. The permanency of the recoveries depends necessarily a good deal on the environment to which the patient returns. A laborious life and indoor occupation are more likely to bring a relapse than a good climate and outdoor exercise. The education which the patients receive at the sanatorium as to the nature of their disease and the methods of combating it is of the utmost value to themselves and to others.

Stump Pregnancy.—John C. Morfit describes a case, which convinced him that it was a variety of extra-uterine pregnancy that has never before been met with, which occurred in the remains of a tube, the proximal end of which he had not entirely removed. The absence of the ovary and most of the tube on the right side, the occlusion by ligature of the stump, the presence of a normal ovary and tube on the left side, and a large corpus luteum being present in the only ovary, led to but one possible conclusion. The fertilized ovum came from the left side, passed through the left tube and the uterine cavity up into the remains of the tube on the right side, where it began to develop, and finally ruptured the tube into the abdomen. This upsets the view that ectopic pregnancy is due to some mechanical or inflammatory hindrance to the normal downward passage of the fertilized ovum. The author believes that the ovum can travel in any direction before anchoring itself preparatory to development.

Hip-Joint Amputation.—William D. Hamilton describes five cases in which Wyeth's bloodless method of hip-joint amputation was used. Three of the operations were done by the writer, with one death and two recoveries. The other two patients were operated upon by Dr. Charles Hamilton, and both recovered. Of the last two, one had had a thigh amputation done by the writer, with early recurrence. There is no doubt as to the great value of Wyeth's bloodless method when it is applicable. A well-appointed hospital is the proper place for its performance. Then, too, shock can be more successfully combated in case it should occur.

The State of New York and the Pathology of Insanity.—By P. M. Wise.

The Prevention of Scarlet Fever.—By Floyd M. Crandall.

Treatment of Membranous Colitis.—By W. H. Thomson.

The Lancet, May 19 and 26, 1900.

Chronic Abscess of the Pericardium.—D. Hunter's patient was a man who was insane and had been a hard drinker. The clinical features of the case presented nothing out of the ordinary. Cardiac symptoms were feeble, with irregular and intermittent heart action without murmurs. Gradual asthenia supervened, and he died from cardiac failure. An attempt to open the pericardium at autopsy showed that much thickening existed and that the pericardial layers were firmly adherent. Continuing the incision round to the left side, a cavity was opened and some thick, creamy, greenish-yellow pus exuded. The heart and pericardium were removed *en masse*, and were found to weigh 530 gm. On dissection the cavity above mentioned was found to be over the wall of the left ventricle and to contain about four ounces of pus. The walls were thickened and lined with a definite pyogenic membrane. There was a smaller cavity over the left auricle containing thin ichorous pus, also with thick and velvety walls. The remainder of the pericardium showed considerable thickening, with complete firm adhesion between its layers. The wall of the left ventricle was hypertrophied, and the myocardium generally was of good color and consistence. The mitral orifice admitted the tips of two fingers only, and the tricuspid orifice was somewhat dilated, but there was no structural valvular disease. The base of the aorta showed two small atheromatous patches.

A Clinical Study of the Causes of the First Sound of the Heart.—A. Morrison concludes that the impulse given to the blood by the muscular action of the heart gives rise in it and in the vibratory structures containing it to vibrations of a certain quality which result in that tone which is synchronous with cardiac systole and usually called the first sound of the heart, and that the largest share in this result must be attributed to vibrations in the blood itself, to produce which at a normal rate valvular support of the vibrating blood columns is necessary. The study of some congenital cardiac malformations especially appears to support this conclusion, because with considerable parietal defects and bruits caused by such the sounds of the heart may be well heard so long as the division of the blood is fairly maintained by the valves.

A Fatty Tumor of the Ascending Colon; Enterectomy; Recovery.—The case reported by J. Bland-Sutton was that of a man aged forty-four years. He suffered from symptoms of intestinal obstruction, and on examination a sense of resistance could be made out between the cæcum and the umbilicus. A continuance of the symptoms led to cœliotomy. Two inches below the ileo-cæcal valve, a tumor was found in the colon, over which an incision was made. This mass was ovoid, one pole being embedded between the muscular and mucous coats; the remaining two-thirds of the tumor, covered with mucosa, projected into the lumen of the ascending colon. It proved to be a lobulated lipoma weighing two ounces.

Congenital Word Blindness.—J. H. Wood gives the histories of four cases, two occurriug in his own practice. Both patients were brought to him by medical attendants who suspected that difficulty in learning to read might be due to some cerebral cause. Wood regards the difficulty in these cases as due to some congenital defect in the visual memory centre for words and letters. Learning to read is a process of two stages: (1) the storing up in the visual memory of the individual letters of the alphabet; (2) the gradual acquirement and storage of the memory of words. This special function is localized in the angular and supramarginal gyri on the left side of the brain in right-handed people.

A Case of Multiple Papilloma of the Vaginal Surface of the Cervix Uteri.—J. Oliver records the case, the patient being a woman who had had two children, but had been a widow for ten years, being at the time of operation forty-one years old. The growth originated on the left half of the cervix, about three-eighths of an inch from the os. There was no evidence of surrounding infiltration. Two other smaller similar masses were also discovered. To include the bases of all three, a wedge-shaped piece was taken from the left half of the cervix and the edges of the incision were brought together with deep catgut sutures. Recovery was without incident.

The Incubation Period of the Plague.—From a study of various outbreaks of the plague, F. G. Clemow concludes that infection from inoculation, as in making an autopsy, has a regular incubation period of from two to three days. Under general circumstances the period runs from ten to twelve days, varying according to the mode of infection. In studying this question a distinction must be made between the time of exposure to infection and the onset of the disease, and the period between the reception of the bacillus into the tissues and the onset of the disease.

Simultaneous Excision of Both Mammæ for Cancer.—A case of this nature is reported by G. P. Newbolt, the patient being a woman aged sixty-four years, with mitral trouble and albuminuria. In spite of these handicaps, the surgical result was a successful one.

The Wounded in the Present War.—An address delivered by Sir William MacCormac before the Royal Medical and Chirurgical Society.

Some Cases Showing the Use of "Gas and Oxygen" as an Anæsthetic in Certain Ophthalmic Operations.—By W. J. McCardie.

On the Inefficiency of the Board-of-Trade Tests for the Detection of Color Blindness.—By F. W. Edridge-Green.

Lecture on the Operative Treatment in Simple Fracture.—Delivered at Guy's Hospital by W. Arbuthnot Lane.

The After-Hisory of Forty-One Cases Treated by Operation for Destructive Hip-Joint Disease.—By A. E. Barker.

Summer Diarrhœa with Special Relation to Causation and Prevention.—Second Milroy lecture by F. J. Waldo.

Summer Diarrhœa with Special Relation to Causation and Prevention.—Third Milroy lecture, by F. J. Waldo.

A Case of Incomplete Development of the Third and Fourth Ribs.—By F. B. Jefferiss.

Malaria and the Malarial Parasite.—By P. Manson; a clinical lecture.

The Modern Treatment of Diabetes Mellitus.—By R. Saundby.

The Standardization of Anti-Venomous Serum.—By W. Myers.

Plague Contracted from the Bite of a Rat.—By J. Bell.

Berliner klinische Wochenschrift, May 14, 1900.

The Reflex Irritability of the Nasal Mucosa in Relation to Narcosis.—F. Bruck attacks the plan devised by Rosenberg, whereby the nasal mucosa is cocainized previous to chloroform inhalation. He asks: (1) Are the cocainized portions of the interior of the nose completely anæsthetized? (2) Does such a plan of local anæsthesia reach the entire nasal interior? To both of these questions he returns an emphatic "no." He believes that if the mouth is kept open and the tongue well forward during chloroform narcosis, there is a minimum of danger of failure of either heart or respiration, from reflex influences. Theoretically these should be abrogated by the local anæsthesia in the nose; practically, according to Bruck, this procedure renders the administration of chloroform more difficult.

Diagnostic Employment of Upper Bronchoscopy in Pulmonary Carcinoma.—G. Kilian records a case of hæmoptysis in which the usual methods of chest examination located some trouble in the right lung. Its exact nature could not be made out. An *x*-ray picture confirmed the location, but bronchoscopy enabled the observer to see the exact bronchial tube from which the bleeding proceeded. Kilian was able to study the ramifications of the bronchial tree, and makes some observations on the anatomical relations of the pulmonary interior.

Fundamental Views on Pathogenesis.—Fr. Martius reviews the changing views as to the pathogenesis of disease which have been current during the present century, paying special attention to Virchow's theory of cellular pathology.

The Origin and Secretion of Oxalic Acid.—By E. Salkowski.

Deutsche medicinische Wochenschrift, May 10, 1900.

The Diagnostic Significance of the Digestion of Carbohydrates in Gastric Hyperacidity.—L. Schüler says the definition of hyperacidity is not yet settled. For the diagnosis of this disease the qualitative examination of total acidity or that of free hydrochloric acid is not enough. There are cases of low total acidity with the clinical symptoms of hyperacidity. For this purpose it is necessary to inquire into the duration of the amylolytic stage of digestion, the quantity of the stomach contents after a test meal, and the specific gravity of the filtered digested fluid. The amylolytic stage is very much shortened in hyperacidity, and hence we will find large quantities of amidolin (proven by the action of Lugol's solution); the quantity of the stomach contents after the test meal is increased—about 200 c.c., while the normal amount is 150 c.c.—due to the hypersecretion of the stomach cells; the specific gravity is therefore low—1.110. Taking into consideration all those points, we are able to make a diagnosis even in so-called latent cases of gastric hyperacidity.

The Relation of Epileptic Convulsions and the Excretion of Urea.—By Dr. Garo.

Acute Dilatation of the Heart and Cor Bovimen.—By Dr. Hoffman.

Deutsche med. Wochenschrift, May 17 and 24, 1900.

The Blood Pressure in Neuropathic Children.—Paul Heim discusses the various apparatus for testing blood pressure, and favors the use of Gärtner's "tonometer" as giving the most accurate and constant results. But the physiological variations in the blood pressure cannot be obtained; the scale does not even read off the average, but merely the maximum, pressure at the height of the systolic pulse, and this finally is increased during the respiratory phase. For comparison with neuropathic children Heim examined about twenty-five normal children. These children were physically in no wise similar, but only such were chosen as were free from fever, nephritis, heart lesions, or icterus. He observed, even in normal children, that the first result obtained was always 10–20 mm. higher than succeeding ones, when taken from the same finger after a pause of about a quarter of an hour. Only after two, three, or at most four tests was a constant value observed, which varied between 80 and 90 mm.; as extremes he found twice a pressure of 75 mm., and in four instances 95 mm. He does not agree with Fraenkel that this difference between the first and subsequent tests is due to paralysis of the arterial muscle, as the variation is too great, but ascribes the heightened pressure to psychical influence, *i.e.*, excitation. Contrary to his expectations this variation was not so marked in neuropathic as in normal children. Only such children were classified as neuropathic who, without discoverable physical cause, complained of headache, stitches in the sides, loss of appetite, nausea, vomiting, dizziness, fainting-spells, cramps, or became easily fatigued at school. Anæmic children, children with defective refraction or other discoverable cause, were excluded. Neuropathic children are always in physical excitation, and this condition causes increased blood pressure, the same as it frequently causes pulse acceleration. Heim does not believe that there is any relation between the height of the blood pressure and the severity of the affection; the usual tension was between 130 and 150 mm. Nor is it possible to make a differential diagnosis of the different neuroses by measuring the arterial pressure, *i.e.*, we cannot say that hysteria causes a higher tension than neurasthenia or vice versa. He believes, however, that blood-pressure measurement is of considerable value in the diagnosis of neuroses in general, in differentiating neuropathic children from the non-neuropathic when suffering from similar symptoms.

Contribution to the Study of Kraurosis Vulvæ.—Ph. Yung discusses the various theories and gives the résumé of four cases of this disease. The appearance of the skin is as follows: it is white and dry, occasionally covered by thick, rough epidermis; the neighboring cutis is shiny, pale reddish-gray in color, covered by white spots and occasionally coursed by varicosed arterioles; sebaceous glands of the pudendal folds are very sparse. Except mild atrophy and atonicity, the remainder of the outer genitalia shows no constant changes. Histologically, connective tissue is very much atrophied and often presents a small-cell infiltration; the rete Malpighii is very thin; papillæ are small or entirely obliterated; in severe cases glands are more or less completely obliterated; no changes in the nerves. Elastic fibres are almost entirely absent. In the neighboring cutis there are sometimes hypertrophy and enlargement of the stratum cœnium, rete Malpighii, and papillæ, as well as small-celled infiltration of the papillæ and horny layer. The atrophy follows the hypertrophic stage. Anatomically, kraurosis is the result of "chronic dermatitis." As to the symptoms, in severe cases, there is a feeling of tension and rigidity, which sometimes entirely prevents coitus. There is also local pruritus and burning on urination. Some cases, however, are entirely symptomless and are discovered only accidentally. The disease may occur at all ages. Bacteriological examination is negative. In six of the sixty cases reported, carcinoma vulvæ was also present, the malignant disease probably finding its starting-point in the chronic inflammation present. The best procedure is excision and removal of the diseased areas. In only one case did a relapse take place. Those cases complicated by cancer naturally give a bad prognosis.

A Case of Glanders.—Zandy describes a case which occurred in a young man twenty-five years old. He was brought to the hospital with the history of having been sick fourteen days, suffering from headaches and weakness. There were no chills. The abdomen was tympanitic and distended, the spleen somewhat enlarged and palpable; there was no gurgling or abdominal pain. There was a doughy swelling in the left upper part of the face, partly covered with a number of small (size of millet seeds) whitish-yellow vesicles upon a bluish-red base. A number of red blotches and nodules were found on the upper arm and chest. Fetor from the mouth was present. His temperature was 39.5° C., pulse 156, respiration 40. The sensorium was free. The œdema of the face and hyperæmic nodules on the arm increased in area. The right lower arm now showed a diffuse swelling. The urine contained albumin and casts. No micro-organisms were found in the blood. Though the picture was not typical (no muscular abscesses, no typical exanthem, no nasal lesion), glanders was diagnosed by exclusion. The patient died after an illness of about three weeks. On the day before death cultures were made on glycerin-agar and on potato of the contents of the pustules, and animal inoculations were also carried out. All these showed the pathogenic glanders bacillus.

Three Cases of Fatal Parenchymatous Gastric Hemorrhage.—Reichard reports three cases of fatal parenchymatous bleeding from the stomach without discoverable anatomical lesion. In the first case, that of a man aged fifty-six years with a history of long-standing jaundice and pronounced icterus, indicating occlusion of the common bile duct, no obstruction could be found at the operation, though the bile channels were dilated. A cholecystenterostomy was performed. On the sixth day the patient passed a large quantity of fluid and clotted blood from the bowels, and died on the eighth day after operation. Reichard concedes that jaundice may have been an etiological factor. In the other two cases there was no jaundice. The patients were transferred to the surgical department on account of uncontrollable hæmatemesis with progressive anæmia. At the autopsy no lesion was found to explain the hemorrhage.

Contribution to the Pathology of the Blood.—Lipowski gives the history of a patient dying from an acute pernicious anæmia of toxic origin. There were continued hemorrhages from the gums and pharynx, as well as from the vagina. Examination of the blood showed slight poikilocytosis, no micro- or macrocytes, no nucleated erythrocytes; number of erythrocytes, 2,115,000; hæmoglobin, eighteen per cent. Death took place after two weeks. The specific toxin was not discovered. He cites another case of progressive anæmia in which its pernicious character was determined rather by the marked continued decrease of hæmoglobin and erythrocytes, the fever, subcutaneous hemorrhages, and changes in the background of the eye, than by the characteristic histological data derived from the blood examination.

Gastro-enterostomy, Gastrostomy, and their Relation to Gastro-enterostomosis Externa.—By O. Witzel and C. Hofmann.

Occupation Poisoning and Accident-Insurance Laws.—By L. Lewin.

Further Clinical Studies on Aspirin. — By Heem and Liesau.

French Journals.

A New Treatment for Alopecia Areata.—Scheffer finds that pilocarpine acts not only in increasing transpiration but produces also marked and persistent vaso-dilatation which increases the nutrition of the hair bulb. He employs the nitrate in solution of one-half per cent. mixed with 1:1,000 bichloride of mercury, by intradermic injection. Before injecting the plaque is rubbed with ninety per cent. alcohol. The syringe is filled three-quarters full by drawing in first ¼ c.c. of the mercurial solution, then ¼ c.c. of the pilocarpine solution, and finally ¼ c.c. of the mercurial solution. This makes the proper proportion. The injections are made just beneath the skin in as horizontal a manner as possible, 1 cm. apart, and repeated every four or five days. A patch the size of a dollar requires about twelve injections. After four or five sittings the hair begins to grow. In sixty cases treated over a period of three years there was no instance of failure. The extension of the plaque is at once arrested and new ones do not form.—*La Médecine Moderne*, May 19, 1900.

Clinical Pneumography.—E. Hirtz and G. Brouardel, in a study based upon extensive observations, describe normal pneumography, and that in the course of chronic pulmonary tuberculosis, and point out its importance in the early diagnosis of the latter. The subject is one which has hitherto received little attention excepting at the hands of one of the present writers. Many tracings from the same subject are required for approximately correct results. It is found that while the tracing for each normal respiration presents four lines, that from the onset of tuberculosis shows but three. This pneumographic formula of chronic tuberculosis persists in all periods and is not found in other pneumopathies.—*La Presse Médicale*, May 19, 1900.

Post-Operative Spontaneous Evisceration.—G. Chavannaz describes as a complication of laparotomy the spontaneous expulsion of a portion of the abdominal viscera through the various layers of the abdominal incision or alongside of the cicatrix. The paper is based on twenty-four cases of this rare accident, three of which are unpublished. In one instance of rupture of the cicatrix there was syncope. The treatment is preventive and curative. A well-applied bandage at first and caution against strain, etc., may act as preventive measures. Infection and shock are two elements to combat. In treatment alcohol, heat, caffeine, and artificial serum are precious resources.—*Le Bulletin Médical*, May 19, 1900.

Pediatrics, May 15, 1900.

The Present State of Our Knowledge of the Action of the Various Therapeutic Serums.—Antonio Fanoni reviews the development of orrhotherapy and strives to answer the question, "Are all these worthy of the confidence of the unbiassed practitioner?" Pane's serum he has employed with marked success in pneumonia in children. Maragliano's serum against tuberculosis has much in its favor. This latest expression of the *ars curandi*, "serum therapy," is gradually forcing itself upon us, and in the interests of humanity it is hoped there will soon be complete victory for its advocates.

A Case of Amnesia.—P. F. Barbour relates the case of a girl aged four years and three months, found in a stupor with apparent paralysis of the right upper and lower extremity. Memory was lost and not regained for several weeks. The writer looked upon the case as one of functional derangement of the intellectual centres such as may be produced by an interference with the nutrition of the frontal lobes, or with the general circulation in the brain, resulting most probably from an auto-toxæmia arising from the intestinal tract.

A Case of Peliosis Rheumatica Caused by Traumatism.—Louis Fischer differentiates peliosis from simple purpura by the fever, swelling, and tenderness in the joints plus subcutaneous hemorrhages. Cardiac lesions do not complicate the condition. A case of a boy of nine years is related, coming on after bicycle riding to excess, from which the writer feels justified in calling it peliosis rheumatica traumatica. The illustration does not do justice to the case.

Reviews and Notices.

HELEN KELLER SOUVENIR. Volta Bureau, Washington, D.C.

THIS handsomely prepared and illustrated volume commemorates the Harvard final examination for admission to Radcliffe College in June, 1899, of Miss Keller, a deaf girl who passed with distinction. This account of her instruction, with methods pursued, is circulated by the Volta bureau for the increase and diffusion of knowledge relating to the deaf, and as such is of the greatest interest to all instructors of deaf children and to those engaged in educational pursuits in general.

INDIGESTION—ITS CAUSES AND CURE. By JOHN H. CLARKE, Fellow of the British Homœopathic Society, etc. American edition, revised and enlarged from the fifth English edition. Philadelphia: Boericke & Tafel. 1900.

LITTLE alteration has been made in this American edition, since only a year has elapsed from the time of output of the last English. The work is very brief, but touches upon the various forms of faulty digestion and enumerates the homœopathic remedies.

A DIGEST OF EXTERNAL THERAPEUTICS, with Numerous Formulæ. Arranged for reference by EGBERT GUERNSEY RANKIN, A.M., M.D., physician to the Metropolitan Hospital, New York. Second edition, revised and enlarged. New York: Boericke & Runyon Company. 1900.

THE necessity for a new edition on March 1st speaks in itself for the reception this work has received. The authorities quoted are almost without exception old-school writers, Pepper, Allbutt, the Twentieth Century Practice, Bangs, Hardaway, Unna, Allen, Ingals, Roosa, Jacobi, et al. The work might have been written, selected, compiled, and arranged, and may be read by one of the regular quite as well as by one of the homœopathic school of medicine.

A HANDBOOK FOR NURSES. By J. K. WATSON, M.D. Edin., late house surgeon Essex and Colchester Hospital. American edition, under the supervision of A. A. STEVENS, A.M., M.D., professor of pathology in the Woman's Medical College of Pennsylvania. Philadelphia: W. B. Saunders. 1900.

THE excellent judgment displayed by the author in giving the essentials without trying to instruct nurses too deeply in the science of medicine has made an American edition of his work a thing to be desired, and the supervision has been in such hands as to give confidence that the work in its present form will be found most useful. The scheme of marginal subheadings has husbanded much space put to good use in making the reading-matter compact.

PLEA FOR A SIMPLER LIFE, AND FADS OF AN OLD PHYSICIAN. By GEORGE I. KEITH, M.D., LL.D., F.R.C.P.E. London: Adam & Charles Black. 1900.

THIS is an interesting and suggestive account of the author's long experience in the dietary treatment of many of the commoner diseases. He maintains that most of the latter owe their origin to excessive feeding, and advises extreme abstinence, especially in regard to red meats. Although confessedly an extremist, the majority of his arguments are eminently sound and will appeal to the good sense of practitioners generally. His style is charming and he has very winning ways in presenting his subject.

MT. SINAI HOSPITAL REPORTS; Volume I., for 1898. Edited for the medical board by PAUL F. MUNDÉ, M.D., LL.D. 1899.

THE institution publishing this work is to be congratulated upon its most interesting first volume. The more modern method of publishing articles upon the hospital experiences by the various chiefs of staff has been followed, and in so doing the board has given the medical public a far more interesting work and one much more apt to be read than if it were simply a mass of statistics. Among the noteworthy articles on medical subjects are those on typhoid fever, lobar pneumonia, and Widal reaction; from the surgical side, Dr. Gerster's general report, as well as numerous and thorough articles on special subjects. It is a most instructive and valuable collection.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. New Series, Vol. III., No. 4. February, 1900.

THE chief article of interest in this little pamphlet is the symposium on typhoid fever, discussed by Müsser, Flexner, Ashton, and McFarland. General tuberculosis and the method of staining the sporozoa of malaria are treated by Hand and Woldert respectively, and Lloyd describes a case of hæmatomyelia.

DISEASES OF THE STOMACH, their Special Pathology, Diagnosis, and Treatment, with Sections on Anatomy, Physiology, Chemical and Microscopical Examination of the Gastric Contents, Dietetics, Surgery of the Stomach, etc. By JOHN C. HEMMETER, M.D. Second enlarged and revised edition. Philadelphia: P. Blakiston's Son & Company. 1900.

THIS edition of Hemmeter's work on "Diseases of the Stomach" contains much new and important material. The following articles have been added: Hypertrophic stenosis of the pylorus, obstruction of the orifices, the use and abuse of rest and exercise in the treatment of digestive diseases. Part of the chapter on motor insufficiency, electro-diaphany, hemorrhage from the stomach, and the articles on gastroptosis and enteroptosis have been entirely rewritten. The present edition will undoubtedly gain as many friends as the first edition.

SKIN DISEASES: their Description, Etiology, Diagnosis, and Treatment according to the Law of the Similars. By M. E. DOUGLASS, M.D., lecturer on dermatology in the Southern Homœopathic Medical College of Baltimore. Philadelphia: Boericke & Tafel. 1900.

THE author states that he has been prompted to prepare this work by a conviction of the existence of an urgent demand for a work which should embody the advances recently made and set forth the distinctive characters of his school's therapeutics. He believes that in this department more than in any other we will find Hahnemann's rule, to treat the totality of the symptoms complained of by the patient, the only method by which we may cure our patient. The author states quite freely what those whom he is pleased to call "allopaths" advise in the various affections, and at times he makes statements concerning their views which carry one back toward the dark ages of dermatology. Unfortunately he does not give the source from which he derives his knowledge of old-school methods, there being no bibliographical references. Nor are there any acknowledgments concerning the source of the pictures, almost if not all of which are borrowed, with the exception perhaps of a print of eczema opposite page 165, which shows nothing of any value to the student and does not grace the book. The statement is made concerning impetigo contagiosa that pediculi capitis are rarely present, and the lymph which is poured out is said to be "splastic." After the statement that "the old school rely" on external measures, the author gives a list of twenty-five remedies for internal use from which the student is left to choose one or more, at times being guided by what the child may state as to the particular kind of irritation it feels at the time of his visit. In trying to learn dermatology the homœopathic student has as much right as any other to the best instruction he can get. There are plenty of good works on the subject. The therapy he can acquire after he has mastered diagnosis.

TRANSACTIONS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION FOR 1899. New York: D. Appleton & Company. 1900.

THIS bound volume of Transactions is very neatly printed, and the papers are of the usual high order of excellence and interest. Henry Swain, of New Haven, is the secretary, to whom credit is probably due.

NEW, OLD, AND FORGOTTEN REMEDIES. Papers by Many Writers. Collected and arranged and edited by E. P. ANSHUTZ. Philadelphia: Boericke & Tafel. 1900.

THIS collection is intended to answer the question, "Where can the literature or description of such and such a drug be found?" The work represents much searching of old journal files and many hours spent on considering what to reject. The compiler deserves no little credit for the amount of careful work bestowed. The reader will find, at times, hidden among chaff, many grains of wisdom. The writings concern chiefly nature-given remedies rather than laboratory products.

THE INTERNATIONAL TEXT-BOOK OF SURGERY. By Amercan and British Authors. Edited by J. COLLINS WARREN, M.D., LL.D., etc., and A. PEARCE GOULD, M.S., F.R.C.S., etc. Volume I. General and Operative Surgery. With 458 illustrations in the text, and 9 full-page plates in colors. Philadelphia: W. B. Saunders. 1900.

IN this volume there are twenty-eight chapters, some authors having written several, and there are many illustrations. The subjects usually discussed under the head of general surgery, or the principles of surgery, occupy the first few hundred pages, and we find here bacteriology, inflammation, infection and its causes, the pathology of the blood, and various general and local diseases which are of surgical significance. There is much information which makes the book especially useful as a work of reference, but there will be few occasions upon which it will be necessary to do much memorizing by the medical student in these days of "compends." The chapter upon the technic of aseptic surgery is capital and contains all that is necessary for the novice or the expert, and the illustrations representing amputations and excisions are very satisfactory. A good diagram in this department of surgery often serves a better purpose than much text. The warning in regard to cocaine cannot be too often repeated. The chapter on "Tumors" is not as satisfactory as it might be. The descriptions are rather too brief, and the illustrations are not specially commendable. The subject of fractures and dislocations, we think, forms the most satisfactory section of the book, and here we find excellent explanatory illustrations. Cranial surgery, including fractures, is considered in a separate chapter, and is followed by one on the special surgery of the vertebral column and spinal cord. An attempt to suture a wound of the heart is advised in all cases in which there is time, but such cases are necessarily rare. The diseases of blood-vessels are disposed of in a rather short chapter, which includes treatment in a general way.

Anatomie Clinique des Centres Nerveux. Par Dr. Grasset. Paris: J. B. Baillière et Fils. 1900.

A most useful little book for every physician to read. After a short introduction on the neuron, and its groupings and connections, the author proceeds to discuss the special anatomy of the nervous mechanism of general motion and sensibility; secondly, of the special senses; thirdly, of speech; and, finally, of circulation, respiration, and digestion. In a comparatively small space the author has succeeded in clearly stating the most recent ideas as to centre, localization, and the paths of nervous impulses in the brain and spinal cord. The book will be of especial interest to the general physician who has not the time to devote to the more extensive works on this subject.

The Anatomy of the Brain. By R. W. Whitehead, M.D. New York: The F. A. Davis Company. 1900.

This book is intended as a text-book for students, and certainly fulfils the aim of the author. In clear, concise language he has described this complex portion of anatomy; by tracing only those fibres whose course is definitely known and omitting minutiæ of those tracts that are still *sub judice* as regards their exact relations and distribution, he has been enabled to present the subject in a comparatively small space. Its terseness, completeness, and compactness recommend it strongly to those for whose use it has been written. The illustrations are numerous and good.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

COMING EVENTS IN MEDICAL COUNCIL—MEDICAL SOCIETIES—BRITISH MEDICAL ASSOCIATION—GALL STONES—PNEUMOTHORAX IN HEALTHY PERSONS—ACUTE ENCEPHALITIS—CHANGES IN THE BLOOD IN DISEASE.

London, May 11, 1900.

Next week the Medical Council meets, and we shall have more dreary talk on many disputed projects. The midwives bill must, of course, be one, as the council cannot permit all their representations to be ignored without a protest, as the government asked for them, and the promoters of the bill have misrepresented their recommendations in the House.

We are also to have next week the conversazione of the Medical Society and the oration by Dr. Fowler. The Clinical, too, will hold its annual meeting, and the Medico-Chi will give us another evening on "The Wounded in the War," by Mr. Dent and Sir W. MacCormac. There will be an exhibition of specimens, bullets, etc. Lantern slides will be employed.

The conference at Manchester, of which I gave you some particulars last week, has given rise to some uneasy sensations. These seem to centre round the resolution to attempt to reform the British Medical Association and to open the campaign at Ipswich in July. If the reformers can only get a hearing we may expect a lively time. But the little clique which rules the association has never been at a loss to stifle unwelcome discussion, and is likely to make a strategic movement in an unexpected direction.

At the Clinical Society on Friday the chief interest was centred in some cases of gall stones. These concretions always excite interest on account of the excessive pain they sometimes give rise to and the slight symptoms in other cases. Thus in one case the diagnosis is evident and in another obscure. Besides, the secondary effects vary greatly and fresh difficulty arises. Mr. Battle related three cases. In one, a girl aged fourteen years had had severe attacks of abdominal pain with nausea and headaches. The pain was not well localized, but referred to the umbilicus and again to the left lumbar region. There were blood and albumin in the urine, but no casts. An x-ray examination was negative. A lumbar incision was made and the left kidney explored, but nothing was found. After convalescence another severe attack of the old pain occurred and an abdominal exploration was made. A gall stone was found in the cystic duct, the removal of which cured the patient, who continues well. Another of Mr. Battle's cases was of a girl aged sixteen years. The gall bladder could be felt, very hard as if contracted on some large stones. It contained none, but its wall was very thick. A stone was found in the common duct and extracted with a good result. The third case was that of a woman aged forty-nine years, who had had attacks of pain and vomiting extending over eighteen years. She had passed gall stones. She had jaundice; stones were found in the gall bladder and ducts and were removed through incisions, and the patient did well.

Mr. Bland-Sutton related a case in which on operation the stone was detected in the wall of the duodenum, impacted in the terminal segment of the common duct. It could not be moved in either direction, so the wall of the duodenum was incised and the papillæ were exposed, when the concretion could be seen at the orifice, and on nicking the edges it was extracted. The incision into the duodenum was sutured in two layers. The patient did well.

Dr. Weber said his house surgeon was palpating a large gall bladder when it disappeared under his fingers, and the stools, previously clayey, became colored. That seemed a case of distention with bile, but in another case when the bladder diminished suddenly a hard lump was felt, which proved to be a stone.

Mr. Symonds made some interesting remarks on the cases and mentioned others. He discussed the necessity of suturing the duct when it was incised, as if that could be dispensed with it would much facilitate operation.

Mr. Bland-Sutton, in his reply, said he had operated on a number of cases without suturing the duct since he reported one in the Transactions, vol. xxv. Though it was thought "risky" then, he never felt the least temptation to put in a suture—he merely drained.

Those curious cases of pneumothorax which now and then come on suddenly in healthy persons were the subject of some conversation at the society, Dr. Parkes Weber having related one at length and Dr. Percy Kidd another more briefly. All the recorded cases seem to have been in males and were probably caused by the bursting of an emphysematous bulla. A minute tuberculous nodule had also been found to open a communication between the air passages and pleura in a person who had given no previous signs of tubercle. Dr. West had such a case, but this cause must be rare, for in cases of sudden pneumothorax in healthy persons, recovery almost always takes place spontaneously.

Drs. Prickett and Batten read details of a case of acute encephalitis following influenza in a lad aged nine years. On the fourth day of the influenza he became paralytic and aphasic, passed into coma, and died in seventy-two hours.

The adjourned discussion at the Pathological Society on changes in the blood in disease was not so interesting nor yet so severely scientific as the earlier debate. Nevertheless there were many points deserving of consideration.

Professor Wright, of Netley, resumed the debate. He did not think much of enumeration of red or white cells, and asked if, after all, there were any diseases in which examination of the blood by current methods helped the diagnosis or prognosis. He thought the coagulability of the blood the most important point to estimate, and that we should watch whether the condition we wish to produce is brought about by our treatment. In aneurism it was wished to increase the coagulability, and starvation diet has been used. But in starvation the coagulability goes down and after a good meal goes up. In phthisis also the coagulability is reduced. Eating acid fruits reduces it to the extent sometimes of "serous hemorrhages"—urticaria. Lime salts increase it, and the professor has shown that they may be used for this purpose, and that decrease of them means diminution of coagulability. The investigation of the agglutinins is a promising field. In Malta fever slow development of agglutinins had been noticed as occurring in the more prolonged cases, and if after this fever or typhoid the agglutinin kept high a relapse was not likely to occur, but if low a relapse was probable.

Dr. Lorrain Smith confined his remarks to anæmia, on which he has made laborious researches. In anæmia from hemorrhage he finds there is a loss of oxygen capacity, *i.e.*, of hæmoglobin. It was not so in chlorosis. Many symptoms he finds due to increase of the volume of blood, and treatment should be directed to reducing it.

Dr. J. H. Drysdale said the red and white cells varied independently of each other, and protested against the common practice of comparative measurements. Percentages were useless. Blood from the periphery differed from that from the centre. Advance must come from clinicians rather than biologists.

Dr. William Hunter could not indorse Professor Wright's remarks on estimation of the corpuscles. Coagulation he admitted to be important, but so were other factors. He demonstrated by the lantern some of the changes he had investigated.

Dr. A. Whitfield said he had worked at the blood from the morphological standpoint, and he gave the results of his researches. He also referred to the work of Justus, who found that mercury given to syphilitics caused a sudden fall in hæmoglobin, followed by a steady rise to normal as the drug took effect. The fall did not occur in healthy subjects, so perhaps might serve as an aid to diagnosis. The statements of Justus had been confirmed by all who had experimentally investigated them.

THE FEEDING OF INTUBATION CASES.

To the Editor of the Medical Record.

Sir: Here is a difficulty: your patient coughs so much, the regurgitation is so great, that but little nourishment is retained; add to this the usual dislike for medicine, and it seems almost insurmountable. First, try this method, which, I think, when practicable, is always the best:

Lay the child on its back with the head hanging over the nurse's knee, or, if it is in bed, let the head hang over a pillow; then feed slowly with a spoon or medicine dropper; do not use a feeding-bottle unless the child has always used one, otherwise the nurse will first have to teach the child how to nurse from one, and time in those cases is always an object.

The purpose of feeding in this manner is simply this: The intubation tube is, of course, a foreign body, and the child in the act of swallowing cannot entirely close the epiglottis; hence the coughing, choking, and regurgitation caused by the fluids getting into the trachea. When the head is kept at a certain angle the food passes more directly into the œsophagus. Now this method, although very good, is not always successful; the choking and regurgitation may continue, and premature coughing up of the tube is a danger to be looked out for.

We have another resource—feeding by gavage. This method is really a life-saving one, but I hold it should be a last resource. A feeding-tube is used, which is similar to the tube used in giving enemata. Get a small rubber or glass funnel. Attach to it a piece of rubber tubing about four inches long, then a piece of glass tubing three inches long, and then the catheter. A rubber catheter, No. 7, is a good size unless the child is very young; then a smaller one may be used. The child is wrapped securely in a sheet and placed on its back on a table. Pass the catheter through the right or left nostril into the œsophagus, at the same time pinching the tube so as to exclude as much air as possible. This is not so difficult as it seems, if the child is held firmly and not allowed to struggle. Practice has proved that it is better to pass the tube through the nasal passage into the œsophagus than through the mouth. When the tube is passed through the mouth a gag has to be used, and the patient is likely to cough and struggle more. Do not pass the tube too slowly; remember how sensitive the parts are, and the tube causes a great deal of irritation, and passing it slowly only means prolonging the trouble.

Insert about eight inches of the catheter. The milk is used warm. Medicine may be given at the same time. When the fluid has passed below the glass tubing, pinch the catheter and withdraw it. The pinching prevents the small quantity of milk that has remained in the tube from dripping as it is withdrawn, and prevents further irritation.

Now it can be readily understood that this is not a pleasant operation for the patient, although I have seen children fed in this manner without the slightest resistance. The strongest argument in its favor is that it prevents the possibility of the fluid getting into the trachea and later on causing bronchial pneumonia; against it is the resistance of the patient and consequent exhaustion. Its use in private practice might be questioned, so for those reasons, unless it is a question of starvation, I advise other means being tried.

Never keep to any rule in those cases. Feed the child the way it takes it best. Every patient is a "law unto himself." There are children who have held the intubation tube for months, and were able to eat and drink as well as if the tube was not there. The patient is often able to swallow solid food when drinking is impossible. This is easily explained: dry particles of food cannot get into the trachea as readily as fluids.

Some one has suggested nutritive enemata. I say no. A nutritive enema can be given only to an intelligent patient, who knows why it is given and tries his or her utmost to retain it. M. D.

THE SALE OF PATENT MEDICINES.

To the Editor of the Medical Record.

Sir: Cannot some way be suggested for the concerted action of the medical profession against "patent medicines"? Their sale and the harm that they do are increasing every year, and, except for a feeble protest now and then from our superior medical periodicals, not a particle of resistance is attempted to the great inroads they are making upon the health of our citizens. It would be folly to introduce a bill into the legislature of any State governing the sale of patent medicines until the people are awakened to its necessity, and who is there to advise and admonish the people except the medical profession? As a profession should we not do all in our power to protect the public's health? Yet how many of your readers ever take the trouble to warn their patients of the dangers to be encountered in taking patent medicines, or any medicines, without the advice of a competent physician? Many physicians, I doubt not, laugh and joke and make light of patent medicines. Perhaps they think their levity will teach the absurdity of using them, but they are slighting their responsibilities when they let pass an opportunity to explain the innumerable dangers always risked by taking any drug, even a diarrhœa mixture, without being so advised by a physician.

The people of the State of New York, by their laws duly enacted at the capital and enforced at no little expense, demand to-day a thorough education in all the principles underlying the science and art of medicine and surgery before they grant a license to treat and prescribe for a patient, and if the same people knew the serious dangers of patent medicines would they not demand the laws and gladly expend as much from their treasury to prohibit the sale of such articles? If the public's attention was drawn to the fact that the laws protect them from ignorant doctors, but do not protect them from poisonous drugs or fraudulent medicines, would they not act, and act at once?

If as much ink as has lately been used by members of the profession in Pennsylvania in a controversy over whether the medical student should receive any credit for subjects pursued in an academic college, were used by these gentlemen in as able arguments for the protection of the public from the ignorant administration of drugs by means of patent medicines or by the drug clerks, much would be accomplished for the public safety.

Again, the profession would do the public and itself better service would it devote a little more exertion toward the regulating of the prescribing of drugs and medicines and a little less toward regulating the free dispensing of professional services.

The law at present upon the statutes of the State of New York, controlling the sale of poisonous drugs, even if enforced, is of little value. If a man has a pain, no matter where, or a cough, or trouble with his bowels or his kidneys, or in fact any trouble whatsoever with his bodily functions, he needs but to be able to go to the drug store, and his wants will be attended to by either the patent medicine bottle or some "just the thing" from the druggist's own bottles. Indeed a man confined to his bed may often receive treatment from a druggist by a friend's describing his ailment. What he receives may not be the direct cause of his death, and yet the delay in seeking professional aid may put him beyond the chance of recovery, and, furthermore, may have given him so many more hours in which to infect other people with typhoid or some other disease.

Since so much advertising is done in the interest of patent medicines, would it not be well to advertise more widely the ruin of health they may cause, and the dangers they exert in possibly inculcating opium, alcohol, or some other habit? A prize for the best article setting forth the dangers of using any drug, without first being advised by a physician, would call forth a number of publishable articles, which could be inserted in the newspapers and magazines. The medical societies could take this matter in hand and by systematic pamphleteering make such attacks as would demand attention from the public and result sooner or later in legislative action.

A suggestion which may be far from feasible, and yet may lead to some one offering a better idea, is this: Let a law be passed prohibiting the sale of any drug or combination of drugs for internal or external use, by any one whatsoever, except upon a written demand of a registered physician, a book of registered physicians to be kept by all druggists. The patent-medicine manufacturers would expend millions to defeat such a bill! Yes, but we are not afraid of the fight, when we are in the right. The druggists would combine against the passage of such a bill! Yes, probably. The people would say the profession was trying to form a trust! No, for the working of such a law would prove the contrary. The drug stores might each have a doctor, who would write for any drug desired! Well, he must be registered, and not many men so well educated as to have passed the necessary examinations would sell their services for dishonorable purposes; and if the drug stores kept proficient doctors behind their counters it would be a step forward at least. Prescriptions would be for sale at every drug store, all written and signed! Again, an educated, honorable man would not dare, or care to, sell a batch of prescriptions for indiscriminate distribution, and the law might be framed to forestall such an evasion.

One result that might accrue would be the customary practice for families, or even a houseful of boarders, hotels, etc., to have visiting physicians at a yearly rate, who would call regularly, practise prophylaxis, and advise upon all topics of health and hygiene. They would at times advise this or that member of the household to be examined by the oculist, aurist, the gynæcologist, or some other specialist. The specialties would be more popular, and the specialists would in consequence be more advanced. During severe illness the consultants would be more frequently called to the bedside. All headache powders, cathartics, etc., the family physicians would prescribe as needed, and no extra charge would be made. As the result of such a law, we would not take a prescription into a shop one quarter of which is given up to a soda-water and ice-cream counter, another quarter to toilet articles, and the shelves on both sides crowded with patent medicines. Pharmacy would become a much higher and more dignified profession than it is to-day, and the drug shop would be a much more respectable institution.

John Joseph Nutt, B.L., M.D.

San Diego, Cal.

RAIN BATHS.

To the Editor of the Medical Record.

Sir: In the issue of the Medical Record of May 12, 1900, I notice an editorial under the title of "An Absurd Claim and a Unique Exhibit," referring to spray or rain baths. Regarding the claims of Dr. Baruch or Mr. Goodwin Brown as to priority in the establishment of public baths I know nothing, but as perhaps pertinent to the subject I wish to make the following statement:

Soon after taking charge of the medical department of Clinton Prison, New York, in May, 1889, I became convinced that the only proper method for bathing a large number of persons was by means of the spray or rain bath, of which at that time I practically knew nothing. The idea was suggested to me by the necessity of preventing contamination from one person to another from tub bathing, especially when there was venereal disease; and also a necessity for a form of bath which would bring on rapid reaction, the circulation of confined men usually being of low pressure and altogether sluggish. I immediately began investigating the subject and agitating the necessity of constructing a bath-house in connection with this institution. Early in the year 1891 an appropriation of $18,500 was obtained from the legislature for the construction of a bath-house in connection with Clinton Prison. No sooner, however, did I attempt to introduce my ideas of spray and rain baths than I met with determined opposition on the part of some concerned in the construction of the building.

I could find no precedent to fortify my position, but fortunately for my cause I accidentally mentioned the subject to Mr. Goodwin Brown, who was then acting in the capacity of pardon clerk to Governor Hill. He immediately indorsed my idea as a feasible one, and stated that he was a warm advocate of this method for public baths. He gave me his earnest support in the matter, and the result was that a bath-house was constructed on the Roman plan of architecture and fitted up with nine rain baths and fifty individual sprays. The water for the sprays is driven with a pressure of eighty-seven pounds, and very finely subdivided; the spray rosette is large, giving a wide radius to the jet, and is attached to a flexible hose. The water is heated to any desired temperature by means of heaters attached to the water-supply pipe. The water used in bathing and all débris are washed down inclines to well-trapped sewers.

The bath proved to be a great success, and so far as I am able to learn is the first spray bath put into operation in connection with a public institution in this country. It attracted considerable attention, and many persons inspected it and approved the principle. Now I am aware that many similar baths are in operation in connection with institutions and are used for the purpose of public bathing.

I do not write this with the desire to prop up any claims of priority which Mr. Brown may have made, but simply in justice to the very efficient aid he gave me in this then experimental work.

J. B. Ransom,
Physician to Clinton Prison.

Dannemora, N. Y., May 21, 1900.

To the Editor of the Medical Record.

Sir: The articles on bathing recently appearing in the Medical Record, as to priority of public baths, whether shower or tub, might well be extended and thus put on record some other facts than have yet been published. The Charity Organization in October, 1893, opened its lodging-house at 516 West Twenty-eighth Street, and largely because of my personal insistence the baths were spray baths. We required also a system of disinfecting clothing, and determined upon constructing something quite different from any apparatus then to be seen. With the competent help in planning given me by our plumber, a hot-air chamber constructed after the manner of the cold-storage places (which gave me the idea) was put in and economically maintained at a temperature of 240° F. or more. All clothing was taken at the time the bather took it off and placed by him in netted bags designed for the purpose, and then the bags were hung on an elevated railway and pushed into the hot-air chamber, swinging perfectly free in the air. The clothing, after remaining there for at least two and one-half hours, was freed from vermin and vermin eggs.

To our minds no public baths are complete without such an arrangement for disinfecting the clothing. Our system of dry heat has been copied in several places outside the city, and has been always found satisfactory. It destroys all visible animal life. Two attempts to copy our system with modifications have been tried in this city, and have both proved dismal failures because of the introduction of steam into the process, thus wrinkling the clothing, because it is in those places (quarantine and department of charities) subjected to steam while under pressure. The result, besides the wrinkles, is to warm the eggs into life, and a worse condition than before obtains in forty-eight hours. With the dry heat, however, this is all avoided, and the bather is not only clean after his bath, but has a chance to remain so by putting on clothing that is also clean.

This is written more to place on record facts that may hereafter be of importance, than to claim any priority for any one.

Wickes Washburn.

May 26, 1900.

Medical Items.

Sterilizing Water by Ozone.—In a method of sterilization of water by means of ozone described by Dr. Weyl, of Berlin, at the German scientific conference in 1899, water is pumped to the top of a tower and allowed to flow freely over stones, meeting as it falls a current of air charged with ozone. The process appears to be likewise effective in purifying peat and bog water, the solution of the iron of humic acid being decomposed and oxidized, and the brown color disappearing in consequence. The method, it is said, can be advantageously used in connection with filter beds. —*Appleton's Popular Science Monthly.*

Losses at Mafeking.—An official report from Mafeking as to the total casualties during the siege shows the following losses: Officers, 5 killed, 15 wounded, 1 missing; non-commissioned officers and privates, 51 killed, 103 wounded, and 25 missing. Of these 15 died from disease and 5 were accidentally wounded. Of Kaffirs 25 were killed and 58 wounded. Non-combatants, 4 killed, 5 wounded, and 32 died from disease. Among the natives 54 were killed and 117 wounded. The Baratongs had 128 killed and 122 wounded.

Military Surgery in the Boer Army.—The Berlin correspondent of *The Lancet* says that Professor von Esmarch has permitted the *Münchener medicinische Wochenschrift* to publish letters written by a former assistant, who is now medical officer to an ambulance with the Boer forces. Most of the wounds treated were caused by the Lee-Metford rifle. Simple wounds of the soft parts healed very well without suppuration except when the shot had been fired from a short distance. This seldom happened in fighting, but some Boers shot themselves wilfully with their own rifles to avoid military service. In these cases the wound of ingress was very small as in all other wounds of the soft parts; the wound of exit, however, was very large and the muscles were lacerated. It was an interesting fact, not from a surgical but from a psychological standpoint, that these accidents happened always a day before a battle was expected. Soldiers with wounds of the extremities continued to fight and were even able to ride to the dressing-tent without support. The majority of the Boers, however, when slightly wounded, seized the opportunity to withdraw from the battlefield. Dr. Küttner, another of the German surgeons at Jacobsdahl, in a letter addressed to Professor Bruns, of Tübingen, confirmed the opinion of the latter that the prognosis of the wounds inflicted by modern rifle bullets was good, and that conservative treatment was advisable. Wounds of the skull and brain were usually very serious and often required operative treatment, while wounds of the thorax healed very well. As to wounds of the abdomen, their prognosis was better than was supposed. A good many of them healed under expectant treatment without laparotomy, an experience in accord with that of MacCormac and Watson Cheyne. The results were not improved by laparotomy. Wounds of the liver were not observed at all, as the wounded died on the battlefield. Wounds of the kidney were more frequent and of a better prognosis. In a postscript the state of the wounded in General Cronje's laager after his surrender at Paardeberg is described. Owing to the want of surgical aid, the wounded had been ten days without dressings. The wounds were covered with tobacco leaf, and nearly all were septic. Many operations were, therefore, necessary, and there were many deaths from septicæmia and tetanus.

Number of Registered Physicians in the United States.—The actual number of registered physicians in the United States, according to the most recent count, shows an average for the whole of about one to 647 inhabitants, but the proportion in the States varies greatly. California appears to be the State which is most liberally supplied, the proportion there being one physician to 420 inhabitants, while in Iowa nearly the same conditions prevail. On the other hand, in North and South Dakota and New Mexico the proportion was respectively one to 1,285, 1,296, and 1,391 inhabitants.

Cremation in the United States.—Within the past twenty years the custom of cremating the bodies of the dead has obtained a considerable foothold in the United States, and several crematories have been built in different parts of the country. The first crematory was built by Dr. Julius T. Le Moyne, at Washington, Pa., in 1876, and was used for the disposal of his own remains. From that time to the present much has been written in America in relation to this safe and rational method of disposal. No more establishments for incineration were erected till 1884, but from 1884 to the present time twenty-six crematories have been established. In some instances laws have been enacted favoring the practice and placing it under proper restrictions. That the public sentiment in favor of incineration is steadily increasing is shown by the rapidly augmenting number of bodies submitted to this method of disposal. The following list furnished by Mr. Louis Lange, of New York City, shows the rapid progress which has been made in the establishment of crematories in the United States and in the number of persons whose remains have been incinerated in these since their introduction in 1876. In the eight years, 1876 to 1883, only twenty-five bodies had been disposed of in this manner, and all these were treated in the crematory built by Dr. Le Moyne at Washington, Pa. From that time the annual number increased to 1,699 in 1898, with a total of 8,885 in all up to the close of 1898, and at the present date the number has probably reached ten thousand.—"Public Hygiene and State Medicine in the United States," by SAMUEL W. ABBOTT.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended June 2, 1900:

		Cases.	Deaths.
	SMALLPOX—UNITED STATES.		
District of Columbia, Washington	May 12th to 19th	5	1
Colorado, Archuleta Co.	May 19th	2	
Arapahoe	May 19th	2	
Boulder Co.	May 19th	1	
Otero Co.	May 19th	3	
Pueblo Co.	May 19th	2	
San Miguel Co.	May 19th	1	
Illinois, Cairo	May 12th to 26th	4	
Indiana, Evansville	May 19th to 26th	1	
Indianapolis	May 12th to 19th	7	
Kansas, Wichita	May 19th to 26th	7	
Kentucky, Covington	May 12th to 26th	8	
Louisiana, New Orleans	May 12th to 26th	78	22
Shreveport	May 19th to 26th	3	
Massachusetts, Fall River	May 19th to 26th	1	
Lowell	May 19th to 26th	2	
Michigan, Detroit	May 12th to 19th	3	
Grand Rapids	May 12th to 19th	5	1
Minnesota, Minneapolis	April 28th to May 3d	54	3
New Mexico, Capitan	May 7th to 21st	11	
New York, New York	May 19th to 26th	4	
Ohio, Cleveland	May 19th to 26th	32	
Oregon, Portland	May 17th	1	
South Carolina, Greenville	May 12th to 19th	2	
Utah, Salt Lake City	May 12th to 26th	5	
Virginia, Petersburg	April 26th to May 26th	2	
Washington, Tacoma	May 12th to 19th	1	
Wisconsin, Deer Co.	May 22d	8	
Douglass Co.	May 22d	8	
Eau Claire Co.	May 22d	10	
Kewaunee Co	May 22d	6	
Pierce Co.	May 22d	1	
St. Croix Co.	May 22d	70	1
Waupaca Co.	May 22d	3	1
Wyoming, Cheyenne	May 19th	3	
Rock Creek	May 19th	2	
Sweetwater Co.		7	
Green River	May 19th	18	
Evanston	May 19th	6	
Aspen	May 19th	1	
Tunnel	May 19th	13	
	SMALLPOX—FOREIGN.		
Austria, Prague	April 28th to May 12th	9	
Belgium, Antwerp	May 5th to 12th	6	
Brazil, Rio de Janeiro	March 31st to April 13th	14	11
Canada, Ontario, Collingswood	May 16th	1	
Sault Ste. Maria	May 16th	Prevalent.	
Winnepeg	May 12th to 26th	16	3
China, Hong Kong	April 7th to 21st	1	1
Egypt, Cairo	April 1st to May 6th	..	55
England, Liverpool.	May 5th to 12th	8	1
London	April 28th to May 12th	11	1
Southampton	May 12th to 18th	1	
France, Lyons	April 21st to May 12th	..	5
Germany	May 5th to 12th	2	
Gibraltar	April 28th to May 13th	4	
Greece, Athens	May 5th to 12th	3	4
India, Bombay	April 17th to May 1st	..	101
Calcutta	March 24th to April 7th	..	102
Kurrachee	April 15th to 29th	45	19
Madras	April 7th to 27th	..	2
Italy, Leghorn	May 5th to 12th	1	1
Mexico, Chihuahua	May 12th to 19th	..	1
Vera Cruz	May 12th to 19th	4	4
Russia, Odessa	April 28th to May 12th	15	4
St. Petersburg	April 28th to May 5th	15	3
Warsaw	April 22d to May 5th	..	6
Scotland, Glasgow	May 11th to 18th	27	1
Sprain, Corunna	May 5th to 12th	..	1
Madrid	April 21st to May 5th	..	16
Valencia	May 12th to 19th	1	
Straits Settlements, Singapore	April 1st to 21st	..	11
	YELLOW FEVER.		
Brazil, Rio de Janeiro	March 31st to April 13th	47	34
Colombia, Panama	May 15th to 22d	7	4
Cuba, Cienfuegos	May 26th	5	3*
	* Santa Clara Barracks.		
	CHOLERA.		
India, Bombay	April 17th to May 1st	..	37
Calcutta	March 24th to April 7th	..	217
Madras	April 7th to 13th	..	1
Japan, Osaka and Hiogo	April 21st to 28th	1	
	PLAGUE.		
China, Hong Kong	April 7th to 21st	40	35
India, Bombay	April 17th to May 1st	..	894
Calcutta	March 24th to 31st	..	1,599
Kurrachee	April 16th to 29th	763	622
Japan, Osaka	April 8th to May 14th	11	3
Shidzuoka	May 7th	1	

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Original Articles.

THE OCCURRENCE OF MOULD IN THE STOMACH AND ITS PROBABLE SIGNIFICANCE.*

By MAX EINHORN, M.D.,

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THE part which micro-organisms (bacteria and mould fungi) play in the occurrence of pathological processes in the stomach has been variously interpreted by authors. Most clinicians ascribe no special significance to them. Others, however, assign them a prominent place; thus, for example, Talma[1] maintains that the fermentation of carbohydrates induced by micro-organisms is the cause of hyperchlorhydria; others, again, place stress not so much upon the variety of these microbes as upon their ultimate number. Among these authors Naunyn[2] may be especially cited.

The mould fungus, as such, has been but little mentioned in the domain of gastric affections. In the following I shall give the different data which I have found in the literature:

Leube[3] writes as follows: "Usually yeast and mould fungi, sarcinæ, and the most diverse forms of bacteria are found. Inasmuch as all these fungi do not exert any direct deleterious influence upon the gastric mucous membrane, and as their presence in the diseased stomach does not materially interfere with a cure, the occurrence of fungi in the gastric contents must be regarded as rather accidental than as a symptom of certain pathological processes in the stomach. On the other hand, in very rare instances micro-organisms appear to be capable of exciting inflammation and ulceration of the stomach; but up to now so few observations from an anatomical standpoint have been made upon gastritis mycotica that it would be better to refrain from the exposition of a clinical picture and from a diagnosis of this condition."

De Bary[4] frequently examined the gastric contents for micro-organisms in seventeen patients suffering from gastric troubles, and found: thread fungi, oidium lactis (cases 1, 8); other forms, undetermined (cases 1, 3); mucor mycelia (cases 3, 4); leptothrix buccalis (cases 14, 17). In general, he determined that the thrush fungi and mould fungi are more infrequent.

Naunyn says: "I would mention the occurrence of mould fungi in the stomach, which I have found in two cases; one observation I made three years ago, the patient being a woman about forty years old with moderate dyspeptic disturbances and considerable increase in the width and depth of the stomach. After lavage had been performed twice the patient withdrew from treatment. The mould fungi, which were present profusely the first time, could be found only with difficulty in the wash-water the second time. The other case came under my observation about a year ago. Unfortunately I have not any notes in regard to it, and can only state that, if I recollect rightly, the mould fungi disappeared from the stomach contents after a single lavage, and that here no considerable mechanical gastrical insufficiency was present."

Boas[5] makes the following remarks relating to this subject: "Among the sprout fungi, the yeast fungi (at least in small quantity) are to be regarded as a normal constituent. The thrush fungus (oidium seu saccharomyces albicans), usually originating in the buccal cavity, is also occasionally met with. Furthermore, mould fungi (mucor forms) are found in small number, these being likewise of no essential pathognomonic significance."

The following pathological anatomical data found in Klebs' "Handbuch"[6] are also of interest: "A different condition prevailed in a mycosis of the stomach which was first observed by E. v. Wahl (*Virch. Arch.*, Bd. 21), then by Recklinghausen (*Virch. Arch.*, Bd. 30), since here the fungi penetrated into the ducts of the mucous glands. In the first case there were found, especially in the pyloric portion, numerous foci of the size of pin-heads, pustular nodules, partly of yellow and partly of red color, which occupied the glandular layer and extended to the submucosa; and in the second case there were in the fundus similar but somewhat larger foci with central necrosis. In this case the fungi were present both in the glandular tubercles as well as here and there in the tissue between them, so that they connected the ends of the tubes with one another. . . . In both instances the same variety of fungi was present, consisting of several fine threads, only rarely or not at all segmented, together with fine, minute granules occasionally arranged in rows in the form of a rosary—forms which therefore belong to the leptothrix group." Klebs attributes the necrosis to the proliferation of these fungi.

Eichhorst[7] expresses himself in a similar manner: "Oidium albicans does not frequently occur in the stomach. Reisz has described an instance in a girl eighteen years old. The mucous membrane was found to be covered with whitish, semiglobular granules up to a pin-head size, which at some points in the fundus ventriculi had coalesced into larger patches. Microscopically, the cylindrical epithelia were destroyed in some places, the mucous membrane being infiltrated by an abundance of round cells, but nowhere was there any entrance of the fungi into the blood-vessels. Besides the stomach, thrush fungi were found in the œsophagus. Rudnew has found penicillium glaucum in a woman who died from cholera, in the vicinity of the pylorus the fungi had penetrated abundantly into two small tumors. Naunyn also observed in two instances mould fungi in the stomach contents. Kundrat recently described, in the case of a man with favus universalis, the presence of favus colonies upon the mucous membrane of the stomach and colon, which had led to a croupous diphtheritic inflammation and to the formation of ulcers."

Grawitz[8] has succeeded by injections of aspergillus colonies into the blood-vessels in producing mycotic diseases of the kidney and liver. As regards the behavior of the fungi in the stomach, nothing, however, is mentioned in this work.

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* Read before the American Gastro-Enterological Association on May 1, 1900, at Washington, D. C.

In all the literature cited, with the exception of the pathological anatomical data, the scant references to mould fungi in the stomach relate to the findings of microscopical examinations. Mould itself, recognizable by macroscopic examination, has, according to my knowledge, not as yet been observed clinically in the stomach. At any rate, no mention of this occurs in the literature. I have had occasion to observe several cases of mould formation in the stomach, and it seems to me worth the while to discuss the subject somewhat more fully. In the cases under my observation there were found in the wash-water of the empty stomach small, sometimes blackish-gray, and sometimes brownish-green flakes (2 to 5 mm. in diameter; see Fig. 1) in varying number (four to fifty and more). The microscopical examination showed that these flocculi consisted entirely of spores and mycelia and scarcely anything else. Similar flocculi were found in the same patients in the gastric contents after a test meal, and the microscope showed the same picture as in the flocculi from the empty stomach.

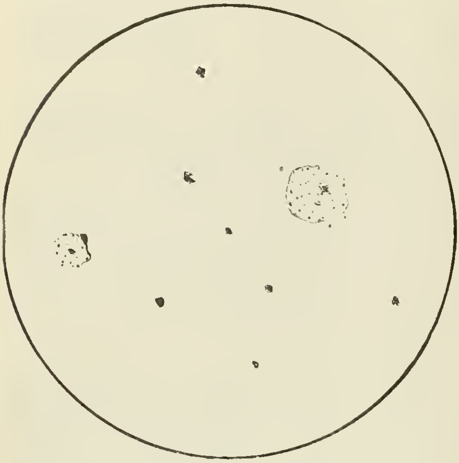

Fig. 1.—Small Pellicles of Mould found in the Stomach. (Natural size.)

Sometimes these blackish-gray masses are embedded in mucus. We then note besides these fungus colonies mucous corpuscles and numerous epithelial cells. This indicates an intimate connection between the fungus colonies and the surface of the mucous membrane. The former must adhere quite closely to the latter and perhaps even proliferate into the epithelial layer. This firm adhesion must be assumed for the following reasons: If the fungi were only an accidental admixture of the ingesta, that is introduced with the latter and then carried further onward, without there being any fungus proliferation, then they would be encountered only in the gastric contents after meals, but not in the fasting state of the patient, that is, when no food is found. As a matter of fact, however, in the cases referred to these flocculi occur in large number, principally in the empty stomach.

Are these mould fungi, present in the stomach, still in a living condition, or are they destroyed by the action of the gastric juice? In answer to this question it can be said that the mould colonies retain their full vitality and are capable of further development. If the flocculi are placed in some water or in the filtrate of the gastric contents of the patient it is soon noticed that there is a formation of whitish-gray clouds which are connected with the flocculi, and under the microscope we find spore colonies and mycelia very similar in character to the original mould.

After these introductory remarks permit me to describe in detail a few of the cases that have come under my observation.

Case I.—Hyperchlorhydria, with periodical continuous gastro-succorrhœa; October, 1899. William R——, thirty-eight years old, has suffered for four years with periodical vomiting of from two to four days' duration. While at first the attacks of vomiting occurred about once in four or five months, they increased to such an extent in the third year of the disease that they appeared every three to four weeks. Since then the patient has no longer felt well during the interval between the attacks, being constantly troubled, about two hours after meals, with intense heartburn and gastric pains; constipation was also present in a marked degree. The patient had lost about thirty pounds in weight. At this time he first came under my treatment. A careful examination showed the presence of hyperchlorhydria with continuous gastro-succorrhœa occurring periodically. He was placed upon proper diet and treated with sodium bromide and alkalies. During ten months he remained free from the attacks of vomiting, after which they recurred in the same manner as previously. The patient consulted me again during such an attack.

Status præsens: The patient appears well-nourished, but somewhat pale; nothing abnormal can be discovered in the thoracic organs; the gastric region is somewhat sensitive to pressure; the knee phenomenon is present; the urine is free from albumin and sugar. In the fasting state about 60 c.c. of gastric juice mixed with some bile is found. During the following irrigation of the stomach small greenish flakes in considerable number (about twenty to thirty) are observed in the wash-water. I first thought that these were small mucous flakes which had absorbed biliary coloring-matter, but the microscopical examination showed that this was not the case, but that the shreds consisted entirely of round spores and mycelia (Figs. 2 and 3).

Case II.—Hyperchlorhydria; February 18, 1900. T. M——, twenty-two years old, had suffered for six years with digestive disturbances; he was troubled with frequent belching; the tongue was always coated, and he often had a bad taste in the mouth in the morning. One-half to two hours after meals a feeling of burning frequently appeared in the pit of the stomach, and the patient had a sensation as if he had swallowed a foreign body. He also often experienced a raw feel-

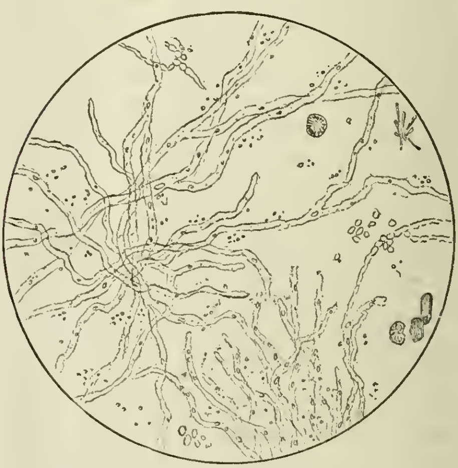

Fig. 2.—A Greenish Pellicle found in the Wash-water of the Stomach (of Wm. R——), in the fasting condition. Mycelia, free spores, and a few crystals are visible. × 240.

ing in the throat, with repeated hawking. The bowels were always regular; the appetite was good; there was no loss in weight.

Status præsens: The patient is of vigorous build and well nourished; the tongue is covered with a greenish-gray coating; the thoracic organs show normal conditions; in the abdomen nothing abnormal can be discovered; the knee phenomenon is intact; the urine is free from sugar and albumin.

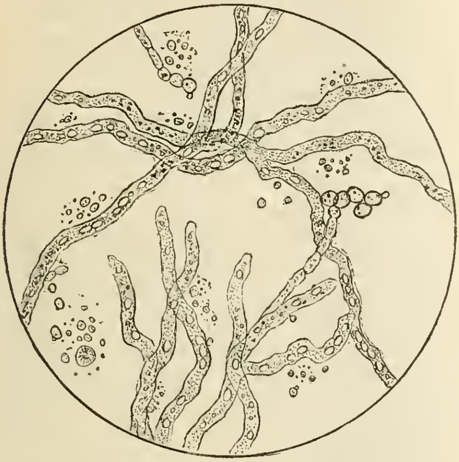

FIG. 3.—Same as Fig. 2, highly magnified. × 420.

Examination of the stomach one hour after the test breakfast shows: HCl +, acidity 76; free HCl, 56. The chyme contains small greenish flakes similar to parsley, in small number (about four such shreds on the filter). Macroscopically these presented the appearance of being either small particles of green vegetables or mucous flocculi which had taken up biliary coloring-matter. Microscopical examination showed, however, that these flakes represented mould fungi colonies, consisting of spores and mycelia (Fig. 4).

The patient was examined on the following morning in the fasting state; the stomach contained no ingesta, but a slight quantity (20 c.c.) of gastric juice. After lavage was performed the wash-water contained a considerable number (fifty to sixty) of the above-described greenish flakes; there was a small quantity of mucus.

The patient was treated with bicarbonate of sodium and with gastric irrigation, in connection with a spray of silver nitrate. His condition improved, that is, the subjective symptoms diminished, and about fourteen days after commencing treatment the irrigating-fluid contained either no greenish flakes or only a scanty number. A small amount of yellowish-brown mucus, however, is almost always present in the wash-water, and in this epithelial cells and spores (probably from fungi) can be demonstrated.

CASE III.—Hyperchlorhydria; March 15, 1900. George D——, forty-eight years old, had always enjoyed good health until about a year ago, when he began to suffer with digestive disturbances. At first the pains appeared some time after eating, and later they were now and then accompanied by vomiting. The appetite at the beginning was undisturbed, later impaired; the bowels were sluggish; frequently there was a sour taste in the mouth. During the course of the disease the patient had lost forty-five pounds in weight, and felt weak and restless.

Status præsens: The patient is of vigorous build, but appears pale and debilitated; the tongue is markedly coated; the thoracic organs are normal; examination of the abdomen discloses a slight sensitiveness to pressure in the gastric region, the presence of splashing sounds, which can be produced down to the navel, and the absence of any tumor. The knee reflexes are present; the urine contains neither sugar nor albumin.

Examination of the stomach one hour after the test breakfast shows: HCl +, acidity 104; free HCl, 80. In the fasting state the stomach is found empty. In the irrigating-water numerous mould flocculi are present, as determined microscopically.

The patient was treated for several days with gastric lavage and alkalies; in addition he was placed on a light diet, with frequent meals. His condition improved; the pains diminished; the vomiting ceased, and he began to gain in weight. After three weeks' treatment no mould pellicle can be discovered in the stomach.

CASE IV.—Gastritis glandularis chronica and gastric erosions; January 12, 1900. Leopold C——, twenty-nine years old, has been troubled for two years with dyspeptic symptoms, a feeling of pressure, and slight pains in the gastric region one-half hour after meals, frequent eructations and slight constipation. The patient has kept up a strict diet during this time, and has lost twenty pounds in weight, while the disturbances remained unchanged.

Status præsens: The patient appears pale; the mucous membrane of the lips and cheeks is anæmic; the tongue is only slightly coated; the thoracic organs are normal; palpation of the abdomen elicits a slight sensitiveness to pressure in the epigastric region.

Examination of the stomach one hour after the test breakfast shows: HCl +, acidity 24; a considerable quantity of mucus and two blackish-green flakes, which on microscopical examination are found to consist of spores and mould fungi. In the fasting state the stomach is found empty; the wash-water contains, however, an abundance of these mould floccules (twenty to thirty) (Fig. 5) and, besides, four small pieces of mucous membrane. The same finding was repeatedly determined, with the exception that after longer treatment, which consisted of gastric irrigation and spraying with silver-nitrate solutions, the mucous fragments and also the mould floccules appeared in lesser numbers.

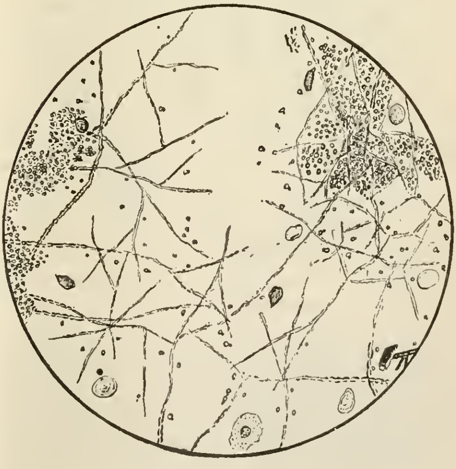

FIG. 4.—A Blackish Pellicle found in the Gastric Contents (of T. M——) after a Test Breakfast. Numerous spores, mycelia, a few crystals, starch granules, and epithelial cells are visible. × 140.

The patient felt better, was more vigorous, and experienced fewer disturbances. He is, however, not yet entirely free from his pains.

Aside from the above-described observations I have found mould in the stomach in two other instances: in one there was a decided hyperchlorhydria; in the other an atony of the stomach, with quite normal chemical processes and gastralgias. Both patients were not long under observation, so that I am not sufficiently informed as to the subsequent course of the cases.

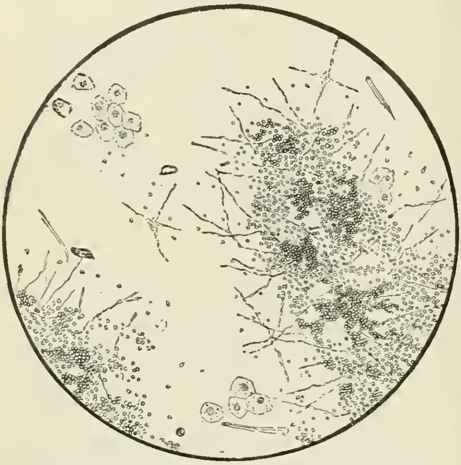
Fig. 5.—A Blackish Pellicle found in the Wash-water of the Stomach (L. C——), in the fasting condition. Numerous spore-colonies, mycelia, a few crystals, epithelial cells, and several algæ are visible. × 120.

That the grayish-green or grayish-black flakes, which were found, represented mould pellicles, was established beyond doubt by the microscopical examination. An extremely large number of spores and mycelia was always observed. In all my cases the microscopical picture was the same, and it can therefore be assumed that the mould fungi present belonged to one and the same species. In order to determine the latter point I gave a few of these greenish shreds to Dr. E. K. Dunham, and insert his report:

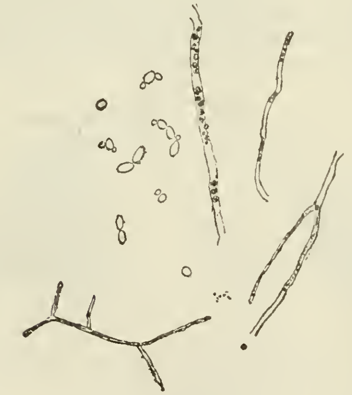
Fig. 6.—Oc. 2. Obj. $\frac{1}{12}$ oil, Leitz.

"New York University, Carnegie Laboratory, }
"New York, April 27, 1900. }

"Dear Doctor Einhorn: The specimen from stomach contents which you sent me for examination contained small particles of a dirty yellowish or greenish color. Under the microscope these particles contained granular material of indefinite character, from which mycelial threads projected into the surrounding liquid. The latter contained numerous round bodies which were considered to be the spores of some mould, but no signs of any fructification could be detected upon the mycelium. Attempts to cultivate the mycelium upon agar-agar, gelatin, milk-sugar, bouillon, and upon acidulated media yielded no fruiting mould. The original material was finally distributed over sterilized bread. Upon this medium, colonies of an aspergillus, a penicillium, and one colony of a mucor were obtained without difficulty. The penicillium appeared to be the common penicillium glaucum. The colonies of aspergillus were also green in color. Only the asexual spore-formation came under observation.

"I attach very little value to these observations, because bread cultures were not made until at least a week had elapsed after the material was received from you. There was a chance that the growths obtained were due to contamination of the material distributed upon the bread.

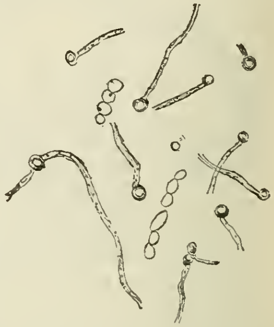
Fig. 7.—Oc. 2. Obj. $\frac{1}{12}$ oil.

"I enclose three drawings made from the original material with the aid of a camera lucida (Figs. 6, 7, 8).

"Yours very truly,
"Edward K. Dunham."

At this place I beg to express my indebtedness to Dr. E. K. Dunham as well as to Dr. Goldhorn for their labor.

If now we return to our cases in which mould fungi were frequently found in the stomach, the question comes up, What significance have these mould fungi in gastric pathology? Although isolated fungi may exist in the stomach for a short time without any detriment, they do not find in the normal organ favorable soil for further development. They are intimately mixed with the chyme and are carried onward, living or dead, through the pylorus. Entire colonies of fungi which are macroscopically perceptible are probably never to be found in the normal stomach. Any considerable growth of mould would be possible only if a colony of the fungi had infested a fold of the surface of the gastric mucous membrane and had become so firmly adherent that they were not carried along with the onward passage of the chyme. Under these circumstances a fungus colony may grow undisturbed, and considerable areas of the gastric mucosa may become covered with mould. In the above-described cases such a condition must have prevailed. In lavage of the stomach the inflowing current

Scale, 0.05 mm. Each division = 0.01 mm.

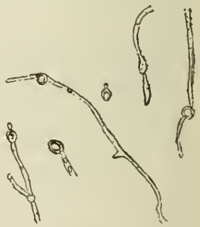
Fig. 8.—Oc. 2. Obj. $\frac{1}{12}$ oil.

of water exerts considerable force and tears many mould islets from their bases, so that they then appear in the wash-water.

It is scarcely conceivable that such a mould coating of certain zones of the gastric mucosa can be unattended with disturbances of the functions of the organ. Conditions of irritation as well as inflammatory processes might be expected *a priori* from the mechanical action of the mould.

After these theoretical conclusions it would be profitable to analyze more closely the cases that have been described, and to elucidate whether the mould formation was in a causative relationship to the symptoms of the disease. The decision of this question is, however, very difficult, because *post hoc* is not always the *ergo propter hoc.* I have met with the mould formation particularly in two groups of gastric affections: first, in cases of intense hyperchlorhydria (occasionally attended with hypersecretion and vomiting); and, second, in gastralgia with normal or reduced gastric secretion. It cannot be denied that in many of these cases the mould flakes became smaller in number or disappeared after gastric lavage followed by spraying with a one to two per mille solution of nitrate of silver. In connection with this a subjective improvement could be observed in the condition of the patient. Yet it cannot be said with certainty that the mould produced the existing pathological process in the stomach; for we find cases analogous in every respect without the presence of mould fungi. Notwithstanding this, it appears plausible that these mould fungi are connected to a certain extent with the above-mentioned abnormal conditions; and even if they are not the cause of these, they undoubtedly increase their severity.

The occurrence of mould in the stomach in large masses must, therefore, be considered of importance from a therapeutic standpoint; hence it must be our endeavor to free the stomach from them as soon as possible. This is best done by irrigation of the stomach in the fasting state of the patient. This acts in a purely mechanical manner, since the mould flakes are removed with the water. The use of the gastric douche might also have a favorable influence in this direction. Following this the application of an antiseptic solution of silver nitrate with a spray appears likewise of some utility. Aside from the therapeutic measures just described, the treatment of these cases must be directed in accordance with the special disease present.

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Prostatectomy.—In lateral lobe enlargements, in perineal urethrotomy, a crescentic incision is made anterior to the rectum and well around it, the rectum being drawn backward and the prostate capsule incised. The prostate is drawn down into the wound by means of the finger and enucleation made with the finger of the other hand and scissors. The wound is packed, leaving in the bladder a large tube from the perineal wound for six days.—FREYER.

DIFFUSE SEPTIC PERITONITIS AND THE ELEVATED HEAD AND TRUNK POSTURE. A REPORT OF THREE ADDITIONAL CONSECUTIVE CASES OF RECOVERY.

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THE following is presented as an addendum to the report of nine consecutive cases of recovery of diffuse septic peritonitis published in the MEDICAL RECORD for April 14th, thus making twelve consecutive cases in which recovery has taken place under the combined treatment of cleansing the neighborhood of the original focus with hydrogen peroxide, through flushing of the abdomen with decinormal saline solution at 110° F., deep pelvic drainage, and the elevated head and trunk posture to facilitate the passage of fluids from the intestinal and diaphragmatic areas to the pelvic portion of the peritoneum. The special object to be accomplished by this posture, namely, that of removing the fluids from the dangerous areas mentioned to the comparatively safe region of the pelvis, together with the anatomical and physiological reasoning upon which this is based, are fully set forth in the article referred to.

CASE X.—March 15, 1900; Methodist Episcopal Hospital; female, aged seven years. The patient was admitted and operated upon on the tenth day of an attack of acute appendicitis. The expression was anxious. There were extreme abdominal distention and tenderness, with persistent vomiting. The conditions were believed to be complicated with intestinal obstruction of mechanical origin. A median incision was made. the operation revealed the small intestines deeply reddened and matted together with exudate; as these were separated large quantities of sero-purulent material flooded the peritoneal cavity. The appendix was gangrenous and perforated. It was excised; the primary focus was cleansed with partially neutralized hydrogen peroxide (diluted with equal parts of a saturated solution of sodium bicarbonate). The intestines were separated, cleared of lymph deposits wherever these were easily separable, and the peritoneal cavity was repeatedly flushed with large quantities of decinormal saline solution. A glass drainage tube was placed in the pelvis and led out of the lower angle of the incision.

After-treatment consisted of elevation of the head of the bed fifteen inches above the horizontal; an enema of saline solution every two hours. Vomiting ceased; flatus passed freely; the distention subsided. The glass drainage tube was removed on the sixth day, and substituted, on account of a reaccumulation in the pelvis, by one of rubber, which was finally removed on the fourteenth day. The head of the bed was lowered at the end of the second week. Recovery resulted.

CASE XI.—March 17, 1900; German Hospital; male, aged twenty-three years; perforative peritonitis of appendicular origin. The operation showed a large quantity of sero-purulent fluid; the peritoneum was deeply reddened, and extensive deposits of fibrinoplastic material were scattered over the entire area of the small intestine. The appendix was excised; the original septic focus was cleansed with partially neutralized peroxide-of-hydrogen solution; the lymph deposits were removed where easily detachable; the peritoneal cavity was flushed with decinormal saline solution at 110° F.; a glass drain was inserted in the pelvis.

After-treatment: The head of bed was elevated fifteen inches; stimulation with strychnine and caffeine; an enema of decinormal saline solution was given every two hours; fluids were administered by mouth *ad libitum.* No vomiting occurred after the patient was placed in bed. Flatus passed freely after six hours. The glass drain was forced out by an act of coughing at the end of twenty-four hours; it was not replaced. The elevated head and trunk position was maintained for six days. Staphylococcus was found in culture. Recovery resulted.

Case XII.—April 5, 1900; Methodist Episcopal Hospital; male, aged sixty-six years; perforative peritonitis of appendicular origin. Upon admission the patient presented the characteristic picture of diffuse septic peritonitis. Upon opening the abdomen, a quantity of sero-purulent fluid escaped from the peritoneal cavity. The intestinal coils were greatly distended, deeply reddened and mottled, and coated here and there with patches of fibrino-plastic exudate. It was with difficulty that spontaneous eventration through the abdominal wound was prevented. The appendix was perforated. Excision of the appendix was done; the original septic focus was cleansed with partially neutralized hydrogen dioxide; the peritoneal cavity was systematically flushed with decinormal saline solution. A quantity of the latter was permitted to remain in the cavity for the purpose of favoring peritoneal leucocytosis and immunity. A small supplementary opening was made through the abdominal wall in the left linea semilunaris, and through this a large and closely fitting glass drainage tube was passed to the bottom of the pelvis. The original operation wound was closed.

After-treatment: Elevation of the head of the bed eighteen inches; stimulation by strychnine and caffeine; aspiration of drainage tube every four hours; enemata of decinormal saline solution. Nausea and vomiting ceased at once; normal peristalsis was re-established and flatus expelled within twelve hours; a movement of the bowels was obtained by simple enema on the morning of the third day. The rigidity of the abdominal wall was replaced by the normal relaxed condition, and the peritonitic facies disappeared. The glass drain was removed on the fourth day, and its place supplied by a narrow gauze strip. Recovery ensued.

The following case is offered in addition. Especial points of interest present themselves in the case, for the reason that the abdominal symptoms absolutely disappeared, while a general septico-pyæmia persisted, which finally resulted in septic meningitis, from which the patient died on the thirteenth day following the operation. I am greatly indebted to Dr. H. A. Henriques, of Morristown, N. J., who, although not previously in attendance, assumed the care of the patient at my request, upon the supervention of the meningeal complication.

April 14, 1900; L. D——, aged fourteen years, of Morristown, N. J.; perforative appendicitis; third day of the disease. The patient presented the typical appearances of diffuse septic peritonitis, *i.e.*, anxious facial expression, purplish-red hue of surface (vasomotor paralysis), extreme distention, and rigid abdominal walls (barrel-shaped abdomen). There was paralysis of peristalsis. The stomach was absolutely intolerant; vomiting of brownish-green matter took place. The pulse was 160; temperature, 104° F. Abdominal section revealed deeply reddened coils of intestine floating about in a large amount of foul-smelling sero-purulent fluid with flakes of lymph; fibrino-plastic patches were present upon the intestinal serous surfaces. The appendix was gangrenous and perforated. Excision of the appendix was done; the region of the original focus of infection was cleansed with hydrogen dioxide undiluted, about twelve ounces being used. Considerable of the hydrogen-dioxide solution necessarily invaded the general peritoneal cavity. Forcible flushing was done with decinormal saline solution at 110° F. A large glass drainage tube was inserted to the bottom of the pelvis.

After-treatment: Elevated head and trunk posture; the glass drainage tube was aspirated every three hours until the third day, when it was removed, and a rubber drainage tube and a strip of iodoform gauze were substituted. Stimulation was effected by caffeine and strychnine. A saline enema was given every three hours; fluids *ad libitum.* The nausea and vomiting ceased at once. The bowels moved spontaneously three times within the first twelve hours, accompanied by the expulsion of large quantities of gas; the distention promptly diminished. The morale rapidly improved. The extensive general septic conditions which existed prior to the operation, however, persisted, although the abdominal symptoms rapidly subsided, save the occurrence of a small and well-walled-off secondary abscess in the left iliac region, which was evacuated by an incision in the left linea semilunaris on the ninth day. On the eleventh day symptoms of cerebral meningitis developed, with intolerance of light, vomiting, high fever, delirium, the temperature finally reaching 107.5° F.; there was stiffness of the neck due to contractions of the posterior muscles; alternate contraction and dilatation of the pupils occurred. The patient became comatose and remained so for forty-eight hours preceding the final lethal exit, which took place on the thirteenth day following the operation.

A word as to the method of flushing pursued in the last case: I believe, in spite of the assertion of Bode[1] to the contrary, that eventration or disembowelling adds increased risks to the operative procedure, and should be avoided, if possible. Heretofore the difficulty of reaching every portion of the peritoneal cavity with the irrigating-fluid and with the intestines *in situ* has been almost insurmountable. In the last case, I adopted an expedient for overcoming this difficulty by means of the following improvised means: The outlet tube of a large douche bag was cut away, and through the hole thus left in the bottom of the bag an ordinary curved and flanged abdominal glass drainage tube of large size was passed from inside the bag. The tube was then passed into the remoter portions of the peritoneal cavity at first, and, the bag being filled with the decinormal saline solution, the solution was forced from the bag by rolling the latter upon itself from above downward, the fluid rushing rapidly and forcibly from the end of the glass tube as this was moved about first in the region of the spleen and liver, and subsequently between the coils of intestine and about the root of the mesentery. Quantities of sero-purulent material, with flakes of lymph, were thus brought to the surface and flowed out of the operation wound with the returning fluid. The pelvic cavity was then flushed in a like manner, and finally a rapid washing away of what débris had been deposited about the wound itself followed. The bag was filled and then emptied again and again, until about eight gallons of the decinormal saline solution was used.

Finally, I desire to state that, in spite of the fact that the elevated head and trunk posture should, theoretically, throw additional work upon the heart in these desperate cases, this has not constituted a valid objection to its employment, in my experience. In case the patient fails to respond to the stimulation employed after the operation, however, there would be no objection to placing the bed in the horizontal position, or even elevating the foot of the bed during the first few hours, providing thorough cleansing of the peritoneal cavity had been done. Absorption of the relatively clean saline solution from the diaphragmatic and intestinal areas will do no harm, and may be of service in assisting the stimulation of the patient. A further argument in this connection is found in the fact that the presence of the saline solution in the peritoneal cavity favors a large local leucocytosis, which, according to the experiments of Durham and Issaeff,[1] results in a peritoneal immunity against pathogenic bacteria for a certain length of time. Unless persistent and progressive failure of the circulation is observed in spite of strychnine and caffeine stimulation combined with whiskey and saline enemas, however, it is better to place the patient in the elevated head and trunk posture from the commencement, since, in addition to its principal advantage, this posture secures early cessation of vomiting and the prompt expulsion of flatus.

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[1] Centralblatt für Chirurgie, No. 2, 1900.

DISEASE OF THE THORACIC DIVISION OF THE SYMPATHETIC CHAIN.[2]

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THE physiology, pathology, and symptomatology of the sympathetic nervous system are admittedly still obscure. Undoubtedly some have found herein an inviting field for speculation, and others a not less welcome excuse for hasty and harsh criticism of attempts to elucidate the subject.

For centuries much ingenuity and labor have been spent upon this question by earnest investigators; but the results are so far very meagre indeed. The sum total of facts concerning the sympathetic nervous system that has been admitted into the text-books as permanent scientific acquisition is small. Most of the text-books refer to the sympathetic only incidentally and meagrely. In all, the familiar symptom groups of destruction or irritation of the cervical division of the sympathetic are described, with their bearing on the diagnosis and localization of disease of the nervous system. This last point is, however, often not so fully considered as it deserves to be.

Recently, affection of the abdominal division of the sympathetic chain has frequently been called upon to explain more or less obscure pathological states.

The discussion concerning the rôle that the abdominal sympathetic may play in the causation of Addison's disease, diabetes, colica mucosa, and similar obscure conditions is not yet settled.

Apparently the least is known about the thoracic part of the chain. It is known that from this part the great splanchnic nerve takes its origin, but the exact roots from which this nerve arises have not been definitely ascertained. Some writers (Quain, Gegenbauer) assign the origin to the fourth, fifth, or sixth dorsal, down to the ninth or tenth dorsal; others (Landois) to the sixth cervical down to the fifth dorsal ganglia. Further, it has been proven by experiments that lesion of the great splanchnic nerve may lead to death of the animal, through anæmia of the oblongata; the animal bleeding into its own blood-vessels as it were (Landois).

From a clinical standpoint, the only reference to the thoracic sympathetic to be found in the literature is in the first edition of Oppenheim's text-book, page 814, which reads: "In a very obscure case of abscess formation near the thoracic vertebral column, there was in life a unilateral œdema, which occupied the whole corresponding side."

The writer recently had the opportunity of observing a case, in many respects singular and remarkable, but particularly valuable as a contribution to the subject in question:

Mrs. B——, thirty-seven years old, married, was first seen July 25, 1898. She complained of headache, irregular sleep, pain in the upper part of the thorax of the left side and in the precordial region, and finally of attacks to be described more fully below. Her father died at the age of fifty-two years from Bright's disease; her mother is eighty years old and in good health, excepting occasional attacks of senile bronchitis. The other members of the patient's family, two sisters and two brothers, personally known to the writer, are in good health; all, as well as the patient herself, are somewhat undersized. Concerning the other branches of the patient's family, nothing definite is ascertainable.

Mrs. B—— was of temperate habits, rather reticent and quiet. When six years old, she fell from a second-story window, without apparent immediate or remote consequences. Menstruation began at the age of thirteen and had always been normal. The patient married at the age of twenty-three, against the wishes of her family, a man who shortly afterward began to ill-treat her, and who subsequently developed general paresis. Soon after her marriage, the patient claims to have "gone into a general decline," which the then attending physician called "uterine displacement and anæmia." Rest and treatment were followed by absolute cure after two months, and she remained well until the onset of the present disease, ten days previous to my first examination, *i.e.*, up to July 15, 1898.

The patient claims to have been free from venereal disease; she never had been pregnant; she states further that she was more or less nervous all her life, "as most women are," but emphatically denies ever having had what people call "hysterics." This latter statement is corroborated by the patient's sister.

The present disease developed without attributable cause, out of vague symptoms of general nervousness and irritability. These symptoms were unheeded, until a nocturnal attack frightened the patient and her family. About ten days previous to the date of her first visit, the patient awoke at midnight with a peculiar pain in the left upper extremity. This was soon followed by painful contraction of the muscles of this extremity, and later by contraction of the muscles of the left lower extremity. Then the right lower and finally the right upper extremities became painfully contracted. According to the patient's description, the hands assumed, during the spasm, the position characteristic of tetany.

The attack lasted about from three to six minutes, and terminated in a short laughing-spell; the patient felt exhausted and soon went to sleep again. Altogether three seizures of this type occurred during two weeks. Apparently there was nothing like an aura preceding these attacks. Furthermore the patient complained of headache, but of a different kind from those to which she had been subject during the greater part of her life. The latter headaches were apparently of a migrainous nature, coming once in six weeks, preceded by a general feeling of malaise that enabled the patient to foretell the attack, and most of the time accompanied by nausea and vomiting. These headaches were all over the skull, and of a throbbing character. During the few months preceding the illness which I am describing, this type of headache disappeared, and its place was taken by a more constant feeling of dull ache, with an occasional sharp paræsthesia on the top of the head (clavus—according to description). She has occasionally some paræsthesia of her throat; not distinctly a globus, though. The patient was nervous, depressed, and sleepless. She arose tired and claimed to be practically ailing all day; "if it's not one thing it's another." The appetite was whimsical, and occasionally attacks of uncontrollable vomiting occurred. Every autumn the patient used to cough for about two weeks, and she has a slight cough now. There were no hæmoptyses at any time; the bowels were and had always been regular. Micturition was normal. Menstruation was regular, copious, of three days' duration. There was no leucorrhœa. There were no subjective complaints of vision, although for some time she suspected that her headache might be caused by some ocular defect, and she was fitted with glasses.

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[1] Byron Robinson: Annals of Surgery, vol. xxxi., No. 2, p. 223.

[2] Read before the New York Neurological Society, March 6, 1900.

Examination: The patient is of short stature, but otherwise well-built, without somatic signs of degeneracy. She is well nourished. The skin is of good color and free from scars. The hair is dark, streaked considerably with gray. The teeth are good. The pulse is 72, of normal qualities; respiration, 16; temperature, 98½° F. The tongue is clean, of normal shape and volume. Percussion and auscultation of thoracic organs, as well as percussion and palpation of abdominal and pelvic organs, reveal no noteworthy findings. Examination of urine and sputum is negative. Vision, hearing, smell, and taste are normal. The cranial nerves are normal. Motility and co-ordination of upper and lower extremities are undisturbed. Erb, Chvostek, or Trousseau phenomena could not be elicited. Scattered areas of analgesia and hypalgesia could be made out on the left side of the body, and a few areas of hypalgesia on the right side. Reflexes: chin and tendon reflexes of upper extremities were absent; patellar and Achilles jerks were present and fairly lively; interscapular and upper abdominal absent; lower abdominal and plantar present; pharyngeal reflex diminished; conjunctival and pupillary reflexes present.

The objective findings justified only one diagnosis; that is, hysteria. Accordingly this diagnosis was given to the patient and her family—although with very little satisfaction. It is the conviction of the writer that the simple clinical diagnosis, "hysteria," is often extremely unsatisfactory, as long as an organic point of exit is not detectable or there is not at least a sufficiently evident etiological factor upon which to rest an understanding of the condition. The therapy that the patient was advised to follow was, therefore, symptomatic and general only. She was advised to spend more time out-of-doors, to abstain from stimulants, to have a cold sponge bath daily, to avoid emotional excitement; and finally she was given a prescription for a mixture of bromide and valerian, to be taken internally.

After four weeks the patient returned, reporting slight improvement—in so far as only two other attacks had occurred since the last visit. Still she had many complaints. The search for the etiology was this time as futile as before, and thinking a premature menopause possibly at the bottom of the mischief, the valerian-bromide mixture was replaced by a mixture of bromide and ovarian extract.

On the 23d of September, the patient reported that she had been free from well-defined seizures, but that she was in general worse. Twitching and pain in the whole left side of the body were more or less constant, with considerable headache; sharp pain on the top of the head and over the left eye. This eye and the left side of face were swollen considerably on various occasions. Sleep was disturbed, and she was tired in the morning. She complained of pain around the heart, frequent and severe, and of "fainting-like feelings around the heart," with tingling and formication in the left upper extremity. Objective examination was as above.

Very little change occurred in the patient's condition until April, 1899; that is, nine months after the onset of the disease. She had called at my office from time to time, complaining constantly, and putting stress at one time upon the one and at another time upon several of the above-mentioned symptoms. The chief complaints were headaches, disturbed sleep, attacks of vomiting, pain in cardiac region, and attacks of stiffness in the left upper extremity. A variety of therapeutic procedures in vogue for these troubles were tried, but all in vain.

On April 17, 1899, the writer was summoned to the patient's house. She then was in bed, and stated that she had become very ill during the last few days. She was much prostrated and complained about everything in general, and in particular about considerable weakness, absolute loss of sleep during the last two nights, and very severe pain around the upper left thorax. The appetite and digestion were fair; the bowels moved; she passed urine; she had no cough. Temperature was 99° F.; respiration, 28; pulse allorhythmic (counting in the first sixth of a minute 20, in the second sixth of a minute 14, and in the third sixth 12), averaging about 130 beats in a minute, otherwise of normal qualities. Physical examination was absolutely negative, excepting for the above-mentioned sensory disturbances. The family was told that all this might be but an aggravation of her original disease, although the slight elevation of the temperature, the peculiar behavior of the pulse, and the localized thoracic pain, and particularly the permanence of these symptoms, did not exactly fit into the picture, but were on the other hand so vague as not to permit of more definite interpretation. She was given some indifferent acid mixture, and assured that she would soon feel better, and she was encouraged to get out of bed soon. Thirty-six hours after that, it became necessary to see the patient at midnight, because she was reported to have become very much worse. She then stated that she did not have a minute's sleep during the preceding four days, and that she was suffering indescribable agony. Temperature was 103° F.; pulse, 120, of good qualities; respiration, 32. The tongue was slightly coated; the bowels were constipated. Urine was passed, and a specimen examined showed an excess of phosphates, but was otherwise negative. Percussion and auscultation of thoracic organs were negative; the heart, however, was pushed upward, and at the base a loud systolic murmur was heard. Astonished at this finding, considerable attention was paid to it, and its existence established beyond a doubt. It was thought that the cardiac murmur was in all probability due to the mechanical displacement of the heart by the distended stomach, but nevertheless the fever and the murmur seemed to call for salicylic acid; so this was prescribed. Further physical examination revealed considerable gaseous distention of the stomach.

Of the reflexes present, the patellar reflexes were somewhat weaker than on former examinations. Sensibility was as above. The patient evinced considerable weakness in standing or walking, but there was no actual motor paralysis.

To the family the findings of this evening were reported, and the view expressed that a definite diagnosis could not be made, and that all these symptoms occasionally occur in the course of a severe hysteria. The next morning the patient looked very much brighter and reported that, "After the first powder" (gr. x. of salicylate of sodium) "I slept all night." Thorough physical examination was absolutely negative. No trace of a heart murmur was audible; the bowels moved; the pains subsided. She was left in charge of the nurse and advised to continue taking her medicine. By the evening the clinical picture had undergone a most remarkable transformation. The patient was in a state of acute collapse. She was pale, covered with perspiration, the features were pinched, and in an aphonic voice she said, "I am very much better." The head was drawn to the left side; considerable tachypnœa, enormous tympanitic distention of the abdomen, and weakness of lower extremities were present. Temperature, 100° F.; pulse, 120. The nurse reported that the patient had voided involuntarily but small quantities of dark, badly smelling urine, and that she had vomited a few times some fluid intermixed with small black particles, not of fecal odor. The nurse was certain that considerable flatus had passed. A thorough examination could not be made, and the patient was given some cardiac stimulants. This remarkable change could not plausibly be explained to the family as being a continuation of the original disorder, as it was very difficult to familiarize them with the differential details between a genuine and a hysterical or dynamic ileus.

The necessity of getting surgical advice was considered, but before the final decision was reached the patient died.

Dr. Van Gieson, to whom I am indebted for the following notes of the post-mortem examination, was asked to perform the autopsy. I said to him that clinically the case presented the picture of a grave hysteria, and that the autopsy might reveal a severe organic lesion of the sympathetic chain, on account of the severity and fatality of the case.

Autopsy: Body of a woman, apparently thirty to thirty-three years old. About one-third of the hair over the frontal region had turned gray. The remainder of the black hair was only sparsely streaked with gray. External inspection of the body disclosed no abnormalities. The body was fairly well nourished, even plump. The diaphragm on the right side stands at the fifth rib, on the left side at the fourth intercostal space. The pleural cavities contain no fluid. The pericardial sac is normal. It contains about two ounces of clear limpid fluid. The heart is normal. The muscle is firm and the valves are normal. The left lung has on its posterior surface near the apex a thin pellicle of fresh fibrin about 3 cm. long and 1 to 1½ cm. wide. The substance of the lung is normal, excepting a slight degree of œdema and a moderate amount of emphysema. The right lung is in a similar condition. The pellicle of fresh fibrin on the posterior surface near the apex is a trifle less extensive. The bronchial glands and bronchi are normal, likewise the arch of the aorta, thoracic aorta, and œsophagus.

The four upper thoracic sympathetic ganglia of the left side and the intervening trunk are buried in a mass of purulent material from beneath the parietal pleura. The right inferior cervical ganglion is also surrounded by purulent material. The details of this involvement of the sympathetic are as follows: On the left side, the subpleural purulent mass is centred about the second intercostal space and its posterior terminus. From this point the purulent mass extends for a slight distance upward, for a greater distance downward, and also laterally along the second intercostal space (see diagram). In its lateral course the pus collection occupies about the posterior quarter of the second intercostal space, burrowing under the parietal pleura, and elevating it above the surface of the ribs, as a tense bulging, yellowish, opalescent membrane, of about the size of a pea. When the elevated pleura over the second space was cut, thick yellowish-white pus flowed out. The pus collection extends downward to the lower border of the fourth rib. It does not, however, in the downward extension, reach out under the pleura, along the ribs or intercostal spaces, but is confined to the left lateral surfaces of the vertebral bodies. The inferior tongue of the pus collection lies in the angle made by the junction of the ribs with the vertebral column, and partially fills up this space. The pus lies beneath the pleura and has stripped the membranes up from the bodies of the vertebræ to a point above one-quarter of the circumference of the bodies. The upper tongue of the pus collection occupies the same position with respect to the vertebral bodies and extends to the upper margin of the first rib. The depth of this abscess is on the average about ½ cm. There were no evidences of a recent reactive inflammation in the neighborhood. Thus it can be seen that a portion of the left thoracic sympathetic chain is buried in this flattened, linear, subpleural abscess. Indeed it seemed impossible to dissect out the sympathetic chain, as it passed through the abscess. Above the abscess, the inferior cervical and the first thoracic ganglion were free and distinct; below the pus mass, the fourth thoracic node, and the remainder of the chain down to the great splanchnic cord and semilunar ganglion, were free and normal; but the intervening segment was left hidden in the pus collection and thickened pleura, and hardened *en masse*. On the right side the thoracic chains and its nodes seemed from macroscopic inspection to be perfectly normal, yet when the inferior cervical was cut across a drop of pus oozed out from the region immediately surrounding the capsule. Apparently this thin layer of pus, enveloping the capsule of the right stellate ganglion, had ploughed its way downward, along the cervical cord, from some source in the neck, for the pus showed no track of communication with the abscess of the opposite side, and section of the cord above the inferior cervical ganglion still exuded scanty traces of pus. Unfortunately, just as we were about to trace out the cervical sympathetic, to determine the source and extension of this thin layer of pus enveloping the inferior cervical node, we were forbidden to continue the examination. The autopsy occurred at a private house, and the examination of the sympathetic was deferred until the organs could be studied first. The abdominal viscera are in general normal, and while attentively examined do not need individualized description for each organ. The general peritoneum is smooth, lustrous, and perfectly

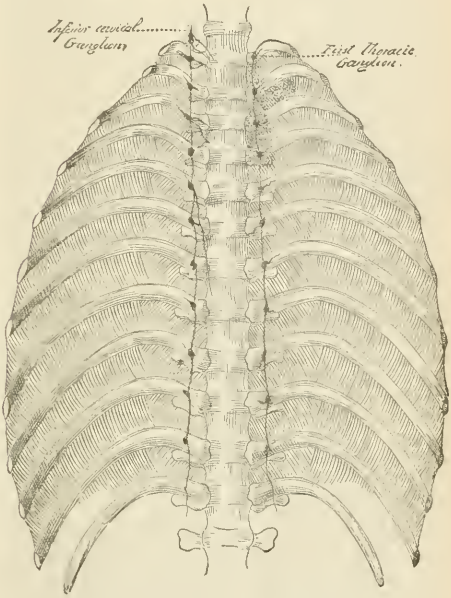

FIG. 1.—Interior of Thoracic Cavity, Showing Involvement of Sympathetic by Collections of Pus in Inferior Cervical and Upper Thoracic Ganglia.

normal. There are positively no naked-eye evidences of peritonitis, neither is there any collection of fluid in the pelvic or abdominal cavities.

The hollow viscera with smooth muscle walls, such as the stomach, intestine, and bladder, uniformly exhibit a long, flabby condition and are seemingly distended a moderate degree, as, for instance, especially the stomach and bladder. The liver, spleen, suprarenal capsules, pancreas, mesenteric lymph nodes, uterus, ovaries, and vagina seemed normal. The diaphragm has its natural arch, and the large abdominal vessels are normal. Volvulus was looked for but not found. The lumbar sympathetic cord was examined in detail on either side, and found normal. The left aortico-renal plexus was also partially dissected out on the right side, as well as a sympathetic trunk entering the left suprarenal capsule.

The semilunar ganglia are normal except that the one on the right side has attached to the middle of its upper surface a small, yellowish, cheesy nodule, about 2 mm. in diameter. Just above, and to the right of the right external iliac artery, apparently one of the deep inguinal lymph nodes is swollen and cheesy. Further examination was not permitted.

Anatomical diagnosis: Subpleural abscess involving the left second and third thoracic sympathetic ganglia and thin capsule of pus enveloping the left inferior cervical ganglion; localized apical acute fibrinous pleurisy; pulmonary œdema. The thin pellicle of fibrinous exudate under the apex of each lung seems plainly secondary to the contact of those surfaces to the pus collections on either side involving the sympathetic.

Microscopical examination: The right inferior cervical ganglion is surrounded by a zone of leucocytes about 1–2 mm. thick, which shows very plainly to the naked eye. Many of these leucocytes show various stages of degeneration and disintegration, and throughout the zone are great numbers of cocci of two kinds: one, the predominant form, apparently staphylococci, is grouped in clusters, while the other, seemingly streptococci, are arranged in chains or linear series. A number of bacilli are also present, resembling morphologically the colon bacillus. This zone of pus cells runs out in thin strings or stouter cords and gets into the fat tissues surrounding the ganglion. Bundles of nerve fibres, branches of the ganglion, are also surrounded by envelopes of pus cells, extending often some little distance from the ganglion itself. Thus the zone of pus cells extends out among the branches of the node, and along the main trunk of the cervical chain. The substance of the ganglia, however, is not infiltrated by the pus cells or bacteria, nor have they even penetrated into the outer layer of the capsule. The ganglion cells are not destroyed or diminished in number; on the other hand, they are normal as to arrangement and distribution. The internal structure of many of these cells, however, is abnormal. These cells, composing probably fifteen to twenty per cent. of the entire number, seem plainly degenerated; their central portions are bereft of granules, and remain clear after staining with Nissl's reagent, although the periphery still retains a number of plaques, one or two rows in thickness. The nucleus of such cells has an eccentric position, although its internal structure appears unchanged. The pigment contents of the cells do not seem abnormal in amount. The semilunar ganglia and second and third right lumbar nodes have also been examined, with the result of disclosing only a very few cells indeed of the degenerated variety mentioned above. Not over two or three can be found in a section.

We have, on the one hand, an array of symptoms which individually and collectively are often components of the clinical picture, hysteria. The general morale, the headache, the disturbed sleep, the vomiting, precordial pain, the hemianæsthesia, the contractures, the fugitive œdema, and finally the tympanites and pseudo-ileus, are known to be occasionally constituents of hysteria. The occurrence of hyperpyrexia and a fatal issue in pure and genuine hysteria is debatable. There are just as many authoritative voices in favor as against the first, and concerning the latter it may be stated that fatal hysteria is not altogether an unheard-of thing. It is true that I have been able to collect only about fourteen cases of fatal hysteria from the literature, and that none stood a thorough critical test. However, I have in my own experience seen two cases of death in hysterical patients under similar conditions to the above-described case. At any rate it seems to me that hysteria was the only possible clinical diagnosis that could be made of this case.

On the other hand, the anatomical findings are at first sight rather bewildering. Unfortunately, the anatomical examination could not be made so exhaustive and thorough as the importance of the case seems to have called for. But it is safe to assume that neither the brain nor the cord could very well be called upon to explain our clinical picture. To me at least it is unknown that a lesion of brain or cord could produce this kaleidoscopic symptomatology, except a severe injury to the cord. Still even so, the symptoms would naturally have been more stable, and finally in the given case such a supposition is entirely out of the question.

We have then practically a cold abscess of the rib, which accidentally involved the thoracic division of the left sympathetic, as an anatomical basis for the described symptoms, and have to answer, with these facts at hand, the following questions:

(1) Are the last scenes of the clinical picture necessarily a continuation of the first act, or mere expressions of the accidental localization of the given anatomical lesion, and in no connection with the original symptoms for which the patient sought relief?

(2) Supposing the above clinical picture to be a continuous one, is there any causal relationship between the clinical symptoms and the gross anatomical findings?

In the present state of our knowledge of the anatomy and pathogenesis of hysteria, and the anatomy and physiology of the sympathetic, it would seem very dangerous to attempt to answer these questions without thorough and extensive study, which, however, must be postponed for another occasion. For the present, it is best to accept the verdict of the Roman judges, "n. l.," *non liquet.*

Nephritis in Chickenpox.—Hans Haenel says that nephritis as a complication of varicella is not so very rare. Henoch was the first to observe these cases. The affection is usually of a mild character, very seldom fatal. It seems that the complication of varicella with nephritis depends greatly on the character of certain epidemics, as the author observed six cases of varicella, three of which were complicated with renal disease. One of the cases was of unusual character, and is therefore worth mentioning. A child one year old, recovering from an attack of pertussis and broncho-pneumonia, was affected with high fever, which lasted for eight days. The physical examination was negative. On the second day the examination of the urine showed quite an amount of albumin, hyalin and granular casts, and red blood corpuscles. On the tenth day there was a new rise of temperature, which was followed by a scanty but characteristic varicella eruption. The author is of the opinion that the primary nephritis was one of the prodromal symptoms and is inclined to think that the abortive eruption was due to the early elimination of the poison through the kidneys.—*Centralblatt für innere Medicin*, May 19, 1900.

Some Points in Connection with the Etiology and Treatment of Diabetes Mellitus.—Alexander W. Beck says that while nothing is as yet definitely known, it seems highly probable that in many cases diabetes is due to bacterial influence. This is based on: (1) The non-existence of uniform lesions after death; (2) the occurrence of the disease between certain ages; (3) the occurrence of the disease in more than one member of the family at the same time; (4) the occurrence of the disease in certain races, and its endemic form in certain countries. Nine cases are cited as treated upon the theory of bacterial origin. The bromide of gold and arsenic is well thought of, but the chloride of gold and sodium proved a pronounced failure.—*International Medical Magazine*, May, 1900.

Unusual Condition of the Skin and Kidneys following an Operation for Appendicitis.—W. G. Taylor reports a case in which the removal of the diseased appendix was followed by severe pain in the incision. Two subsequent operations by removing an adhesion attached to the under surface of the scar involving the omentum relieved the pain, but nutritional disturbances followed, and finally the kidneys, skin, and bowels showed evidence of disturbed function. The specific gravity of the urine went as high as 1.100; this the author considered due to glycogen. It is probable that as a result of shock to the organic nervous system the digestive tract suffered first, and no doubt primarily the liver. The stomach undertook to eliminate the imperfectly absorbed food stuffs, causing anorexia and irritability. Amenorrhœa and obstinate constipation were additional means of retention, but finally skin, kidneys, and bowels came to the rescue, and the patient recovered, although she is not in perfect health.—*Buffalo Medical Journal*, May, 1900.

Rupture of the Œsophagus Caused by Vomiting.—Bowles and G. R. Turner recently reported to the Royal Medical and Chirurgical Society the case of a woman aged sixty-two, who after purging herself with aloes and rhubarb became sick on taking some milk and then took a tumblerful of salt and water to "clear the stomach." The vomiting caused by the latter was followed by epigastric pain and collapse. There were retraction and some rigidity of the upper abdomen, vomiting having ceased on the occurrence of the collapse. She was partially quieted by morphine, but as she threw off the effects of the opiate her distress and pain returned and emphysema of the neck set in. Death came twenty-two hours after the attack. Autopsy showed, one and one-half inches above the diaphragm, a longitudinal rupture of the œsophagus five-eighths of an inch long, with thin edges and no peeling of the mucous membrane. The authors analyzed the literature of the subject, having been able to find on record the histories of some sixteen similar cases.—*Journal of Laryngology*, May, 1900.

Some Illustrations of the Clinical Significance and Importance of Decubitus.—J. O. Affleck describes the various postures characteristic of diseases of the respiratory, circulatory, alimentary, and nervous systems, a study of decubitus being most valuable to diagnosis. Even in fevers, he says, it is a good sign to find the patient lying on his side, particularly if that attitude is assumed spontaneously, testifying as it does to a fair measure of muscular strength; while on the contrary, when the patient lies on his back and tends to sink down low in the bed, it is regarded as an evidence of great debility, and often of evil omen. One serious accompaniment and result of this latter posture is the condition known as hypostatic congestion of the lungs. Taking the hint from this, it is often excellent practice in attending a case of long-lasting fever or debilitating disease, to have the patient occasionally moved round on one or the other side, so as to prevent blood stasis in the posterior parts of the lungs.—*The Scottish Medical and Surgical Journal*, March, 1900.

Comparative Anatomy of the Pharynx in Vertebrates.—C. Chauveau studies the development of the pharynx among branchial vertebrates, cyclostomes, elasmobranchiates, teleosteans, batrachians, reptiles, crocodiles, birds, and mammals. His study is of special interest as showing that the human embryo in its various stages of development successively presents practically all the varieties of pharynx enumerated as occurring in the various lower orders above mentioned.—*Annales des Maladies de l'Oreille, etc.*, April, 1900.

Case of a Peculiar Form of Dwarfed Growth.—John Thompson reports the case of a little girl aged four years, whose height was only twenty-eight and one-half inches, her weight twenty pounds and seven ounces. The body was well nourished and fairly normal, and the child was in good proportion. Intelligence was good. The administration of thyrocol caused slightly increased growth for ten months, after which it ceased to have effect. The child suffered from seizures the nature of which was obscure, but which finally proved fatal. At the autopsy the only abnormal conditions discoverable were great congestion of the brain, and the persistence of a greatly enlarged but otherwise healthy thymus gland.—*The Scottish Medical and Surgical Journal*, March, 1900.

Salol in the Treatment of Smallpox.—Charles Begg found that the administration of this drug kept the patient free from all sense of irritation without the slightest desire to scratch. This prevented exhaustion from sleepless nights and drain to the system from weeping vesicles and pustules torn by scratching, and avoided danger to the eyes from soiled fingers. Secondly, all the vesicles terminated as vesicles, and the stage of maturation was absent except in a few isolated vesicles. The author has not observed any evil effects from a daily dose of ʒ i. continued for long periods, and the slight mental depression sometimes caused at first quickly passes off with discontinuance of the drug.—*The Scottish Medical and Surgical Journal*, March, 1900.

Disturbances of the Sympathetic System in Lobar Pneumonia.—J. Eason, out of fifty-four cases of lobar pneumonia, found twenty-four patients with unequal pupils, the inequality being due to unusual dilatation of one pupil. Twenty-one of these had the large pupil on the side on which the signs of pneumonia were detected. The author suggests that the condition of the pupils may be explained by the irritation which the pneumonia causes to that part of the sympathetic system which is known to act as the dilator of the pupil. These fibres are said to pass from the first, second, and third dorsal nerves to the inferior cervical ganglion, and in their course must be intimately related to the lung at its uppermost part. This would explain why apical pneumonias appear specially liable to cause inequality of the pupils. There are other indications that the sympathetic in this region is irritated in pneumonia, as the flushing and pallor of the face, and in some cases a distinct though not very great protrusion of the eyeball.—*The Scottish Medical and Surgical Journal*, April, 1900.

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THE ANTI-VIVISECTION BILL.

THE question as to the need or morality of that form of investigation known as vivisection has been the cause of more acrimonious discussion during the past twenty years in Great Britain, and within the past four or five years in this country, than of any other subject connected with experimental research. The men who experimented on animals and those who agreed with these methods of gaining knowledge have been characterized as inhuman, "without bowels of mercy," and maligned and slandered in every possible way. In Great Britain the anti-vivisectionists have been so far successful as to obtain the passing of an act restricting the practice of vivisection, which has, however, by no means had the effect of quenching the ardor of workers in this branch of medical science, although undoubtedly it has caused delay, annoyance, and loss of time.

In the United States during the past three years the opponents of vivisection have been busy, and have, as is well known, introduced into Congress, from the District of Columbia, a bill during that period under the sponsorship of Senator Gallinger, with the object of placing obstacles in the way of experimental animal research. However, scientific men in this country, judging that they had been supine in the matter long enough, and fearing from the favorable consideration accorded to the bill by the committee on the District of Columbia, that it might be allowed to slip through without the true bearings of the question being clearly understood, prevailed upon the committee to give to advocates and opponents of the "anti-vivisection" bill a public hearing.

At this meeting, which took place on February 21st, friends and enemies of the bill presented their views, and speaking without prejudice it may be asserted that the vivisectionists had distinctly the best of the argument. Of the statements made, those of Professor Welch, of Professor Bowditch, and of Dr. D. E. Salmon were perhaps the most instructive. Dr. Welch defined the situation and the attitude of the majority of scientific men in regard to it accurately when he said: "However much the advocates of the bill may assert that its enactment will not interfere with the proper uses of experimentation upon animals, and is designed only to check abuses, it is to be noted that the main part of their argument is an attack upon the practically unanimous opinion of well-informed scientific and medical men that experimentation upon animals is essential to the advancement of physiology and medicine, and has conferred inestimable benefits upon mankind. Nor is it surprising that anti-vivisectionists should cling tenaciously to this position, indefensible as it has become, for it is apparent that those who are convinced of the great value of experiments upon animals to science and humanity will hesitate long before approving any legislation likely to check the progress of scientific and practical medicine." And, again, he points out that there is no need for additional legislation restricting the practice of animal experimentation in the District of Columbia. The existing law permits only "properly conducted scientific experiments or investigations, which experiments shall be performed only under the authority of the faculty of some regularly incorporated medical college, university, or scientific society." The result of this discussion was that on March 9th an amended bill was printed for the committee, the only important changes in which are that cold-blooded animals are excluded, two classes of special certificates are omitted, and a freer hand is given in the selection of anæsthetics. Some of the restrictions are made more severe, and the most obnoxious features, in the eyes of its opponents, are unaltered.

President Eliot, of Harvard University, writes on the new bill and on the subject of the restriction of vivisection generally as follows: "This bill is a slight improvement on its predecessor, but is still very objectionable. I beg leave to state very briefly the objections to all such legislation: (1) To interfere with or retard the progress of medical discovery is an inhuman thing. Within fifteen years medical research has made rapid progress, almost exclusively through the use of the lower animals, and what such research has done for the diagnosis and treatment of diphtheria it can probably do in time for tuberculosis, erysipelas, cerebro-spinal meningitis, and cancer, to name only four horrible scourges of mankind which are known to be of germ origin. (2) The human race makes use of animals without the smallest compunction as articles of food and as laborers. It kills them, confines them, gelds them, and interferes in all manner of ways with their natural lives. The liberty we take with the animal creation in using utterly insignificant members of them for scientific researches is infinitesimal compared with the other liberties taken by us or the people who cry out against the infliction of any suffering on animals on behalf of mankind. It is of course possible to legislate against an improper use of vivisection. For instance, it should not be allowed in secondary schools or before college classes for purposes of demonstration only; but any attempt to interfere with the necessary processes of medical investigation is, in my judgment, in the highest degree inexpedient and is fundamentally inhuman." In respect to Senate Bill 34 its most serious defect is that it delegates to men who are ignorant of medicine and science authority to arbitrarily dictate concerning these matters. It places in the hands of two laymen who constitute the majority of the District commissioners the duty of deciding whether certain experiments upon animals shall be undertaken in the District of Columbia. There are other clauses of the bill which are unnecessary, but the one just referred to must strike any unprejudiced individual as absurd.

In regard to the stand now being made against vivisection, the fact should be remembered that all scientific progress has ever been obtained in the teeth of bitter and unreasoning opposition, and it could not be expected that a method which so powerfully appeals to the popular imagination and lends itself so easily to the creation of distorted views should escape the common fate. The public at large have in the nature of things no accurate knowledge of the manner in which experiments on animals are carried out, and consequently the imagination runs riot and pictures to itself the scientific laboratory as the scene of the most grewsome happenings. The belief is widespread—and this fallacy is unfortunately fostered and encouraged by many educated but prejudiced persons—that in in all, or at any rate the majority of instances in which animals are experimented upon torture is inflicted upon them. Any one who is intimately conversant with the subject knows well that such is not the case, and that while there is no doubt that vivisection has at times been abused, and perhaps on occasions is abused now, in the United States it is invariably conducted upon as humane lines as possible. Of course no scientific man would contend that even under existing conditions and as aided by anæsthetics pain is not sometimes inflicted upon animals undergoing operation for experimental purposes. But attention may be drawn to these facts: First, that no animal feels pain as man does—the higher the organization the greater the capacity for feeling pain; and secondly, that it is only pain given needlessly and uselessly that is cruel. Pain given for beneficent reasons cannot be termed cruelty. There is yet another point in the plea for vivisection which does not appear to be appreciated at its full worth by the opponents of the method; that is, the benefits which have accrued to the human race from experimental animal research. It would not be too much to say that almost every discovery of permanent value in medicine and surgery had its origin in experimental investigation. Charles Darwin some years ago made use of these words: "I am fully convinced that physiology can progress only by the aid of experiments on living animals. I cannot think of any one step which has been made in physiology without that aid." There has been no proof that vivisection has been abused in this country, and therefore it would seem that more restrictive vivisection regulations than at present exist would be both unnecessary and tiresome. Sir Michael Foster, in a letter written to Professor Hodge, of Clark University, in 1890, expresses himself as follows: "I have always said, and always shall say, that the necessity of a restrictive law has never been shown. The English commission failed to demonstrate any abuse such as could justify the measures adopted, and from what I know of America and Americans I am confident that no such laws are needed with you. Indeed my objections to the act as a politician are quite as strong as my objections as a physiologist; the act is stamped with that mark of bad statesmanship, meddlesomeness." This will probably be the opinion of the majority of medical and scientific men.

OUR REPORT OF THE AMERICAN MEDICAL ASSOCIATION.

We take a commendable pride in referring our readers to our exhaustive report of the meeting of the American Medical Association. Although we reported the proceedings in full up to the date of going to press, there was not an hour's delay in the delivery of the journal. Aside from the accuracy of the report, the time of its presentation is a matter for gratification.

Without attempting to make any invidious comparisons, we feel warranted in stating that the Medical Record stands alone in this respect, so far as the timely publication of the proceedings is concerned. We regret to notice that several of our contemporaries that pride themselves on being rivals in this method of journalism have been quite behindhand in this respect. One, from which we might naturally expect the most, as being the official organ of the association, has no report at all for the last week, save that of the president's address, which, of course, was furnished in advance. Another journal, in order to make a fuller report, delayed its edition, which, of course, is not prompt journalism as understood in this age. Still another journal had no mention at all. We say this much only in plea for modern, progressive journalism based on fair business principles, which consists in giving the most news up to the latest date of going to press, and not delaying the publication for mere convenience of what is mistakenly called generous rivalry in journalistic enterprise.

NEW THEORIES OF PLAGUE PROPAGATION.

The apparently mysterious manner in which the bubonic plague spreads itself to distant and widely separated localities gives becoming interest to any new theories explaining such methods of propagation.

When it is considered that much of what is now known concerning the character of the scourge has been learned since 1894, when the specific bacillus was discovered by Kitasato, the profession can congratulate itself that very much has been accomplished in solving many of the apparent problems which attached themselves to propagating qualities of this direful scourge. The isolation of the plague microbe was the first step in this direction. Then followed the various experiments by numerous observers, in connection with inoculation tests and the more minute and careful examination of autopsical lesions as bearing upon their relations with symptoms and the way in which the disease spreads in accordance with the modern views of pathology.

So far it may be definitely stated that the plague bacillus is the specific cause of the disease. This has been abundantly proved by the usual bacteriological methods of isolation of the micro-organism, its cultivation, its inoculation into animals, the transmission of the bacillus through their bodies, and its final recovery from the dead victims. The latest theories of the propagation of the disease are quite exhaustively presented in the work of Dr. José Verdes Montenegro,[1] of Madrid, who in connection with other important studies of the disease has summarized his experience with the Oporto epidemic.

The rat is acknowledged to be a chief factor in the dissemination of the disease, as this animal is peculiarly liable to infection through the intestinal canal and is notoriously migratory in his habits. Montenegro asserts that the plague is simply a disease of rats which infects man. According to the observations of Simon, the epidemic among rats follows a course analogous to that in man. After a period during which the cases are not very frequent the plague becomes suddenly very severe with a consequently increased mortality. Thus it happens that before the disease attacks man large numbers of dead rodents are found in the houses and streets of a threatened district. This was the case in Mandvi, where the street arabs amused themselves by using the dead animals as missiles in play.

Curiously enough Simon has discovered that preceding the rat in initiative causative influences comes the rat flea, which appears to have the real credit of starting the humble bacillus in its ambitious tendencies for better company. Simon says that a healthy rat has very few fleas on it, but the sick animal becomes very soon covered with them. The insects become gorged with bacilli and transfer the disease not only from one rat to another, but also to man.

While this very ingenious theory might explain quite satisfactorily why some sporadic cases appear in widely separated localities, it does not seem capable of accounting for the actual explosion of an epidemic which is evidently due to the varied conditions of human infection. It must be admitted with all our recent knowledge on the subject of propagation of the disease gained by those who have had large experience with the plague, that we have not yet arrived at safe or definite conclusions upon the subject. Whether or not the disease is contagious or infectious, whether or not it depends upon soil or house contamination, we certainly know one thing—that an epidemic when once started burns like a devouring fire madly reaching for available fuel. The epidemic influence, whatever it may be, gives the virulence of the disease a new force and a new purpose. If we rule out the latter condition and confine ourselves to the study of isolated cases, the conclusion seems almost irresistible that the real danger of directly communicating the disease from person to person is very much exaggerated.

It does not appear to be distinctly contagious in the sense in which that term is now used. There is great probability, however, that it is markedly infectious under certain circumstances of careless contact. This is most frequently manifest in cases of autopsy in which the operator becomes infected through accidental wounds coming in contact with the blood and secretions of the corpse. Two of Kitasato's assistants acquired plague that way. The experiences in the Vienna laboratory, still fresh in the minds of medical men, were on parallel lines. It is quite assuring to know, however, that physicians, nurses, and undertakers who come most in contact with plague cases are seldom stricken when proper aseptic precautions are taken. The danger appears more in the direction of actual contact, actual and direct transmission of virus, than by any other means. But a most ready means of transmission of the disease is by house infection, which by many high authorities is considered to be the underlying and controlling factor in all widespreading epidemics.

Regarding human infection the same laws govern as in similar communicable diseases. With plague the most direct avenue of infection appears to be by inoculation or by the transference of the germ to the nasopharyngeal mucus. Next in order come wound infection, contact with articles of soiled clothing, utensils of sick-room, sputum or dejections generally, and, last and perhaps least of all, constantly breathing the air of the sick-chamber. It is by no means proven that the intestine can be infected as in typhoid, as numerous experiments on animals have proved the negative side of this question.

News of the Week.

Sir John William Moore.—Among the recipients of knighthood conferred in honor of Queen Victoria's birthday is Dr. John William Moore, president of the Royal College of Physicians of Ireland, and editor of the *Dublin Journal of Medical Science.* Her Majesty's advisers might have searched the United Kingdom over without finding among the members of the medical profession one more worthy of this honor.

Dr. Pilcher a Doctor of Laws.—Among the June honors from the colleges may be especially noted the degree of LL.D. conferred by Dickinson College upon Dr. Lewis Stephen Pilcher, of New York, the editor of the *Annals of Surgery.* Such an honor to a distinguished American surgeon is particularly appropriate upon the part of an institution of which Benjamin Rush was one of the founders and for many years an active trustee.

Thirteenth International Medical Congress.—Dr. Henry Barton Jacobs, secretary of the American National Committee, writes that, according to instructions from Dr. A. Chauffard, secretary-general of the Thirteenth International Medical Congress, no subscriptions to the congress will be received after the 15th of July, and the name of no subscriber will appear in the official programme whose subscription is not received before the 15th of June. The publications of the Congress will consist of seventeen volumes, one of which will be sent gratuitously to each subscriber; that is, the volume containing the papers of the section under which he has inscribed himself. The other sixteen volumes may be purchased at a price of 4 francs per volume, or 45 francs for the series.

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[1] "Bubonic Plague: Its Course, Symptoms and Means of Prevention and Treatment," by Dr. José Verdes Montenegro, Ex-interne Central University of Medicine and Professor at Municipal Micrographical Laboratory, Madrid. Translated by W. Munro, M.D., Medical Officer St. Kitts, W. I. New York: William Wood and Company. 1900.

Dr. John V. Shoemaker, surgeon-general of the Pennsylvania National Guard, and acting president of the trustees of the Medico-Chirurgical College of Philadelphia, has been appointed a director in the Department of Charities and Correction of Philadelphia.

The Lucien Moss Home for Incurables of the Jewish Hospital, at Philadelphia, was formally dedicated on June 10th. The building, which cost $50,000, is an exceedingly fine fire-proof structure. It is forty-eight by one hundred and thirty-four feet in size, and constructed of stone, brick, and terra-cotta, with a roof of slate.

University of Pennsylvania, Medical Department.—Dr. J. William White has been elected Rhea Barton professor of surgery and Dr. Edward Martin and Charles H. Frazier clinical professors of surgery. Dr. Richard M. Pearce has been elected demonstrator of pathology, and Drs. William F. Hendrickson and Frederick H. Howard assistant demonstrators of pathology.

Tuberculosis Declared Infectious.—The board of health of Trenton, N. J., has placed pulmonary tuberculosis on the list of infectious diseases which must be reported by the physician in charge. The latter is allowed thirty days in which to make this report, failing in which he is liable to fine or imprisonment. When reporting existing or suspected cases the physician must forward sputum in receptacles which are to be furnished by the board of health, in order that in case there is any doubt cultures can be made. Hospitals are not exempted from the general provisions. After the death of a tuberculous patient the bedding, clothing, and other articles which may have become infected must, if possible, be destroyed by fire.

The International Congress of Obstetrics and Gynæcology is unfortunate. The third congress, held last summer in Amsterdam, was boycotted by German gynæcologists who had taken umbrage at some action of the estimable Dutch gentleman who presided over the deliberations of the assembly. The fourth congress, it has been announced, will be held in London in 1902, under the presidency of Professor Simpson, of Edinburgh, and now we learn from *The Hospital* that the past and present teachers of gynæcology and obstetrics in the metropolitan medical schools now practising in London have decided with quite an interesting unanimity to boycott this congress. "This they do in sorrow, as a protest, not against the distinguished professor, but against the manner and source of the invitation. . . . That an international congress should be held in London and should be 'bossed' by the non-elect was too much to be borne." In view of the present disjointed condition of the medical profession, our contemporary remarks, "it is somewhat instructive to note the sort of thing which is capable of producing an absolutely unanimous action in any group among its members, an action so unanimous in this case that the letter in which the boycott was announced was, we believe, signed by every member of the set."

A Study of Alcoholism in Germany.—The Prussian minister of education, Dr. Studt, has recently ordered the government bureau of statistics to collect material regarding the effects upon the nation of the abuse of alcoholic beverages.

Smallpox is reported from several places in Massachusetts, near Westport and New Bedford. The board of health of the latter has ordered all the local mill managers to exercise caution in giving employment to help from Fall River and Westport.

A Temperance Congress.—The World's Temperance Congress has been in session in London this week under the presidency of the Archbishop of Canterbury. The archbishop delivered an address at the opening of the congress on Monday, and on Thursday entertained the members of the Congress at a garden party at Lambeth Palace. The lord mayor, A. J. Newton, gave a reception to the delegates on Friday. A leading feature of the programme was a grand cosmopolitan temperance meeting, over which the Earl of Carlisle presided. Many Americans took part in the deliberations and discussions of the congress.

The Philippine Association of Acting Assistant Surgeons, U.S.A.—The first annual meeting and banquet of this association was held at the Paris Café, Manila, on May 1st. The toastmaster was Dr. Harry Morell. This association was formed on April 28th on board the United States steamer *Grant*, on which seventeen of the members of the society came over to the Philippines to administer relief to the sick and wounded soldiers. The following were elected officers of the association: *President*, Dr. H. W. Beal; *Vice-President*, Dr. H. Morell; *Corresponding Secretary*, Dr. R. M. Inglish; *Recorder*, Dr. H. M. Stromberger. *Members*—Drs. F. M. Baker, L. P. Bell, H. P. Belt, C. R. Byars, J. A. Collie, C. L. Hodgkins, L. P. Howell, G. L. Marcion, J. N. Merreck, J. L. Norris, C. R. Ohliger, J. J. Reilly, E. R. Rockhill, W. H. Spiller, S. A. Springwater, R. M. Thornburgh, E. M. Trook, and C. E. Ward. It is the intention of the association to enroll as members all the acting assistant surgeons in the Philippine Islands and hold a meeting and banquet on Dewey Day every year in the future.

An Incident of the Tuberculosis Congress.—The following amusing tale regarding the congress for the study of tuberculosis, held recently in Naples, is related in *The Practitioner*. The members of the congress "were expected to wear a badge, besides carrying a little token showing them to be entitled to all the privileges of membership. Both the badge and the token were described as works of art which members would be proud to display. But nothing seems to have been said as to any official costume. The dress-coat is recognized in Italy as a kind of ceremonial vestment which must be worn on solemn occasions. It may easily be imagined, therefore, that when a considerable number of foreign members presented themselves without having on the regulation garment, the native mind suffered a serious shock. The 'undressed' strangers were refused admission, and when they attempted to assert what they considered their rights, they were promptly ejected by the arm of the civil power in the form of policemen. So hot was the fray that the police called firemen as auxiliaries! Thereupon the excluded ones retired to a neighboring hostelry bearing the suggestive name of Gambrinus; here, under the inspiration of the beery *genus loci*, they drew up a formal protest against the injustice and indignity to which they had been subjected."

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending June 9, 1900. June 2d.—Passed Assistant Surgeon A. M. D. McCormick detached from the *Montgomery* and ordered to the *Chicago*. Assistant Surgeon J. R. Whiting detached from the *Chicago* and ordered to the *Montgomery*. June 6th.—Passed Assistant Surgeon W. C. Braisted ordered to the *Massachusetts* immediately. Passed Assistant Surgeon L. L. von Wedekind detached from the *Richmond* and ordered to the *Indiana* immediately. Pharmacist S. W. Douglass ordered to additional duty on the *Massasoit*.

The American Electro-Therapeutic Association.—The tenth annual meeting of this society will be held at the Academy of Medicine in this city on September 25, 26, and 27, 1900, under the presidency of Dr. Walter H. White, of Boston. The chairman of the committee of arrangements is Dr. Robert Newman, 148 West Seventy-third Street, New York. The secretary of the association is Dr. George E. Bill, 255 North Street, Harrisburg, Pa. The subjects announced for set discussion are "Electricity in Gynæcology and the Present Reluctance of Gynæcologists to Use Electricity," and "Electricity in Tuberculosis and the Present Modes of Treatment."

The Late Dr. Landon Carter Gray.—"The members of the New York Neurological Society wish to record their profound sorrow at the untimely death of Dr. Landon Carter Gray. As one of the earliest members of the society, he was ever zealous in its behalf, and during many years of his activity added much to the interests of its meetings. His work was characterized by care and thoroughness in preparation; his thoughts were soberly presented in the light of a large clinical experience, and his conclusions were those of a sound thinker. In every line he wrote, and in every word he spoke, there was evidence of broad culture and refinement. He was a kind friend to many, disposed to help those who sought his counsel, and was always ready to allow for honest differences of opinion.

"*Whereas*, The members of this society have sustained a severe loss in the death of their honored friend and colleague; be it

"*Resolved*, That this acknowledgment of Dr. Gray's estimable qualities be recorded in the minutes of the society, and that a copy of these resolutions be sent to the New York MEDICAL RECORD, the New York *Medical Journal*, and the *Medical News*."

B. SACHS, M.D., C. L. DANA, M.D., FREDERICK PETERSON, M.D.

Dr. Edmund C. Wendt, of this city, recently gave a reception at the Hotel Cap, Paris, in honor of the United States commissioners to the Exposition.

Turkish Medical Students in Trouble.—The students in the military medical school of Stamboul recently rebelled against the system of supervision to which they are subject. Ninety of them have been arrested, and will be brought before court-martial.

Dr. John Wyllie, who was recently appointed to the chair of medicine at the University of Edinburgh, left vacant by the death of Sir Thomas Grainger Stewart, is said to have been the only one of the numerous candidates who did not back up his application with a stack of testimonials.

Another Testimonial to Dr. Jacobi.—The dinner of the Section on Diseases of Children of the American Medical Association, which was held at the Hotel St. Charles, Atlantic City, on Tuesday evening, June 5th, was made the occasion for the presentation to Dr. A. Jacobi of a handsome loving-cup and engrossed testimonial from the section.

Obituary Notes.—DR. JAMES T. WHITTAKER, of Cincinnati, died at his home in that city on June 5th of cancer of the intestine. He was graduated in medicine from the University of Pennsylvania in 1866, and from the Medical College of Ohio in 1867. During the civil war he served for a time as a private in the army, and later as acting assistant surgeon in the navy. After graduation he studied for a time in Berlin and then began the practice of medicine in Cincinnati. He was professor of theory and practice of medicine in the Ohio Medical College, and was attending physician to the Good Samaritan Hospital and to the Cincinnati Hospital. Dr. Whittaker's contributions to the literature of medicine were numerous and important.

DR. MELANCTHON STORRS, of Hartford, Conn., died in that city on June 9th, from a septicæmia contracted during an operation. He was a graduate of the Yale Medical School in 1853. During the Civil War he served as brigade surgeon on the staff of Gen. Edward Harland, and at the close of the war took up practice in Hartford. He was a member of many local, State, and national medical societies.

DR. PAUL GIBIER, of this city, was killed in a runaway accident near the medical institute of which he was the head, at Suffern, N. Y., on June 9th. He was born in France on October 9, 1851, and was graduated in medicine from the University of Paris in 1884. He was for several years an assistant at the

Pasteur Institute. His first public work was the study of cholera and of Ferran's preventive inoculations in Spain, and in 1888 he was sent by the French government to Havana to make a study of yellow fever. On his way home he spent some time in this city, and a year later returned here to reside permanently, opening a small hospital for the preventive treatment of rabies. Later he built a large sanatorium in the upper part of the city, but a few years ago moved the institution to Suffern. He was a chevalier of the Legion of Honor.

Dr. Robert Locke, of Chicago, committed suicide in the Occidental Hotel, San Francisco, on June 9th. He was a graduate of the Rush Medical College. Some time ago he was sent to the Philippines as a government press censor, but ill health forced him to return, and it was shortly after his arrival that he shot himself.

Dr. G. R. Chambers, a dentist in Vineland, N. J., died on June 4th, of apoplexy. He was sixty years old.

Dr. Valerius Idelson died recently at Bern, Switzerland. Dr. Idelson was an expatriated Russian, and was for many years a contributor to American and European journals of reviews of Russian medical publications.

Progress of Medical Science.

New York Medical Journal, June 9, 1900.

The Treatment of the Opium Habit by the Bromide Method.—A. Church says that the purpose of this plan of treatment is to stupefy the patient utterly for a number of days, during which time the opium is rapidly withdrawn and the physical disturbance secondary to its withdrawal is recovered from. The drug should be given only in the daytime, gr. cxx. of sodium bromide in half a tumbler of water every two hours, until an ounce is given in the first day. The second day a smaller amount is given in the same way, and this may be sufficient, or it may be necessary to continue the doses in the same way on the third day. Three deaths occurring in twelve cases, although in each instance attributable only remotely to the bromide, and occurring when the bromide had been used in extraordinary doses, doses that can no longer be advised, show that the plan of treatment is very far from being simple and without danger.

Æstivo-Autumnal Fever in New Orleans, Summer and Autumn, 1899.—H. A. Veazie concludes a series of articles, the object of which has been to prove that the fever outbreak in question was malarial in nature and had nothing at all to do with yellow fever. The articles are of interest chiefly from their bearing on various sanitary questions concerning the locality in which the fever occurred.

Ethylic Bromide as an Anæsthetic for Short Operations.—This agent is commended by P. F. Sondern, who gives a brief description of its effects and of the proper method of administration. Nothing new is presented.

Abstract of President's Address Delivered at the Fifty-first Annual Meeting of the American Medical Association, Held at Atlantic City, June 5-8, 1900.—By W. W. Keen.

The Collection, Preservation, and Transportation of Clinical Material for Laboratory Examination.—By S. Hart.

Some New Traction Apparatus for Hip Disease, Pott's Disease, etc.—By R. T. Taylor.

Journal of the American Medical Ass'n, June 9, 1900.

Neurasthenia and the Rest Cure.—Frederick A. McGrew distinguishes three varieties of neurasthenia—developmental, overstimulation, and developmental plus overstimulation neurasthenia. In some individuals asthenia is a prevailing factor from the cradle to the grave. The developmental neurasthenic is usually a woman of healthy appearance who complains of chronic fatigue. This patient needs exercise, not rest. In the class of overstimulation neurasthenia belong individuals, mostly men in middle life, whose baneful habits end in exhaustion of their inherited nervous vitality. The rest cure is here the treatment *par excellence*, combined with massage, etc. The developmental and overstimulation elements may be combined, either predominating. The degree of nerve strain necessary to precipitate an attack is in inverse ratio to the degree of developmental weakness. In those cases in which loss of weight, dyspepsia, headache, neuralgia, and other symptoms indicating a failure of nutrition accompany a history of recent nervous overstrain, the rest cure is the best thing, preliminary to subsequent treatment, to develop nerve vitality as indicated above under the first class. On the other hand, with patients who have succumbed to a slight overtaxation of the nervous system, the overstimulation element may be disregarded altogether, and treatment for the development of nerve force instituted at once; it is with this class that a sea-voyage or a sojourn among the mountains proves most beneficial.

Improved Methods and Details in the Care of Patients during Surgical Operations.—T. B. Turck gives methods of preventing infection from the skin with hands, instruments, sponges, etc.; of preventing the skin from becoming contaminated, by the use of an improved laparotomy sheet made from thin rubber dam fitted close to the body. A similar arrangement for shutting off the peritoneal cavity is figured. A thin rubber cylinder is employed to protect against leakage around a drainage tube inserted within it. Another device is a thin rubber hot-water bag placed within a gauze pad to apply heat to the viscera; a temperature of 48° C. is that found most useful. Hot rubber sponge pads are figured, and hot-water-coil slippers for application to the foot-soles especially in preventing shock.

Intralaryngeal Insufflation.—Rudolph Matas gives details of a procedure for the relief of acute surgical pneumothorax. He concludes his article with a history of pulmonary insufflation as applied to the surgery of the chest, presenting drawings of bellows, insufflating-tubes, etc. The features of the apparatus presented by the writer are that the original O'Dwyer cannula is modified so as to be used as a respirator, tampon cannula, anæsthetizer, tractor of the larynx and tongue, insufflator, and as an aspirator. In total extirpation of the tongue, etc., the value of an apparatus which will permit of easy respiration while the larynx is securely plugged, can be readily appreciated.

Address of Chairman, Section on Practice, American Medical Association.—By George Dock.

President's Address, American Medical Association.—By W. W. Keen.

Typhoid Fever among American Soldiers in 1898.—By V. C. Vaughan.

Philadelphia Medical Journal, June 9, 1900.

Criticism in Medicine.—George Dock finds a discouraging fact in the waning influence which medicine has over the layman. While the science is becoming more candid and more accurate, the grossest delusions flourish and the ridiculous claims of half-crazed brains find believers by thousands. This is an age of little respect for authority. Healthy scepticism can do no harm, and it is well to remember that with all our great advances there are still about us some relics of mediævalism. It is often impossible to distinguish the wares of the professor of chemistry or pharmacology from those of the modern seekers after the philosopher's stone. Commercialism is largely responsible. He fears that false prophets will last long into the twentieth century.

Conclusions Reached after a Study of Typhoid Fever among the American Soldiers in 1898.—By Victor C. Vaughan.

Gastric Ulcer: Non-Perforating Hemorrhage.—By William L. Rodman.

The Endowment of Medical Colleges.—By W. W. Keen.

Gastric Hemorrhage.—By W. L. Rodman.

The Boston Medical and Surgical Journal, June 7, 1900.

A New Intra-Abdominal Method for Retroverted Uteri.—George W. Kaan says that in all cases of retroverted uteri the round ligaments, with the peritoneal covering, are elongated, and his method consists simply in puckering them upon a gathering string, and so shortening them that the uterus is brought into normal position. He picks up the round ligament and peritoneum together with a double hook, about midway between the cornu of the uterus and the internal abdominal ring, then passes a suture of silk subperitoneally from the uterus as far outward along the round ligament as seems necessary. The tissue is puckered along this suture, the two ends of which are then tied together with moderate traction. To avoid its cutting through, the silk used is of medium size, and is passed into the tissue of the fundus at its point of entrance, and through ligamentous tissue at its exit. The strain on this stitch, however, is not nearly so great as upon the stitches of a ventral suspension, which drags the uterus out of position.

Report of Cases in which the Bacillus Aerogenes Capsulatus was Found.—Joseph H. Pratt and Frank T. Fulton report five cases and draw the following conclusions: Only one of the cases was a pure infection with the gas bacillus, but this case shows what marked pyogenic properties the gas bacillus may possess. In these cases the organism appeared to gain entry into the tissues from the gastro-intestinal tract. In two, infection was probably referable to dirt containing the gas bacillus which gained access into the body through wounds of the skin. The bacillus is shown to be easily destroyed by cold. The lesions produced by it on a muscle tissue are remarkable. This was shown in two cases of emphysematous gangrene reported by Dr. Thorndike. In some places the muscle fibres were broken into small pieces—the appearance being that of débris thrown about by an explosion. In other places degeneration and digestion of the muscle fibres appeared to have taken place.

New Nasal Scissors for the Removal of the Lower Turbinate.—Carolus M. Cobb describes scissors which are more convenient to use than the turbinate saw, and leave a cleaner cut. The fault with most nasal scissors is that the blades are not firm enough to cut through the body of the turbinate; the blades either slip by each other, or one is not able to put force enough on the handles to make the points cut anything more than the mucous membrane. The blades of this instrument are short, and the whole so strong that the blades will cut through any part of the lower turbinate. The shape of the instrument allows the operator to reach any part of the lower turbinate that can be reached by the saw or by any other instrument except the cold wire snare.

Clinical Report of Cases of Infection due to the Bacillus Aerogenes Capsulatus of Welch.—Paul Thorndike describes four cases which were, clinically speaking, cases of malignant œdema; in two of these the bacillus present was not the Koch bacillus, although similar to it. Dr. Post considers that the symptoms of malignant œdema may be caused by other spore-bearing, gas-producing organisms equally well as by the bacillus known as that of malignant œdema. The lesson deduced by the author from the cases reported is to operate as early as possible, but operate even after the time when the whole of the diseased tissue could have been removed by earlier operation.

Chairman's Address before the Section on Practice of Medicine.—By George Dock.

The Endowment of Medical Colleges.—By W. W. Keen.

Gastric Hemorrhage.—By W. L. Rodman.

The Lancet, June 2, 1900.

Preventive Inoculation against Typhoid Fever.—A. G. R. Foulerton describes the different steps which have led up to the introduction of inoculative measures, and gives some figures indicative of results thus far obtained. In regard to the length of the protective period he says that if we accept the persistence of the agglutinative power as an indication of the persistence of immunity, the protective effect lasts for two years. The immediate effects of inoculation are often unpleasant, but they are only temporary. The symptoms following the inoculation have been as follows. Toward the evening more or less severe constitutional symptoms may set in; thus there have been severe frontal headache, slight shivering, and in one case actual rigors and nausea, accompanied sometimes by vomiting. A tendency to syncope is sometimes present; it occurs within between four and six hours after the inoculation and very soon passes off, but is quite sufficient to render it necessary that the recumbent position for some hours should in every case be insisted on. All these constitutional symptoms, except perhaps a little headache, have invariably disappeared by the next morning—that is to say, within about eighteen hours of the inoculation. The patient feels fairly well except for the local reaction which now begins to make itself felt at the site of inoculation. The local reaction results in a firm and painful œdema of the subcutaneous tissue with redness of the skin over it extending for about two inches round the puncture made by the syringe; there may also be redness of the skin extending for some little distance along the line of the lymphatics. Shooting pains may be present which radiate from the puncture in the flank principally upward toward the pectoral region. The inguinal glands are enlarged and tender. By the following morning all the signs of local inflammation will have disappeared in nearly every case, and the completeness of the disappearance of what is sometimes a very intense local reaction in the short space of time is very striking. The only remaining effects of the inoculation felt by the patient are a general feeling of tiredness and a sensation of bruising and stiffness about the site of inoculation, although no trace of redness or œdema is now perceptible nor is there any tenderness on pressure.

Removal of a Foreign Body from the Ear.—J. G. Macaskie's patient was a school-boy who had pushed into the ear the india-rubber attached to a pencil. Owing to its flat surface and the depth to which it had gone, it was impossible to remove it by either forceps or syringing. Macaskie therefore teased out a small piece of twine, and giving it a good coating of some adhesive material, packed it against the rubber, surrounding the whole with cotton wool. It was allowed to dry for twenty-four hours. Then gentle traction on the string easily removed the whole mass.

Intestinal Obstruction due to Persistent Meckel's Diverticulum; Successful Laparotomy.—By F. Fawcett and R. F. Jowers. The patient was a girl aged eleven years, with evidences of intestinal obstruction referred to intussusception. Abdominal section showed several coils of small gut tightly nipped by a thin cord which came from the extremity of a Meckel's diverticulum, which was again attached to the bowel, forming a ring through which the strangulated coils had slipped. Recovery was uneventful.

A Contribution to the Statistics of Rheumatic Fever and its Complications.—W. C. Bosenquet analyzes four hundred and fifty cases of rheumatic fever treated in the course of eight years at the Charing Cross Hospital. Statistics are given as to age, sex, heredity, occupations, season, onset, duration, location, complications, causes of death, and treatment.

On Operations for Cancer in the Aged.—E. H. Freeland records the case of a spinster aged eighty-two years, who underwent an operation for cancer of the mamma. Immediate surgical results were successful, and the patient lived about eighteen months, dying of sudden heart failure. The growth had not recurred.

Note on the Passage of a Calculus of Exceptional Size through the Right Ureter and the Urethra of a Man of about Fifty Years of Age.—By J. A. Cunningham.

The Use of Massage in Recent Fractures and Common Injuries.—A clinical lecture by W. H. Bennett.

A Case of Two Aneurisms of the Transverse Arch of the Aorta.—By G. J. Arnold.

Primary Syphilitic Chancres.—A clinical lecture by Jonathan Hutchinson.

British Medical Journal, May 26 and June 2, 1900.

The Treatment of Puerperal Eclampsia by Diuretic Infusions.—Robert Jardine treats these cases on the principle of toxic elimination; he believes that the renal activity should be stimulated immediately during the actual attack, and considers saline infusions of sodium chloride and potassium bicarbonate or sodium acetate the best means of producing early diuresis. The fits should be controlled by chloroform, chloral, or the bromides, or if the pulse be quick and tense ten or fifteen minims of tincture of veratrum viride should be given hypodermically. Free catharsis is produced by administering four to six tablespoonfuls of magnesium sulphate in water, using a tube if necessary. The skin should be kept active by steam or hot pack. The most important part of the treatment is the subcutaneous infusion under the breasts, into the abdominal wall or axilla of a hot (104° F.) saline solution containing half a drachm each of sodium chloride and of potassium bicarbonate to the pint of water. Of twenty-two cases treated, in twelve this solution was employed, while in the last ten cases he used a drachm each of sodium chloride and sodium acetate to the pint. One to three pints were infused at a time, repeated as indicated. Seventeen patients recovered; one of the five died from perforating duodenal ulcer. In all cases the urine was increased in quantity, and the percentage of urea and uric acid rose. Of the twenty-three children, ten were alive and thirteen dead. Of the ten full-time children all were saved except two on whom craniotomy was performed. In two cases in which urine was obtained from the new-born it contained albumin in considerable quantity.

The Treatment of Smallpox by Salol.—J. Biernacki and P. N. Jones discuss the suggestion made by Charles Begg that salol will arrest the development of the rash in the vesicular stage. A score of cases were subjected to this treatment. All but eight had been vaccinated, so that modification of the process aside from salol was to be looked for. Their conclusions based upon the eight cases are that salol may practically avert general pustulation, and even have a partial abortive effect when given after maturation has commenced. The influence of the treatment on maturation is, however, not constant in degree, and in one case was almost *nil*. Short of an abortive effect, it almost invariably hinders pustulation, so that the pustules form tardily, the process being imperfect in a much higher proportion than usual. The cutaneous inflammation is slight, and irritation commonly absent even in confluent cases. There is generally an entire absence of unpleasant odor. Scarring is inconsiderable and often absent, the scabs scaling off with great rapidity. The most remarkable effect of the treatment is its effect on the secondary fever, which, if not absent altogether, is as a rule of little importance. These results appear to resemble, but exceed, those obtained by the red-light treatment. On the whole, the statement is justified that salol affords a means of treating smallpox superior to the methods in vogue.

A Case of Puerperal Septicæmia; Treatment by Antistreptoccus Serum; Recovery.—Harcourt Gervis reports the case of a woman suffering from puerperal sepsis, seen by him on the sixth day after delivery. There were a slight offensive discharge, some tymphanites, and diarrhœa. Injections of 10 c.c. of antistreptococcic serum were made morning and evening for six days, until the temperature of 105.5° F. and pulse of 144 fell to 99° F. and pulse 88 respectively. The uterus, at first irrigated with 1 : 4,000 bichloride solution, was subsequently washed out with a 1 : 2,000 solution of chinosol. An apparent relapse or reinfection occurred a week later with high temperature, and serum was again injected and the uterus scraped; but a subsequent parametritis explained the symptoms. Gervis believes that septic absorption was stopped after the sixth day, and that the further injections were unnecessary, and that curetting should not have been performed. He injected in all 170 c.c. of serum, and concludes that antitoxin is harmless; that no one should be satisfied, when treating a case of puerperal fever, unless, in addition to the ordinary methods of treatment, he also employs antistreptococcic serum.

Chronic Brass Poisoning.—William Murray gives the clinical picture of an affection seen in metal manufacturing centres which is apt to puzzle a stranger. Symptoms may come on only after years of brass polishing. The first indication is usually anæmia. A green line on the teeth may be seen very early. Later on subcutaneous fat gradually diminishes and progressive emaciation supervenes. Dyspepsia, gastralgia, catarrh, itching skin eruptions, etc., are among the symptoms. Excessive debility and nervousness are among the features of the early stages. Whether it is the copper or the zinc of the alloy which poisons has not been definitely ascertained. Phosphorus has been found to act beneficially. Milk diet and change of occupation are advised.

Remarks on the Pathology of Acute Yellow Atrophy of the Liver.—J. W. Findlay gives with pathological illustrations clinical notes of a case of acute yellow atrophy in a girl aged fifteen years. Distinct evidences of proliferation and division of the hepatic cells were noted in the peripheral parts of the lobule, and such proliferation is considered a forerunner, not of degeneration but of regeneration of the proper hepatic tissue. Fatty degeneration of the hepatic cell is considered the primary lesion and connective tissue increase secondary. Some of the writer's pathological conclusions differ from those of other observers quoted.

Hæmatometra in Right Horn of an Undeveloped Double Uterus, Successfully Treated by Abdominal Section.—By F. W. N. Haultain.

A Clinical Lecture on Puerperal Inguinal Parametritis; or the Common Kind of Pelvic Cellulitis.—By G. E. Herman.

A Case of Uterus Bicornis Accidentally Discovered after the Patient's Fourth Pregnancy.—By C. Hubert Roberts.

Two Cases of Extirpation of the Uterus for Excessive Hypertrophy and Prolapse.—By T. Arthur Helme.

A Case of Enteric Fever of Three Months' Duration.—By William Murrell.

A Case of Rigid Os Uteri Treated with Cocaine.—By E. F. Clowes.

Case of Bromoform Poisoning; Recovery.—By T. Brown Darling.

On Vaginal Hysterectomy for Uterine Prolapse.—By R. C. Chichen.

Two Cases of Bromoform Poisoning; Recovery.—By C. E. Stokes.

A Clinical Lecture on a Case of Cholecystotomy.—By James Swain.

Chronic Eczema Cured by an Abscess.—By P. A. Longhurst.

The Radical Cure of Femoral Hernia.—By T. E. Gordon.

Infectiousness of Acute Rheumatism.—By C. W. Lanson.

Berliner klinische Wochenschrift, No. 21, May 21, 1900.

Treatment with Hetol.—C. A. Ewald gives his experience with this remedy, which is the commercial name of cinnamate of sodium. Twenty-five cases of pulmonary tuberculosis were placed upon a course of treatment therewith. Of these, eleven patients were during the whole period free from fever, ten had long afebrile intervals, while in only four did the fever persist. None of the cases had cavities when the administration was begun, though all but two showed bacilli in the sputa. The remainder of the article goes into the details of the cases and cannot be analyzed here. Ewald believes that the remedy is deserving of a further trial, but he is unwilling to accept, on the basis of results thus far attained, the sweeping claims of Landerer and others who have been its advocates.

Are Special Divisions for Tuberculous Patients Necessary in General Hospitals?—This question is answered in the affirmative by E. Aron, though he does not take the extreme views of some of the latter-day sanitarians.

Hæmolysine.—By P. Ehrlich and J. Morgenroth.

French Journals.

The So-Called Pernicious Dysenteric Fever.—S. Kanellis and J. Cardamatis, having observed many cases, conclude (1) that pernicious dysenteric fever is not an especial or essential morbid entity. (2) A similar form does not result primarily from paludal miasm, that is to say, this element cannot produce essential dysenteroid catarrh. (3) In case of complication of dysenteric paludal miasm the products of one of the causes cannot influence those of the other excepting by the debility of the organism which both bring about. Each one of the nosological entities evolute in the same organism independently of the effects of the other, each progressing in the nosological camp on its own account. (4) These two nosological entities do not oppose each other nor join forces, and when they follow out their evolution in the same organism the one does not the less predispose the soil for the establishment or for the renaissance of the other disease after the debility of the organism which it produces. (5) Dysenteric fever, called pernicious, should be erased from the list of malarial fevers, since it does not exist with the nosological properties which are attributed to it. It should be referred to as paludism, complicated with dysenteric catarrh.—*Le Progrès Médical*, May 19, 1900.

Hypertrophic Alcoholic Cirrhosis with Diabetes.—A. Gilbert and P. Lereboullet report two observations which seem to belong to the class of indurated and indolent hypertrophy of the liver in alcoholics affected with diabetes. In one case intemperate habits were persisted in; little treatment was carried out, and the cirrhosis ended in death with hypothermic coma without the disappearance of sugar from the urine. In the second case treatment was directed toward the cirrhosis, and the glycosuria disappeared coincidently with marked improvement in the hepatic symptoms. It is thought that in both cases the evolution showed the dependence of the diabetes upon the hypertrophic cirrhosis, and the liver disease seemed to govern the evolution of the diabetes instead of causing the sugar to disappear as is the case in atrophic cirrhosis.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, May 20, 1900.

Traumatic Bilateral Cowperitis in a Bicyclist.—E. Ozenne records an instance of this affection due to falling forward upon the point of the saddle. There was burning in the canal on urinating and perineal discomfort for the rest of the day. The following day there was painful tumefaction on either side of the canal. The Cowper glands could be made out behind the bulb in the membranous portion, especially on combined rectal and perineal touch, or rather ano-perineal touch with the thumb and index of one hand. The swelling was firm and oblong along the canal. Simple treatment and rest brought about prompt relief. The glands were still to be felt at the end of six weeks.—*Journal de Médecine de Paris*, May 27, 1900.

Syphilis of the Liver.—P. Hutinel in his course on internal pathology states that hepatic lesions are among the most frequent and the most severe manifestations of visceral syphilis, both hereditary and acquired. The lesions are diffuse or gummous with small infiltrations. Small nodules are generally associated with diffuse infiltrations. Diffuse lesions are found in infancy, while in the adult sclerous lesions are found about the vessels, especially the hepatic artery. Recent lesions disappear under treatment, but it is difficult to bring back normal vitality to a liver which has been the seat of old fibrous lesions.—*La Tribune Médicale*, May 23, 1900.

The Plague in Australia and South America.—Netter reviews the history of the plague in these countries. He finds that the first cases usually escape recognition. The period between their occurrence and the official recognition of the presence of the plague varies from one to several months. At times the exact time of first invasion cannot be determined. Early bacteriological researches are insisted upon. Even when prophylactic measures have not been taken epidemics have remained limited in extent. An extensive development can occur only in insalubrious localities or quarters.—*La Presse Médicale*, May 26, 1900.

Repose and Exercise in Cardiac Disease.—H. Vaquez cautions against a too exclusive drug medication in heart disease. He does not pretend to claim that exercise can be set up as a systematic treatment for all cardiac affections, but applied to particular forms and individual cases it may render great service, and this is in some instances so considerable that physicians cannot longer afford to ignore it as one of the curative measures. The theory and technique are discussed.—*La Presse Médicale*, May 23, 1900.

Ulcero-Membranous Anginas.—Bonnus and Deguy give a number of observations upon an angina showing fusiform bacilli and spirals. The first may exist alone, the spirals being merely associate forms. These cases must be recognized so that rational therapy can be established. Antiseptic applications, tincture of iodine, phenosalyl, and chlorate of potassium are recommended with frequent gargling, and oxygenated water renders good service.—*Journal des Praticiens*, May 19, 1900.

Psoriasis Treated by Full Baths Containing Oil of Cade.—Balzer and Mousseaux offer a new method of applying oil of cade. A soap emulsion is made with one part of green soap and two parts of water. To 100 gm. of oil of cade is added enough of this emulsion to make 250 c.c. to be added to each bath. The results have been about the same as after other forms of active treatment, but it is considered more agreeable for the patient, who continues at his occupation.—*Journal des Praticiens*, May 26, 1900.

Acute Blennorrhagic Aortitis and Endocarditis.—Bodier and Laroche call attention to an attenuated form of endocarditis in gonorrhœa, giving the history of a case with aortitis. Modifications in the volume of the aorta may at times be quite rapid. Salicylates and revulsives are recommended. These cases should be recognized early by daily examinations of the heart in the course of gonorrhœa.—*Gazette des Hôpitaux*, May 22, 1900.

Treatment in Strangulated Hernia.—Pauchet says that taxis should not be attempted; most deaths after operation are to be attributed to preceding attempts at reduction. Directions for operating are given, and the steps to be taken when gangrene is present. Radical cure in various forms of hernia is described. Opium must never be given after abdominal operations.—*Journal de Médecine de Paris*, May 20, 1900.

Acute Spinal Perimeningitis.—A. Deléarde discusses the inflammation of the cellulo-adipose tissues which envelop the dura mater of the cord and separate it from the vertebræ. Historical considerations, etiology, pathology, and treatment are discussed, and a case is reported. The abscess should be opened by incision of the vertebral laminæ.—*Gazette Hebdomadaire de Médecine*, May 27, 1900.

Digitalis in Heart Disease.—Professor Potain considers the indications and contraindications of this drug, which is a very useful and powerful remedy without possessing any succedaneum. It should be employed with great caution, since in too strong or too long-continued dose it may prove injurious.—*Le Bulletin Médical*, May 26, 1900.

American Journal of the Medical Sciences, June, 1900.

A Contribution to the Pathology of Chronic Hyperplastic Tuberculosis of the Cæcum, Based upon the Study of Two Cases, in One of which Carcinoma of the Cæcum Coexisted.—T. R. Crowder contributes an elaborate article in which the subject of cæcal tuberculosis is carefully studied. He says that a review of the clinical histories and the post-mortem findings proves that with active, destructive, and disseminated tuberculosis of the intestine there is usually found in the lungs a similarly active process, while in cases of localized chronic cæcum tuberculosis there is quite as frequently found a latent healed or healing pulmonary involvement. In primary tuberculosis of the cæcum the general conditions would be much the same as in that contracted from a healing pulmonary lesion. The clinical history seems often to point to such a primary infection, but even when the physical examination fails to show any involvement of the lung there is found post mortem an old lesion. On account of this slight involvement, or the inability to demonstrate clinically any at all when the tumor is first noticed, many authors have concluded that the pulmonary affection is secondary. Opposed to this view are two facts: the extreme rarity of localized cæcum tuberculosis with no lung findings, and the extreme frequency of slight ancient pulmonary involvement. Even when a patient with a tuberculous cæcal tumor has died of a later pulmonary tuberculosis there has been found evidence of an old latent or healed preceding process which may have given rise to the cæcal trouble.

Permanent Non-Progressive Ataxia, with a Clinical Report of Three Cases.—Sanger Brown presented these cases, which showed the common features of a more or less severe, acute, and probably infectious illness of varying duration and character, resulting in profound general muscular ataxia showing itself conspicuously in the muscles concerned in articulate speech. In none was there any lasting impairment of special sense or of general sensation. The ataxia in all was essentially stationary. Experiments on the lower animals, studies in embryology, clinical and post-mortem observations on the human subject, have abundantly demonstrated definite relations between the neurons of the cerebellum and those of other parts of the nervous system, both sensory and motor. Assuming that the cerebellum exercises a predominating influence upon the co-ordination of voluntary muscular movements, then it would not be unreasonable to assume in the cases cited that one effect of the primary disease had been to injure permanently those parts of the organ subserving this function, or, what would amount to the same thing, a considerable number of the neuron processes connecting it with other parts of the nervous system.

A Fifth Case of Family Periodic Paralysis.—L. M. Crafts reports the case of a man aged thirty-five years, under observation for a period of seven years. He regards this rare neurosis as due to same form of auto-intoxication, though the poison has never been isolated. The poison, whatever it may be, seems to be developed only at intervals and not constantly. It seems to result from over-exertion and gastro-intestinal disturbances, but it is unknown why these causes evolve the poison in certain individuals. All of the cases have presented a massive muscular supply. In the present case, a muscular snip from the inner portion of the right gastrocnemius shows a distinct increase in the fibrous tissue and moderate hypertrophy and vacuolation of the fibres.

The Surgical Anatomy of Congenital Dislocation of the Hip Joint.—By Edward H. Nichols and Edward H. Bradford.

A Critical Summary of Recent Literature on Plasma Cells and Mast Cells.—By Herbert U. Williams.

The Pathological Anatomy of the Cord in Paralysis Agitans and Senility.—By Charles L. Dana.

Embryonal Renal Adenosarcoma.—By Maximilian Herzog and Denslow Lewis.

On the Spinal-Cord Changes in Paralysis Agitans.—By Max Nonne.

The Medical Chronicle, May, 1900.

Widely Conducted Cardiac Murmurs.—E. M. Brockbank reports twenty-four cases of heart disease in which the murmurs were heard in unusual situations. The only explanation which suggests itself to him is that the sound was carried along the aorta and large vessels, and transmitted to the surface over the liver, spleen, and kidneys by the intervening tissues, and over the upper part of the chest by the resonant qualities of the thorax. There was no pulmonary consolidation. The author has never met with these widely conducted murmurs in health, in anæmia, or in any case without a cardiac lesion. As a means of cardiac diagnosis their value is doubtful, but it is possible that they may indicate an abnormal condition of the aortic or anterior cusp of the mitral valve, which is thrown into vibration during ventricular systole and the passage of a column of blood—with which it is in contact—into the aorta. Their occurrence must be remembered in examining cases of supposed aneurism, or obstruction of the thoracic or abdominal aorta.

Immunity to Diphtheritic Infection, and Reinfection after the Use of Antitoxin.—R. W. Marsden reports several cases which seem to demonstrate that immunity after an attack of diphtheria may have quite ceased to exist at the expiration of three weeks, when that attack has been terminated by the injection of antitoxin. It is interesting to note that in each instance the second attack was practically a recapitulation of the first, *i.e.*, was of an exactly similar type. The author does not incline to believe that the period of immunity is proportionate to the dose of antitoxin administered, or at least, he holds that a consideration of the doses administered warrants the conclusion that the connection cannot be a very close one. For his own guidance, he has decided that during convalescence from an attack of diphtheria, the reinjection of antitoxin must be immediately performed upon the supervention of "croupiness" or signs of early laryngeal stridor.

Two Cases of Intestinal Obstruction due to Peritoneal Bands.—J. E. Platt describes two cases, and remarks that the most frequent causes of peritoneal bands are appendicular trouble and pelvic peritonitis. Obstruction from compression of the gut under the band, as in the first case, is the most common way in which the lumen of the bowel is interfered with in these cases. Less frequently the obstruction is due to traction of the band upon a loop of bowel, as in the second case. The course of the disease is usually rapid, the average duration of life in cases not subjected to operation being five days, according to Treves. Treatment must be conducted on the lines for acute intestinal obstruction generally, for in only a few cases will it be possible to diagnose the exact cause of obstruction.

A Case of Pneumothorax Complicating Whooping-Cough.—Francis Villy reports a case in a child aged three years, who had just previously suffered from faucial diphtheria, whooping-cough, measles, and otitis media. There were no pressure signs in the chest, but a slight difference was perceptible in the percussion noted at the two bases of the lungs behind, and the child's general condition was so serious that aspiration was performed. A considerable quantity of gas was evacuated, but no pus was found. The immediate relief did not appear to be very great, but the child steadily improved, and finally recovered.

The Enucleation of Interstitial Fibro-Myomata by Cervico-Vaginal Hysterotomy.—By Louis Dartigues.

Medicine, June, 1900.

Ether Anæsthesia from a Medical Standpoint.—Louis Faugères Bishop thinks that as a rule more ether is given than is necessary. If a patient be put thoroughly under in the early part of an operation, very little additional ether is required to keep him under for a considerable length of time. There is great danger of doing insidious damage to a patient by having him at some stage during an operation too profoundly anæsthetized. Such an occurrence upon the nervous system is like what might be produced by a blow upon the abdomen or a condition of shock. Many of the ultimate bad results of ether might be accounted for by such an interference with innervation of different parts of the body, such as the kidneys. The management of the tongue is often a source of much worry. So long as the air enters and leaves the chest with freedom the tongue can be let alone. If it gives trouble, lifting the angles of the jaw in the usual way is sufficient in most cases. Nausea may be to a large extent avoided by regulating the anæsthesia so that it is never too deep.

Maternal Impressions.—James G. Kiernan gives an account of the early beliefs and superstitions in regard to maternal impressions, and illustrates his article with photographs of monstrosities supposed to have been due to mental shock, but really due to arrested development. Profound shock, destitution, and want of food act on the mother and may influence the fœtus deleteriously. Hence the significance of the fact that of ninety-two children born in Paris during the siege of 1870–71, sixty-four had slight physical or mental anomalies; the remaining twenty-eight were all weakly. Not only do poverty and want produce anæmia and malnutrition of the fœtus, but profound shock disturbs the whole bodily metabolism. The nutrition of the mother may thereby be so disturbed as to result in a partial toxæmia, which would tend to check or disturb the healthy development of the fœtus in utero. In this way a nexus of cause and effect can be traced, but facts which can be thus explained give no support to the view of maternal impressions popularly entertained.

Rumination and Periodic and Habitual Vomiting.—Fenton B. Turck says that rumination is characterized by return of food without nausea or effort through the œsophagus into the mouth, to be rechewed and reswallowed. This occurs not only without distress, but is accompanied often by a peculiar enjoyment. Peripheral irritation of the vagus nerve should be looked for in every case, and should be corrected by both local and general treatment. Periodic vomiting is a symptomatic disorder characterized by regular recurring cycles of vomiting, or the more or less constant rejection of food. Nervous vomiting may be divided, for description, into three classes: (1) cerebral, spinal, or central vomiting; (2) hysterical or neurasthenic; (3) that caused by irritations of various parts of the body.

The Repair of Old Traumatic Nasal Deformities.—By J. Homer Coulter.

Talmudic and Jewish Medicine.—By Lawrence Irwell.

Archivio per le Scienze Mediche, vol. xxiv., No. 1, 1900.

The Pathogenesis of Periodic Hæmoglobinuria.—Ettore Chiaruttini says that there are three stages in the production of hæmoglobinuria: (1) Alteration of the blood (preexisting); (2) alteration of circulation (paroxysmal); (3) kidney lesion (usually only functional). The blood changes may affect the corpuscles or the plasma. The globules become in part disintegrated, and the hæmoglobin escapes. The alteration in the plasma consists of a power to cause dissociation of the hæmoglobin from the corpuscles. The circulatory changes are produced by vasomotor disturbances and induce paroxysms by causing hæmoglobinæmia. The kidney lesion consists of a temporary loss of the property possessed by the epithelium of the convoluted tubules of decomposing the hæmoglobin and separating the iron. This kidney lesion is essential to the appearance of hæmoglobin in the urine.

The Alterations Caused by Rachitis in the Metabolic Processes of the Epiphyseal Cartilages.—V. Grandis and C. Mainini, from experimentation, deduce the theory that the growth of bones is caused by a fixation of the circulating lime by means of the phosphorus accumulated in the cartilage cells. In rachitis the cells do not prepare and do not elaborate the phosphorated products. This gives a scientific basis to the well-known clinical fact of the good effects of phosphorus in the treatment of rickets. In a case studied carefully by the authors, the rachitis was without doubt due to a quantitative and qualitative alteration in the distribution of the phosphorus in the cartilage, the amount of lime salts being certainly equal to that of normal conditions.

The Chemical Phenomena Occurring in the Epiphyseal Cartilages during the Period of Growth of the Bone.—By V. Grandis and C. Mainini.

The Physiology of the Spleen.—By Angelo Pugliese and Tullio Luzzati.

Correspondence.

THE MEDICAL ASPECT OF THE SOUTH AFRICAN WAR.

(From our Special Correspondent.)

Since I last wrote the war has come almost certainly to a close, while winter has definitely set in. Lord Roberts is virtually in possession of all the Orange Free State (which he has formally annexed to the British Crown), and of the two chief cities of the Transvaal. The change of temperature has exerted a marked influence upon the soldiers. The sick rate has gone up, and there is a considerable increase in the number suffering from pneumonia and dysentery. On the other hand, the tremendous activity shown by Lord Roberts in the field has not tired his troops in the least, those who have had to march hardest showing the cleanest bills of health. In fact, throughout the war it has been noted that inactivity has been followed by disease.

The Plight of Mafeking.—On May 18th, as all the world knows, Mafeking was relieved. The little town, so near the Boer capital and so far from the British base, seemed doomed, but some admirable marching on the part of combined forces from the north and the south drove the investing troops away just in time. There is no need for me to expatiate upon the heroic nature of Baden-Powell's defence of Mafeking. Everything possible to be said has been said twice over, but the total casualties incurred by the garrison prove the nature of the struggle they endured. Among the combatants 22 officers were killed, wounded, or missing out of a total of 44, and 190 men out of a total of 970. The total casualties among the non-combatants, black and white, brought the list of injured up to 924, a figure which sufficiently indicates the persistent nature of the shelling and "sniping" to which the inhabitants of Mafeking were subjected during their seven months' siege. There were 60 deaths among adults of disease, and a great many native children perished, but on the whole, the health of Mafeking, when it was relieved, was found to be better than had been anticipated. The investment of the place was never so close as that of Ladysmith, so that there was not the same trouble about water supply, and enteric fever was not so rife, while the natives were occasionally able to drive cattle into the town through the Boer lines and thus replenish the stock pots a little. Still Mafeking was on starvation rations when Captain Mahon entered it, and even on that scale of diet could not have held out more than another three weeks or so.

Inoculation against Typhoid Fever is on its trial in this war, and when the figures are published (as in the interests of science they should be) medical opinion ought to be able to declare itself for or against the process. Inoculation was practised on the outgoing British transports to the considerable discomfort of the men, and it is admitted that in a striking proportion of cases it has proved an entire failure as a measure of protection under the circumstances of camp life. All the fever that has prostrated the British soldiers during the South African campaign is not typhoid fever, malaria and typho-malaria having accounted for long sick lists, but there is no doubt that a good many who were presumably protected by inoculation have succumbed to genuine enteric fever. Full notes have been kept of all deaths in the hospitals, so that interesting statistics may be looked for.

The British War Office has approved of pay at the rate of £1 per day being given to civilian medical practitioners in temporary military employ who are not receiving either fixed or capitation rates of pay from the army fund.

The Princess Christian Hospital, which has been presented to the Natal government by Mr. Alfred Mosely, is now open. The building is situated at Pinetown Bridge, a healthy spot fifteen miles from Durban amidst fine scenery, and contains two hundred beds together with the most complete fittings necessary for a military hospital. The beds are all occupied already, and Mr. Mosely has undertaken to bear at his own expense for four months the whole cost of the establishment, which cost is estimated at £25,000. This is truly practical patriotism

The Death Rate in Bloemfontein, especially among the sick in the hospitals, is ominously high. This is a great disappointment to medical authorities, for the pretty town was regarded as a model place to have the sick during the great march northward. But Bloemfontein is forty-six hundred feet above the sea-level, and this altitude causes a diurnal variation of temperature that tells heavily upon sick men. For the future the sick will be sent farther south, as all lines of communication are now quite safe as far as the British are concerned.

Dr. William Davies, son of Dr. Ebenezer Davies, the medical officer of health of Swansea, who was imprisoned owing to his supposed connection with the Jameson raid, was in charge of the medical stores with the Mafeking relief column.

By the request of the principal medical officer at Bloemfontein the Langman Hospital, which, as your readers may remember, consisted originally of one hundred beds, has been converted into one of one hundred and fifty beds, the necessary additional equipment having been provided by Mr. Langman.

Nearing the End.—The war is believed to be practically over. I shall send you information concerning the sanitary condition of Johannesburg and Pretoria when Lord Roberts enters those towns, as well as a note upon the plight of the three thousand prisoners whose stay in the latter city has been so prolonged and by many accounts so uncomfortable. These will be the last medical aspects of the war, accurately speaking, though the submission of the Boers in their capital will not preclude the possibility of prolonged guerilla warfare.

LETTER FROM NEW ZEALAND.

(From our Special Correspondent.)

A PLAGUE SCARE—THE PLAGUE IN SYDNEY—SURGERY IN AUCKLAND.

AUCKLAND, May 12, 1900.

DURING the last month we have been suffering from a plague scare. Your readers may possibly have learned that the plague has been in Sydney, New South Wales, for more than two months. Now the whole of New Zealand is in constant connection with Sydney, which is only eleven or twelve hundred miles distant. The mail steamers from San Francisco go on to Sydney from Auckland, and having delivered the mails for Australia, and received those for New Zealand, America, and Europe, return to Auckland and there receive the outward mails. Besides these, there is, or rather was, a regular weekly service of steamers. All this in addition to sailing-vessels. When the plague appeared in New Caledonia and Sydney, the usual precaution of subjecting all vessels arriving from those parts to quarantine until they received pratique was adopted. Later on, seeing that the whole of Australia was liable to be infected by travellers overland from Sydney, the whole continent was declared infected. In Auckland the municipal authorities were at last stirred up from their usual lethargic condition, and sanitary measures were taken which had been neglected for years. The harbor board offered a reward of sixpence a head for rats caught about the wharves. The city council offered a penny a head (two cents) for rats caught on shore; poison was distributed gratis, and so carelessly that the wonder is that human beings were not poisoned. His excellency the governor, the Earl of Ranfurly, went about the slums in Auckland, and very usefully employed himself in poling up the mayor and council. We don't think quite so much of earls as you do in the States, because we are more used to them; but still an earl who is also governor has a good deal of influence.

Then came the news that some man on the Queen's wharf had caught a rat, and that this rat, or the fleas that infested him, had the plague bacillus. Then the harbor board went mad, shut up the man and two of his mates in one of the landing-sheds, barricaded the wharf, and would not allow any one to visit the men or that part of the wharf where they were confined. Meanwhile the premier, Mr. Seddon, a most energetic individual, came up post-haste from Wellington, and he went off his head too. He even went so far as to inform the city council that if they did overstep the law in their zeal to suppress nuisances, he would introduce an indemnity act in the next session of Parliament to protect them from the consequences! You ought to bless your stars that your ancestors instituted a supreme court that can protect you against the vagaries of ministers with a majority in both houses of the legislature. We have no such protection.

Last of all, a boy was bitten by a rat. He grew feverish and the wound did not heal kindly. The medical man who was attending thought it a case of blood poisoning, and advised that he should be sent to the Auckland Hospital. There he was put in the smallpox ward (which has never had a smallpox case in it), and he was isolated—after the New Zealand fashion. A young lady who has just taken her degrees in the New Zealand University, and of course never saw a case of plague nor probably of typhus in her life, volunteered to attend him. Cultures were taken from his blood; the plague bacillus was found; it was wired all over the world that a case of plague, but a mild one, had appeared in Auckland. A number of people were inoculated with Haffkine's serum, and the scare became intense. One lady whose children were all at boarding-schools in Auckland took the first boat from the town she resided in, rushed up to the schools with cabs, had the children's luggage bundled in anyhow, and started off for the country forthwith. Trade was seriously interfered with. A boot and shoe manufacturer, who had nearly completed a large order for the South, received a telegram peremptorily telling him to send nothing until further orders. Even loads of timber were countermanded, as they would have to be fumigated at a cost of nearly two dollars a ton.

Some days elapsed; the boy did not die, but seemed getting better. Fortunately, just at this point a physician arrived on a visit who had seen plague on a large scale in India. In conjunction with the staff of the hospital he examined the patient, and unhesitatingly affirmed that it was not a case of plague at all! Then there were rage and fury on the part of the trading classes, and indeed of all classes. Who was responsible for pronouncing the case plague? Well, the medical superintendent of the hospital, who had also been just made by the premier a sanitary commissioner with extraordinary powers, had undoubtedly wired up to the colonial secretary that it was a case of plague. He had to resign his hospital appointment, instead of getting the six months' leave he had applied for in order to fulfil his duties as a sanitary commissioner. As an illustration of the despotic powers assumed by Mr. Seddon, I may just remark that there is no such person as a sanitary commissioner known to our law; he is entirely the creation of Mr. Seddon.

I asked in an article published in the principal daily paper for particulars as to the culture experiments adopted, whether there were any control cultures, how many, and of what kind. To these impertinent inquiries I of course got no answer.

However, as the plague still continues in Sydney, no precautions are omitted. We have a Maori population of about forty thousand, and if the plague once got among them it would carry off thousands. They live in the most unsanitary conditions possible; they are accustomed to eat dried shark's flesh and other fish dried in such a way that they are most offensive to the smell of Europeans; they delight in maize soaked in water until it becomes putrid, absolutely putrid; and they crowd together in huts at night, sleeping on the floor, men and women and children all together, in an atmosphere that would suffocate a European. For their sakes we must keep out the plague if possible. Then we have four thousand of the lowest class of Chinese, living as Chinese always do.

It seems probable that we shall have the plague sooner or later, as it shows no signs of abating in Sydney, although winter has commenced. With proper care, however, it may be kept sporadic, as it has been in Sydney. There, in nine weeks there were only one hundred and fifty-three cases and forty-nine deaths, which in a city of about four hundred and fifty thousand inhabitants can hardly be called an epidemic. Sydney is the oldest town in Australia, having been founded in 1780 (or thereabouts) as a convict settlement. The older streets are very narrow, and there are some horrible slums in those parts of the city near the wharves. The government is resuming the control of the wharves, and has shut up several of them. It is estimated that this step, which is quite unnecessary, and merely the result of the scare, will cost the colony of New South Wales between two and three millions sterling.

There is nothing new here except the plague scare. I paid a couple of visits to the Auckland Hospital lately, and saw some very pretty operations by Mr. Hope Lewis, who is one of the honorary visiting surgeons—a tenotomy, an Alexander, an amputation of the hip joint, a hysterectomy, and an ovariotomy. The hip-joint case was the first amputation of the kind I have seen done since I served in the Crimea. We had five cases there and all ended fatally. The ovariotomy was really a funny case. It was a dermoid cyst, and when the incision was made to admit the trocar, out shot hundreds of little white spherical bodies, exactly the size and shape of sugar-coated pills; out they came with every movement of the cyst, and ran out on the floor and rolled about in a really ludicrous way. There were a number of masses of hair as well. Mr. Hope Lewis is an excellent operator and making a name for himself by his laparotomies and other operations. His style reminds one of the late Sir William Ferguson, of King's College, London.

OUR LONDON LETTER.

(From Our Special Correspondent.)

QUEEN'S BIRTHDAY HONORS—MEETING OF MEDICAL COUNCIL—THE MEDICO-CHI. ON WOUNDS IN THE WAR—THE ORATION AT THE MEDICAL SOCIETY—EXCISION OF THE GASSERIAN GANGLION—FIRST SOUND OF THE HEART—PATHOLOGICAL SOCIETY'S LABORATORY MEETING—DEATHS.

LONDON, May 25, 1900.

WE have been celebrating the Queen's birthday yesterday (24th) with more than usual enthusiasm, making the occasion a demonstration of patriotism as well as loyalty. The list of honors conferred on this occasion is long enough, but the medical profession scarcely gets its share. No baronetcy is given us, but there are four knighthoods, viz., Dr. Hector Cameron, President of the Glasgow Faculty, Dr. J. W. Moore, P.R.C.P.I., Dr. W. B. Berry, Speaker of the late House of Assembly, and Dr. D. P. Ross, surgeon-general of British Guiana. There are also three medals for services in India.

The General Medical Council met for its sixty-ninth session on Tuesday, and is still sitting with much work yet to do. With its oppressive cost and its inability to find time for all its work, why should the president persist in giving a lengthy address? There is no need to tell the members what they have to do. A good programme would suffice. Details of what has been done and told in all the journals are equally unnecessary, and laudation of outgoing councillors would be best omitted.

Two new members put in an appearance, viz., Sir H. Beevor, *vice* Mr. Brudenell Carter, for the Society of Apothecaries, and Mr. W. R. Power for the Crown in succession to the late lamented Sir R. Thorne. Dr. Leech is absent from illness, and Sir W. Thomson is in South Africa. Reports of committees and formal business occupied most of the first day. In the evening the president of the Royal College of Physicians and Mrs. Church gave a reception as they also did on the following evening.

On Wednesday the midwives bill monopolized the major part of the time. The report of the committee was discussed with some animation, but other points managed to force their way into the speeches. The committee accepted the suggestion of the lord president of the council that the central board could frame a rule requiring the midwife to send for a registered practitioner in case of abnormality, but Mr. Horsley, who was on the committee, had dissented from this point in the report and divided the council upon it. The report, however, was adopted, and so far as the council is concerned the midwife will do as she pleases.

The question of personation of registered practitioners came on. It seems the public prosecutor does not consider such personation criminal in the sense that he is bound to prosecute. Counsel's opinion is to be obtained, and the question will then be considered, perhaps to-morrow. The proposed conjoint board for London, the appointment of a solicitor, and resolutions forwarded about the mode of appointing councillors received the usual attention. Yesterday renal cases occupied the council. The Medico-Chi. gave another evening (Tuesday, the 22d) to the subject of the wounded in the present war.

Mr. C. T. Dent, of St. George's Hospital, told of his experience in this campaign. He thought tent hospitals better than wood or iron in a climate like that of South Africa, for they permitted of practically open-air treatment. If chilling was avoided, only good resulted. Churches and schools were very ill adapted for hospitals. He entered into various particulars as to different wounds, but, of course, admitted that there is much more to be learned before positive conclusions can be formulated on many points.

Sir William MacCormac also gave some details of his experience, though he admitted he had said all he wished to say in his letters to *The Lancet*. He exhibited a one-hundred-pound shell presented to him by the officers of the Royal Artillery, and a smaller one was also shown, said to be the first fired into the English lines at the battle of Colenso.

Major W. Dick, of Netley, made some remarks on the wounds after the men returned. There had been many injuries of the musculo-spiral nerve. He thought small-bore bullets more often deflected than supposed and gave instances. He thought, too, the successful issue of abdominal wounds was favored by their having been inflicted on men when starving.

You will naturally take it for granted that there was an unusually large assembly to hear the returned surgeons and welcome them back. In fact, with such a subject as the war and exhibits of bullets, shells, etc., with lantern slides and other attractions this session, the Medico-Chi. bids fair to become quite popular—a change which will be welcomed by many.

On Monday evening the Medical Society gave its annual conversazione. There was a full assembly of fellows and their friends, and everything passed off successfully. The oration was delivered by Dr. Kingston Fowler, who took for his subject "Science and Medicine in the Eighteenth Century." Sir W. Gairdner was present and proposed the vote of thanks (cordially carried), contrasting in a few words Cullen and Brown, and remarking that the eighteenth century was one of revolution, the nineteenth one of evolution.

At the last ordinary meeting for the session held on the preceding Monday evening, Mr. Hutchinson, Jr., read a paper on excision of the Gasserian ganglion for epileptiform neuralgia of the fifth nerve, in which he detailed the cases in which he had performed this operation. He thought the Hartley-Krause method the only practicable one of exposing the ganglion. In all his cases the neuralgia had lasted five years, but he thought it would be justifiable to operate after two or three years or before the patient was worn out by pain and treatment. If the pain was confined to one branch, a full removal of that branch would suffice; but when it affected two divisions and had an epileptiform character, excision of the ganglion would be necessary and, if the patient were running down, might be undertaken after one year.

Dr. A. Morison read a paper on "The First Sound of the Heart, Considered from a Clinical Point of View." His study led him to attribute the largest share in producing the sound to "vibrations in the blood itself, to produce which at a normal rate valvular support of the vibrating blood columns is necessary." Thus he would seem to take a view between that of Quain on the one hand and Leared on the other. Of course this was objected to. Indeed, the first sound seems to be a perennial source of controversy. Dr. Sansom insisted on tension and could not believe the blood had much to do with the sounds; while Dr. Robert Maguire held by Quain's view. He said the first sound was produced by one column of blood against another, or one bubbling through another, and asked if murmurs might not be due to the same thing modified. I pass the question on to physicists and physiologists instead of following this debate further.

Lord Lister presided at the laboratory meeting of the Pathological Society on the 15th, which was held at King's College. Professor Crookshank said he had lately found in healthy field rats the flagellate protozoa which he described fourteen years ago in sewer rats, and which were then thought to indicate disease. A similar protozoon is found in equines and camels.

Dr. Dean described an apparatus for the cultivation of the tetanus bacillus; Messrs. Hewlett and Rowland their plan of measuring a volume of serum for diagnostic purposes.

Dr. MacFadyen described experiments on the virus of African horse sickness, which point to the possibility of bacilli being so minute as to pass through Chamberland's filters. At any rate, the fluid which so passed killed the horses experimented on. It has been asserted that the bacillus of bovine pleuropneumonia will pass through such filters.

Drs. Bullock and Hunter made a preliminary communication on a hæmolytic poison in pyocyanic toxin and an antihæmolytic body in the serum of immune animals.

Dr. G. Newman had tested the inoculability of twenty-nine species of animals with tubercle. Guinea-pigs could always be inoculated with the tubercle of mammals, never with that of birds. In fishes and reptiles he had not found a bacillus which answered the tests for tubercle. In birds, tubercle attacks the abdominal viscera, rarely the lungs. In cattle, the serous membranes are the most frequently attacked.

Dr. Hewlett demonstrated the indol-like reaction given by cultures of the diphtheria and of the pseudo-diphtheria bacillus.

Dr. Drysdale gave an account of research on the bacillus capsulatus aërogenes to which post-mortem emphysema is attributed.

Mr. Pryce Jones exhibited three varieties of streptothrix from rum, horse dung, and drinking-water.

The late Dr. George Bird, who died on the fourth inst. at the advanced age of eighty-three years, was a very noteworthy man, the friend and adviser of a considerable number of "men of light and leading." Sir R. Burton dedicated to him a volume of his "Arabian Nights," and many other marks of the appreciation of his worth by great thinkers fell to his lot. It is said that Ringer's "Therapeutics" owes any literary grace it possesses to his revision. He was always attached to athletics and even took up the bicycle in his old age.

Capt. W. F. Hopkins, M.D., who went from Australia with the contingent and performed prodigies of valor at Rensburg, where the officer in charge declared if any one deserved the V. C. he did, has died of typhoid.

Captain Dowse, R.A.M.C., has also died at Bloemfontein. He had the medal for service in the Chitral expedition.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Fifty-first Annual Meeting, Held in Atlantic City, N. J., on June 5, 6, 7, and 8, 1900.

(*Continued from page 1006*)

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

Second Day—Wednesday, June 6th.

Parturition as a Factor in Gynæcic Practice.—Dr. John M. Duff, of Pittsburg, read this paper. He said that to convince gynæcologists that parturition was the principal factor in producing morbidity calling for their interference, no other argument was needed than the statistics of their own practice. He felt justified in saying that considerably over fifty per cent. of all gynæcological cases could be charged to parturition. He believed that a rigid enforcement of the rules of obstetric practice as laid down by the best teachers of to-day would eliminate more than fifty per cent. of the gynæcic cases resulting from parturition, if we except those resulting from abortion. In proof of this he referred to records of cases in maternity hospitals. The author declared that the day of antiseptic midwifery was past. To-day its principles were not only directly harmful, but a neglect of asepsis, with a dependence upon antiseptics to right wrongs, was not only unscientific but cruel and murderous. The true antiseptics were stated to be the normal and healthy secretions of the body, and especially that greatest of all germicides, the blood. Hence the necessity of due attention to the secretions and to the condition of the blood previous to the onset of labor. In instituting aseptic precautions before labor the douching of the vagina with antiseptics was declared to be harmful in a healthy woman: and in an unhealthy vagina with pernicious secretions it was not effective. When necessary to cleanse the vagina, it should be prepared as carefully as for vaginal hysterectomy. The vulva should undergo the most careful cleansing possible. One cause of infection through putrefaction was a failure to remove all placental tissue and membranes, and in this connection he emphatically called attention to placenta succenturiata and placenta spuria, which he believed to be frequently the direct cause of sepsis which could not be accounted for. On five occasions he had found spurious placentæ. The author still believed his previously published opinion, that "the routine practice of administering ergot after the third stage of labor" was pernicious and frequently the cause of the woman coming into the gynæcologist's hands. The too early resumption of household cares after labor he considered accountable for many malpositions with their concomitant disorders.

In conclusion it was stated that by a rational midwifery such as suggested, with careful asepsis and proper and timely repair of lacerations, salpingitis, ovarian abscess, and endometritis would be less frequent, and prolapsus uteri, vesicocele, and rectocele, with all their accompanying phenomena, would be comparatively rare.

Dr. Mordecai Price, of Philadelphia, opened the discussion of Dr. Duff's paper by heartily indorsing the author's views upon the antiseptic treatment of puerperal conditions. The cases thrown into his hands, of puerperal fever, or fever following the puerperal state, in nine cases out of ten had been caused wholly and entirely by the unnecessary and dangerous use of antiseptics. He thought that the profession had been so imbued with the old idea of antisepsis that such papers as this were required to correct the past teaching.

Dr. L. H. Dunning, of Indianapolis, indorsed the paper of Dr. Duff most heartily. He thought that Dr. Price had perhaps stated the matter a little too strongly, though he had seen some of the results indicated, from intra-uterine douches. He considered of great importance the matter of displacement due to subinvolution, which could readily be corrected if the obstetrician would follow the cases after delivery. He agreed that every case of laceration should be attended to at once unless there were strong contraindications. He did not believe in the immediate repair of laceration of the cervix, but did believe that when there was reason to suspect such laceration the case ought to be examined in six weeks and repaired if the necessity was present. Otherwise there was the possibility of subinvolution of the uterus and of the ligaments, resulting in displacement, endometritis, chronic congestion of the pelvic organs, and chronic invalidism. He emphasized the point that the care of the woman delivered should not end until the cervix had been attended to and involution completed.

Dr. Joseph Price, of Philadelphia, said the practice of midwifery in private and public cases differed greatly, and that there was not the enthusiasm in obstetrics that there was a few years ago. With Parvin died the last obstetrician in America. He deplored the general use of the family syringe in private practice. The indiscriminate use of the curette in many cases was simply guesswork: often the finger would bring away that which had not been detected by the curette. He believed that nothing was more important than the fact that at the present time we have no enthusiastic specialists in obstetrics. Too often an obstetrician sought the position of teaching obstetrics, but practised gynæcology.

Dr. Ritter, of Kansas City, said that Dr. Duff's paper had the genuine ring, and, as Dr. Price had said, enthusiasm in obstetrics was on the wane. He also thought that there was too great a tendency to use the syringe. He believed that if more attention was paid to the alimentary canal the patients would be in a better condition. He also agreed with the essayist that too often strong germicidal remedies were used. Of more importance was thorough cleanliness in the practice of obstetrics.

Dr. Miller, of Syracuse, thought that in treating puerperal fever the source of infection should first be ascertained. This infection was sometimes carried by the physician, who might at the same time be in attendance upon a pus case which was due to the more virulent infection, and if the field was sufficiently large there would be great development of the septic poison with serious danger to the patient. If due to sapræmia the curette and irrigation would do good by washing away the products. The specific treatment was indicated by a recognition of the source of infection.

Dr. Tuttle believed that if the cases of disease due to parturition were ruled out, there would be few women complaining of abdominal trouble. He thought the matter must be regarded from a preventive standpoint, and that it resolved itself into two stages: (1) the preparation of the patient before delivery, which should be as careful as that for abdominal section or vaginal hysterectomy; (2) that which was perhaps more important than the first—careful investigation of the parts immediately at the close of labor.

Dr. Zinke, of Cincinnati, did not doubt that the majority present knew how to prevent sepsis during and after labor; when and when not to curette, and when and when not to use a dull or sharp curette. The trouble he believed lay elsewhere: the obstetrician of the present day did not hold the position he should because it did not pay to be a specialist of obstetrics, and the cause of this was in the fact that when graduating a man thought he knew all about obstetrics. He appreciated the remark of Dr. Price because he held the chair of obstetrics, and was bound to practise gynæcology to make it possible for him to pay his debts. In his opinion the chair of obstetrics ought to be endowed. He thought obstetrics could be thoroughly taught even if the obstetrician found time to do gynæcological work. The attempt to establish maternities for teaching-purposes had been frustrated, and to teach obstetrics thoroughly and to practise this department as it should be practised, due consideration must be given to all these things. Dr. Zinke thought an obstetrician should not be blamed for not limiting himself to the position which he occupied and for practising something else which he understood just as well, simply because it did not seem right to some. For himself he would like to practise obstetrics and nothing else, but he would have to starve if he depended upon the practice of obstetrics alone.

Dr. Duff, in closing the discussion, said the subject of obstetrics had not been a popular one; that he made his living out of gynæcology, and taught obstetrics incidentally. That obstetrics did not pay financially he believed to be the fault of the profession. With reference to sepsis he thought we were coming to the day when consideration would be given, not to septic infection, but rather to the prevention of sepsis in obstetrics. He expressed the hope that the spirit engendered by this discussion might aid in the obstetric physician becoming popular.

The Causal Relation Intra-Abdominal Diseases Bear to Nervous Disturbances Recognized by Gynæcologists, Ignored by Neurologists.—Dr. Henry O. Marcy, of Boston, in this paper considered the importance of the physiological function of reflex action of nervous centres in health, the normal relationship of afferent fibres, nerve centre, and efferent fibres. Motor impulses were spoken of; also inhibitory nerve centres, and automatic action. The deep reflexes were believed to be of little value. Certain groups of symptoms were shown to be indicative of local lesions. These were considered in relation to their bearing on the reproductive organs of woman in health and in disease. A careful knowledge of the pathological reflexes of the first were stated to be important in proper differentiation of organic lesions of pelvic structures.

The Principal Obstetrical Advance during the Last Half-Century.—Dr. A. H. Halberstadt, of Pottsville, Pa., in this paper declared the standstill in obstetrics to be due to so much attention being given to gynæcology through the fascination of abdominal surgery. He said that little advance had been made in obstetrics since the death of Hodge and Meigs. Asepsis and anæsthesia he considered to be the only advances made during the last half-century, and these he stated did not apply to obstetrics more than to medicine and surgery. Symphyseotomy he considered as fleeting, and gave a brief report of two cases.

Neuroses due to Auto-Intoxication from Faulty Menstruation.—Dr. Arthur Johnstone, of Cincinnati, read this paper. He spoke of the repair or the cure of an inflammation of the pelvis as doing much to regulate menstruation; and stated that with this regulation came the relief of headaches, migraines, neuralgias, and all the other nervous symptoms to which we were so thoroughly accustomed. This relief he believed to be sometimes caused by the removal of the scar tissue; but this scar tissue could not by any means cause the general systemic disturbance present in most of these cases. Relief came gradually, and each successive menstruation was better; still, perfect relief did not come for six months or a year, which proved that the relief was due to the drainage of accumulated poisons from the system by a perfect menstruation. The majority of nervous symptoms in gynæcological subjects he believed to be due to retained excretions which defective menstruation had failed to eliminate. Another great cause of neuroses was the intestinal infection accompanying nearly all these cases. The main thing to remember was that the bad cases belonged to gouty families, and for their relief reference was made to Haig and Rachford on the leucomain poisons. Elimination was the keynote of their work. Exercise was stated to be only another form of elimination.

Traumatisms and Malformation of the Female Generative Apparatus as the Cause of Insanity.—Dr. George H. Noble, of Atlanta, Ga., based this paper upon his personal observation, and many replies received from alienists and gynæcologists of the United States relative to the subject. He stated: (1) that traumatisms and malformations of the female genital apparatus were indirect or exciting causes of insanity; (2) that heredity did not necessarily play a part as a cause, but was found in a large percentage of cases; (3) that many operations had been done with satisfaction and uniformly good results; (4) that no special form of insanity followed the above conditions. Some institutions made a practice of examining women inmates for the above-mentioned conditions, and were giving much attention to the gynæcological side of the question with much satisfaction.

The Third Element in the Equation between Pelvic and Abdominal Disease in Women and Disturbance in the Nervous System.—Dr. H. A. Tomlinson, superintendent of St. Peter State Hospital, St. Peter, Minn., read a paper on this subject. He said that menstrual disorder and pelvic diseases were quite commonly associated with the different neuroses and psychoses, but in his experience they bore no apparent causal relation to the nervous disturbance, nor was the intensity of the nervous disturbance in proportion to the gravity of the physical disease; but, on the contrary, the most grave pelvic disease, even among the neurotic and insane, existed without disturbance in the nervous system and frequently without physical symptoms. In cases in which the insanity or chronic nervous disease had existed for more than a year, or the patient had a defective nervous organization, it was stated that treatment of the disease of the generative organs was practically without effect upon the insanity or neurosis, and in such cases operative interference resulting in the establishment of an artificial menopause almost invariably hastened the onset of the dementia. Operative interference the author believed was called for in the treatment of pelvic disease among the insane for the same reasons that would determine the necessity for such treatment among the sane: *i.e.*, the reasons were purely surgical. In order to know the probable curative effect on insanity of treatment of diseased generative organs, it was considered important to know the family and personal history of the patient with regard to the presence or absence of evidence of unstable or defective nervous organization, the length of time the condition had existed, and to what extent the general health of the woman was affected by the pelvic disease independently of the insanity or nervous disease.

Pelvic Disease as a Factor in the Insanity of Females, and Surgery as a Factor of Cure.—Dr. E. C. Carpenter, of Columbus, O., read this paper. He said that from the data at hand we seemed to be justified in the conclusion that pelvic disease was a factor in the cause, and that surgery was a factor in the cure, of the insane condition. The question confronting us now was, what estimate may be placed upon them as factors. As such he believed both had their limitations. The established law of multiplicity and complexity of cause admitted few exceptions in singleness of cause. He thought it important to take the broadest view in the consideration of the etiology in insanity. The specialist, the speaker said, was too prone to infer that the organ of his specialty must be the source of all other pathological conditions, when the lesions, the remote symptoms, might be but consequential to general conditions. In the consideration of cause in the insanity of women he stated that heredity, predisposition, puberty, the puerperal and the climateric periods were especially to be borne in mind. In the general physical examination pelvic disease should always be sought for, and when found to exist it should be eradicated. No physician, in his opinion, should consent to the commitment of a woman for insanity until the existing pelvic disease was removed; except under absolute necessity from the mental condition. He further believed that upon entrance into our asylums every female should be examined by a conscientious specialist, and if she was found diseased operation should be urged. In the absence of pelvic disease operative procedure should be approached with our best judgment. He thought it questionable whether medical knowledge and experience would justify operating on the defective classes, women at puberty, idiopathic epileptics, those in the preclimacteric years, and those whose insanity was not over two years in duration. All our asylums, it was stated, had representatives in them from these classes, who had not only not been benefited but made worse by operation. This list he believed it would be at least instructive to place in parallel with those benefited, in passing judgment on any case to be operated. Reference was made to a class which might be regarded as non-diseased but operable—the hysterical, those especially disturbed at the catamenia, and those in the post-climacteric years. From the first two the author considered that some of our most brilliant recoveries have come by the employment of surgery alone. Operation in the post-climacteric period, he believed, might hasten senility, but was not likely to do much absolute harm.

Interrelation of Gynæcology and Neurology in Practice.—Dr. C. H. Hughes, of St. Louis, Mo., read this paper. He stated that advances made in bio-neurological discovery gave us just warrant for the statement that, with a proper understanding of this subject, there ought to be one opinion respecting the interrelation of neurology and gynæcology in practice; there should be but one method of therapeutic procedure among both gynæcologists and neurologists, *i.e.*, to treat the whole organism and every damaged part for the best results. The omnipresence of the nervous system throughout the organism, with its afferent and efferent communications, as could be witnessed, for instance, in the interrelations of the vagus nerve and the brain and the abdominal and thoracic viscera; the relations of hysteria, a cortex lesion, to its varying subcortical and peripheral abnormalities of functions; the proven interrelations of pelvic and cerebral states as shown in the various phases of erotic life and evolution; the neurophysiological and neuropathological changes, both central and peripheral, of the catamenial stages, and the menopause in women—were dealt with. It was shown that these alterations beginning in the governing nervous system, and affecting active and reactive influences, revealed to us in a clinical symptomatology largely nervous, but also in grave pathological changes of uterine structure, admonished us that we have a patient to treat as well as a part, a case in which the knowledge of more than one specialist is often demanded in treatment. Woman, the author said, had both a gynæcic and a neurocerebral function and sphere of physiological and pathological influence, and often deserved when ill both neurological and gynæcological attention at the same time. The gynæcologist, if he treated her all over as she deserved, should be much of a neurologist, and the neurologist should be much of a gynæcologist.

Tubo-Ovarian Adhesions: their Reflexes.—Dr. A. L. Beahan, of Canandaigua, N. Y., called attention to the simulation of hysteria by conditions resulting from simple inflammatory forms of adhesions between tubes and ovaries. Differential diagnosis of this border-line disease was shown to be paralleled by insanity caused from structural changes in the appendages; the former consigning the patient to chronic invalidism, misnamed neurasthenia or hysteria, the latter excluding from society if not ostracizing from home. The author emphasized the fact that tubo-ovarian adhesions occurring in the early years of a woman's life might, by reflex as well as by direct effects, give in insidious ways obscure nervous symptoms, and a great error would be made if from a lack of a discriminating diagnosis this disturbance was characterized as one in which systemic forces alone were at fault instead of local ones. It was claimed that a clean removal of both appendages cured the patient, and a nervous wreck became a healthy, happy, useful being.

Gall Stones and Diseases of the Gall Bladder, and Nervous Symptoms Resulting Therefrom.—Dr. Edwin Ricketts, of Cincinnati, read this paper. He said that clinically speaking there were recognized by operators marked nervous manifestations of a most detrimental kind, but that just how these were caused had so far not been satisfactorily explained. The contents of the gall bladder, with or without gall stones, might become infected by the bacillus coli communis or a pyogenic streptococcus entering the biliary passages from the duodenum or through the blood of the portal vein. He advocated the removal of gall stones as soon as diagnosed. Distended gall bladders that failed to empty themselves by well-selected internal medication and with massage through the abdominal wall, he believed should be drained by means of cholecystotomy. The views of the author were based upon an experience of forty-six cases.

The foregoing papers were discussed together.

Dr. Porter, of New York, in opening the discussion said that to him the most interesting fact demonstrated by the papers was that physicians must not attempt as gynæcologists to deal with this most important subject alone, but must combine with the neurologist, which unfortunately was too infrequently done. In his opinion, by operation the patient was sometimes put into a worse condition than before. He believed that in connection with the asylums for the insane there should be consulting gynæcologists.

Dr. G. E. Shoemaker, of Philadelphia, thought that Dr. Hughes struck the point at issue when he stated that the gynæcologist and the neurologist should have the same view-point. He stated that there was one central standpoint of truth, and if all could get the same training and look at the problem from the same point the problems would be solved. Reference was made to a friend who was at the head of a great institution for the insane, who was strongly opposed to gynæcological work for the insane, and he stated that large numbers came into the institution who showed depraved nutrition. They were fed to the highest point. Many were helped and not a few cured. It was shown that the gynæcologist treated cases showing definite disease and profound nervous disease in the same way.

Dr. Eastman, of Indianapolis, referred to the remarkable increase of cancer and insanity as the two important subjects confronting the medical profession to-day. From the discussion he thought it appeared as if the old practitioner, who looked through the whole system, was again to come to the front; but "to plough deep, means in no sense to turn a wide furrow." Two specialists working along these lines would, in his opinion, secure the best results.

DR. I. S. STONE, of Washington, said he was reminded of a discussion along these lines some years ago, when several papers were read before the American Medical Association on insanity due to pelvic disease, which resulted in inquiries being made of every insane asylum in the United States as to examinations. He claimed credit for the gynæcologists in starting this inquiry.

DR. BENJAMIN, of Camden, referred to his success in the treatment of patients in whom there was no clear indication of lesion, with those medicines which were used in neurological cases, and through this means there had been a reduction of ovariotomy.

DR. ZINKE, of Cincinnati, said he was reminded by the discussion of to-day of that held in Denver at a previous meeting of the American Medical Association, and a comparison showed the wonderful progress that had been made: peace prevailed to-day where then all was war. He wished to contribute his share of compliments due Dr. Hughes. He cited two cases, one in which he had removed two pus tubes and in which the wound healed perfectly and the woman left the hospital sane, but within a short time symptoms of insanity developed and she was placed in an insane asylum for eighteen months. The doctor was condemned. The other case he saw within two months thereafter, in which also there were pus tubes, and in this case he urged operation, notwithstanding the result in the first. Comparisons were made by the family and operation refused. In exactly two weeks afterward this patient was insane without operation. She was not right to-day, while the other had recovered perfectly. He regretted that he could not agree with Dr. Ricketts in everything he said. He had seen patients who had been the victims of gall stones for years, recover without operative interference and he did not believe it was right to operate as soon as the diagnosis of gall stones was made.

DR. CARSTENS believed that if it was simply considered that healthy ovaries and healthy tubes would not produce insanity, and that the same organs diseased would produce all kinds of disturbances in the alimentary canal and interfere with the process of digestion, the function of the kidney, and the elimination of effete material—which effete material would lower the nutrition of the nerves—it would be easily seen that there was a tendency to the increase of insanity from this source. If it was considered, too, that the pathological condition at the nerve periphery produced a process of irritation and, if the process of irritation continued for a long time, we might remove the nerves but the pathological condition became permanent, the wisdom of early removal of the reflex cause would be apparent. He believed great precaution should be used not to promise the patient too much from operation. He defended Dr. Ricketts by saying that if pus tubes ought to be removed, also gall stones when diagnosed should be removed.

DR. BALDY, of Philadelphia, thought the whole subject resolved itself into the two questions: Will pelvic or gynæcological troubles cause insanity; and, if so, will operation cure? After due consideration he was convinced that gynæcological troubles did not cause insanity. So convinced of that was he, that the suggestion that every insane woman should undergo a physical examination, and operation be done if a lesion was found, appeared to him a preposterous one and entirely indefensible. Many healthy married women had lesions which in no way caused symptoms, and the only argument in favor of operation was for the removal of symptoms.

DR. PALMER DUDLEY, of New York, said that he did not discuss the subject from the standpoint of the neurologist, but from his experience he believed that if neurologists would look over the statistics of cases in women they would find, aside from heredity when they could trace a direct line of insanity, that the majority of cases under their care were puerperal, *i.e.*, having puerperal fever as a starting-point. Therefore he agreed with the neurologists that insanity was directly produced by pelvic trouble.

DR. HUGHES, in closing the discussion of his paper, referred to the matter of promising too much from operation, and stated that he was very guarded in his prognosis.

DR. CARPENTER, in closing, said his position, in giving to the insane the same advantages as to the sane woman, was unchanged, because the minutest part of the disease was so serious a question even when only a probable element that he thought the patient should undergo operation for the removal of the cause.

DR. MARCY, in closing, referred to a consultation between the distinguished Brodie and Watson, the result of which was the opinion that it was good medical practice to remove the cause of irritation if possible, and then trust that the irritation itself would cease; and it would appear from the discussion that in this century we were not very much wiser than those celebrated men of the earlier time. Gynæcologists and the neurologists were one in removing the cause of irritation and in trusting to God for a better result.

SECTION ON PEDIATRICS.

Second Day—Wednesday, June 6th.

Demonstration of Home Milk Modifier.—DR. A. L. SHERMAN, of New York City, exhibited this apparatus, which consisted of a glass jar showing seven panels, with lip, capable of holding sixteen ounces. One of the panels presented an ounce graduation, while the other six had different formulæ for modifying cow's milk. He said that the physician should decide what formula was to be used, and ignore the others. The food should be compounded for the period of twenty-four hours. The apparatus is called "the materna."

Causation and Relative Frequency of Typhlitis, Perityphilitis, and Appendicitis in Infancy and Childhood.—DR. JOSEPH N. BYRNE, of New York, presented this paper. He said that typhlitis was generally due to primary conditions, while perityphlitis was always secondary. The advancement in bacteriology and pathology during the past twenty years forced us to abandon our former theories. He spoke of the relative position of the appendix, it often being directed toward the spleen, but it might be, and often was, directed downward.

Milk Supply and Control at the Kaiserin Friedrich Hospital.—This interesting paper, by DRS. ADOLF BAGINSKY and PAUL SOMMERFIELD, of Berlin, was read by Dr. Louis Fischer, of New York. The control of the milk supply in general necessarily began with the care and the arrangement of the cow stables. They were built of brick, iron, and cement, and were two stories in height, and the walls were finished with glazed brick. The building was 30 metres long, 11 metres wide, and 4 metres high. The lower story was divided into two compartments, while the second story was one open room. The ground floor was raised at one end slightly in order that it could be flushed easily. The cows stood in stalls that were called "feeding-tables," which were made of cement. The mangers were of glazed bricks. Each animal had a separate stand, and it was raised 2.7 cm. with a sloping floor. The water supply was automatic. Sawdust was used in the stalls. The cows were of Holland breed. All of them were injected with tuberculin and were under the constant care of a veterinary surgeon. The animals were fed in two ways, viz., dry feeding and wet feeding. Those that were dry-fed produced the milk used for infant feeding. Swill was entirely forbidden. It had been noted that cows fed on the products of distillation of potatoes and corn soon suffered from diarrhœa, and the milk had a certain toxic effect upon the child. The principal dry food-stuffs used were clover, residue of breweries, wheat, and the bran of rye. When it was necessary to stimulate the appetite, small quantities of dry cut bagasse, or sugar-cane stalks, were given. The wet or moist feedings used were turnips, rye, bran, and hay. The stables were cleaned before each milking, and the men were obliged to wash their hands as well as the udders. This did away with milking-machines. The milk was removed immediately. Milking was done three times a day. By the immediate removal of the milk to the dairy, where it was filtered, sterilized, and cooled, the danger of infection was reduced to a very small point. It was found that the bacilli of potatoes and hay were the most difficult to destroy, and the warm milk easily absorbing fumes would become infected. Thus the milk would be affected by the perspiration from the cow, and so would have a repulsive taste. In filtering the milk, linen cloths were used. These were readily boiled and cleaned, which was a simple and inexpensive method. The milk for house use was cooked in copper vessels and packed in ice-boxes. Milk for children was mixed with oatmeal gruel, and after sterilization was bottled and cooled to 10° C. The milk was transported in galvanized tin cans. Sterilization was performed by the Soxhlet method in what is called a Henneberg sterilizer. This held two hundred and sixty-four bottles. The paper closed by mentioning some of the different modified milks.

Infant Feeding.—DR. ALEXANDER MCALLISTER, of Camden, N. J., read this paper. He said that the generations yet unborn were more or less influenced by the methods of infant feeding. The mother's milk would go farther to solve this question than any chemical combination. The infant's food was strictly an animal food and not a vegetable one. We could not improve upon nature's method. He then spoke of young married society women, who for social or other reasons would not nurse their young. Dr. McAllister mentioned, in passing, the well-known pictures of "fat babies" seen in certain advertisements of "infant foods." Babies fed naturally were in a better condition to resist disease, while the artificially fed infants were exposed to constant dangers. The milk from the time of milking to the place of feeding was in constant danger of being infected. Pasteurization and sterilization were used, but not in every home. He spoke of the importance of partial breast-feeding, and thought that even one breast-feeding in twenty-four hours would be very beneficial. Young mothers, who had little milk, should be treated for it, and everything possible should be done to increase the flow. Food for the mother was very important, such as cow's milk and other fats. He referred to galactagogues, with diet, and thought in this way many lives might be saved. In considering the different modified milks, he said that there should be an excess of proteids in water, but one had to keep in mind the needs of the individual case.

Infant Feeding; Accidents and Incidents.—DR. WILLIAM P. NORTHRUP, of New York, read this paper. He spoke of the responsibility of the physician in such cases. In regard to modified cow's milk he said there was a greater responsibility upon those who persisted in using a fixed formula. He cited a case of a female child that had a fair start in life. When she was three days old, modified milk was given. At the age of nine months she had bleeding of the gums. One eye was seen to be black and blue, and then swelling of the ankles and knees was noticed together with paresis of the lower extremities. Later she had blood in the urine. The patient was put on orange juice and other anti-scorbutic treatment, but the child did not improve as much as she should have done. When she was two years old she had typical rachitis. Dr. Northrup advised, in closing, to begin with a formula and increase the amounts rapidly. Sick children could not stand as much proteid as could well children.

DR. H. D. CHAPIN, of New York, said that in sterilizing milk a chemical change took place. When modified milk first came into use it was thought that the question of the percentage of fats and proteids was solved. It was not solved. The less manipulation of the milk the better. When an emulsion such as milk was once broken up it could never be restored in as perfect a form. Dr. Chapin said that the milk should be bottled at the farm and then sent on its journey. He said that when milk was bottled in cylindrical vessels and cooled to a temperature of 50° F., nine-tenths of the butter fat rises to the top of the bottle. He said that there was nothing so variable as cream, the percentage of fat varying with the layers. Dr. Chapin exhibited a small dipper which held one ounce, to be used to take the cream off of the top instead of using a siphon drawing from the bottom. He showed a chart relating to what was called the "deep-setting process of milk," and its relation to fats. Mother's milk varies from day to day. Dr. Chapin spoke of the importance of watching the stools, and said that gruels were of service because of their dextrinizing power. When a gruel was thoroughly dextrinized, the solution would separate into two layers.

DR. VICTOR C. VAUGHAN was the next speaker. He agreed with Dr. Chapin as to the value of sterilization of milk. Sterilization changed the proteid into a nucleo-albumin at high temperature. There was no change at the temperature of 158° F., but when heated two degrees higher nucleo-albumin was formed. He spoke of the bacillus coli communis in milk, and said that while we were able to kill the bacilli we had no control over their toxins. Dr. Vaughan mentioned a case of a child who was poisoned by the parents' allowing the milk to stand for three hours at summer heat.

DR. W. L. STOWELL, of New York, said that modified feeding was ideal, but did not work practically. He mentioned some cases of scorbutus, and said that children would digest an amount of casein. He thought the main difficulty in artificial feeding was that the milk was not modified rapidly enough for the growing child.

DR. A. JACOBI said that if any person present thought he could lay out any routine feeding, that person had found by the papers read that he was mistaken. He had taught for years that milk should be diluted with cereals. He said milk once separated could never be made milk again. Nine to ten per cent. of breast-fed children had fat in their stools. He said that nature was more generous than doctors.

DR. J. P. CROZER GRIFFITH, of Philadelphia, said that he believed in sterilized milk.

DR. KOPLIK, of New York, said that the whole problem was still unsettled. He believed the day would never come when a clean milk could be procured.

DR. NORTHRUP said that he had learned of a new mixture, that of "milk and brains," and this he thought was the secret of Dr. Jacobi's success.

Demonstration of Specimen of a Fatal Fœtal Ichthyosis, with Complete Pathological and Bacteriological Examinations.—Dr. A. S. Daniel, of New York, exhibited this specimen. The maternal history was negative with the exception of severe grief over the loss of her previous child. She was delivered by a midwife, the head presenting. The paternal history was also negative as far as syphilis was concerned. The child passed urine and meconium at birth. During its life the child's body was rigid and cold. After death the temperature was 103° F. Necropsy showed an absence of the panniculus adiposus, and the heart was normal. There were a few small areas of emphysema in the lungs. The liver was congested and showed granular degeneration of the liver cells. A meningeal hemorrhage was also present. Dr. Daniel then reviewed the histories of these cases, and found that only forty-two cases had been reported.

Gastro-Intestinal Hemorrhage in the New-Born.—Dr. Edward H. Small, of Pittsburg, Pa., read this paper. He had had a case of a female child, born at full term, who began to vomit blood about the third day. A little later she had a tarry movement, and then she passed clots of blood. She died on the eighteenth day, treatment being of no avail. Dr. Small said that the following causes had been ascribed to this accident: sepsis, syphilis, respiratory disturbances, malformation of the heart, conditions of the blood, hæmophilia, worms, ulcerations in the gastro-intestinal tract, and delayed labor. These cases were more common in hospitals. This fact, he said, suggested that this disease was of the character of an infection. Diplococci resembling that of pneumonia and streptococci had been described.

Clinical Significance of Stools in Diarrhœa of Infants.—Dr. William E. Darnall, of Atlantic City, N. J., read this very interesting paper. He spoke of the importance of examining the stool and napkins of the child and not depending upon the mother's statement. The usual history of these cases was as follows: The child became cross and irritable, which was soon followed by an attack of acute indigestion and colic. The mother would feed the child every time it cried, thus increasing the symptom. Green stools were the rule, the so-called spinage-green stool; sometimes they were pea-green in color; others were brown and muddy in character. These he thought were due to bile. Some stools were loose and watery. He spoke of the stools with more or less mucus, due to some colitis or proctitis present. In these cases the rectum was often relaxed. The "constipated stool," so-called, he thought was due to a deficiency of fat in the child's diet. The serous discharges were often important. The treatment of these cases consisted of elimination, disinfection, and feeding. All food was to be withdrawn for twenty-four hours, and only cold water given that had been boiled, or barley water. He prescribed ʒ ss. of aromatic syrup of rhubarb, or salol gr. ¼ t.i.d. Dover's power in grain doses was also of great benefit in cases with an excessive number of stools. Hot applications over the abdomen were often of service. In cases of mucous stools, high rectal irrigations of warm water or saline solution were very serviceable as well as soothing and comforting to the patient.

Shall Children be Kept from Measles and Exanthemata Usually Incident to Children?—Dr. C. F. Wahrer, of Fort Madison, Iowa, read this paper. He said that one of the axioms in medicine was "If a child did not have a disease, it could not die from that disease." He thought that preventive medicine was better than a cure. We had quarantine regulations for consumption and cerebro-spinal meningitis. Scarlatina was the most dreaded of these diseases, for there was no way of foretelling its complications, which sometimes disfigured the patient for life. The same was true of diphtheria. The mortality of measles in some epidemics was very great, more especially among adults. There were mild epidemics of measles, and why should not all children be exposed to the disease?

Rötheln: a Distinct Affection Apart from Measles and Scarlatina, and its Differentiation from these Exanthemata.—Dr. Henry Koplik, of New York, presented this paper. He said that some observers doubted that rötheln was a distinct disease. It was most often mistaken for measles. He said that rötheln was not a disease of the mucous membrane. He had never seen coryza and cough in this disease, as it occurred in measles. The slight cough present was due to an infection of the mucous membrane and tonsils as in la grippe. Children rarely complained of sore throats, but adults did. The temperature was practically normal. He said a typical case might run its course without fever. He had seen one case of rötheln with desquamation. He paid especial attention to the recent enlargement of lymphatic nodules in the groin and axillæ.

Clinical and Pathological Study of the Rash of Scarlet Fever.—Dr. Jay F. Schaumberg, of Philadelphia, read this paper. He said that the eruption in scarlatina was an infectious dermatitis, and that it varied with the patient. The different colors produced were known as redness, raspberry, and boiled-lobster appearance. In some cases there was a bluish color, due to venous congestion. The punctate spots were due to inflammation around the hair follicles, and sometimes they were so enlarged as to produce roughness, which was spoken of as "nutmeg feel." Sudamina were due to droplets of sweat. He exhibited a photograph showing marked sudamina over the mons veneris. Vesicles were often present, but not much larger than pin-points, and oftentimes they were microscopical. He said that the vesicles were directly proportional to the intensity of the disease. The skin was infiltrated with eosinophiles, and these seemed to stimulate the cells in the corium to multiply. Several karyokinetic figures were shown in microphotographs.

Dr. Wahrer said that what was wanted was a clinical study of the disease.

Dr. Griffith said that he would not be willing to expose his children to measles. The mortality was as large as that of scarlatina and diphtheria together. He said that desquamation in rötheln did occur. Ten years ago his attention had been called to a case of measles with enlarged cervical glands and no disease of the scalp.

Dr. Louis Fischer spoke of the complications of measles. Last winter he had cases with otitis media and emphysema, and one case of vaginitis following measles and lasting for several months.

Fœtal and Infantile Typhoid.—This paper was read by Dr. John Lovett Morse, of Boston. He said he would not consider the cases reported before the typhoid bacillus was discovered. By experiments on animals he found that the bacilli could pass from the mother to the child; also that they were found in the amniotic fluid. He referred to fœtal typhoid, which had entrance through the blood, and called it a septicæmia; he also spoke of infantile typhoid and the serum reaction.

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Second Day, Wednesday, June 6th.

Discussion on Diabetes.—Dr. O. T. Osborne, of New Haven, differentiated between true diabetes and glycosuria. In all cases some malfunction of the pancreas was at the bottom of it.

Dr. J. M. Allen said that in seven personal cases of diabetes in which an autopsy was made he found a chronic inflammatory process in the duodenum in each of them. The value of opium consisted in its quieting effect on the bowel. Intestinal antiseptics were to be used in all cases.

Dr. Brower, of Chicago, related the history of a case that was due to colon infection, with recovery.

Dr. Bartley, of Brooklyn, pointed out that the copper test was useless for determining small quantities of sugar in the urine. When albumin was not present, the bismuth test was the best that we possessed.

Dr. Solomon believed that we might educate patients to consume large amounts of fats. A certain percentage of alcohol was often beneficial. The discussion was continued by Drs. Lyons, of Detroit, and Zwisohn, of New York.

Dr. Stern stated that for the past ten years in New York City there were eighteen hundred and seventy-six deaths from this cause; fifty per cent. of these cases were in women. In some patients an absolute milk diet afforded the best results. In most cases of diabetic coma oxybutyric acid was present. The most frequent cause of oxybutyric acid was fat meat. The color tests for sugar in the urine were unreliable.

Gastro-Intestinal Remedies in Typhoid Fever.—Dr. I. M. Anders, of Philadelphia, presented this paper. The importance of careful feeding and cool baths in the prevention of complications could not be said to be overestimated. From two to three quarts of water should be administered daily. This was best given between the feedings. If hydrochloric acid was given after the feeding, there was less likelihood of indigestion. The stools should always be examined both microscopically and macroscopically whenever any complication arose. Errors in diet and digestion were generally the cause of fresh symptoms. Intestinal antiseptics controlled meteorism, diarrhœa, etc. They had no effect on the bacillus typhosus. Calomel should be given for the first few days, or even as late as the second week if necessary. Salol gr. iii. every three hours was his favorite drug. In tympanites due to ulceration of the colon turpentine in small doses was often useful. The so-called specific or Woodbridge treatment was entirely useless in the control of the disease. Intestinal irrigation was often beneficial for the diarrhœa that occurred late in the disease. In many cases of delayed convalescence a saline would cause rapid and permanent reduction of the temperature.

Dr. Favill, of Chicago, said that the type of the disease had changed in the last ten years. Much of our success was due to hydrotherapy. He employed saline enemas of one pint several times daily with much success. Guaiacol was given internally.

Dr. T. F. Reilly, of New York, called attention to the value of fair-sized doses of strychnine in the management of the constipation during the decline of the fever.

Dr. W. B. Hill, of Milwaukee, believed that we feed too often. Flushing of the colon with cold saline solution lowered the temperature better than the external application of cold water.

Dr. F. Woodbury, of Philadelphia, pointed out that all water that was given to the patient should be sterilized.

Dr. Anders in closing said that the urine should be watched if large doses of salol were administered. The salol prevented complications, but had no effect on relapses. The intestinal antiseptics prevented the multiplication of other germs and rendered the stools less offensive. An absolute milk diet was best in most cases.

Brief Note on Ointments and Some of their Medicinal Applications; the Iatraliptic Method of Treatment.—Dr. Frank Woodbury, of Philadelphia, read this paper. He described the various classes of ointments. If warmed, many of them could be used in a nebulizer and sprayed over the cavities of the body. The value of inunctions of cacao butter and cod-liver oil in overcoming the denutrition of typhoid fever and of diabetes was pointed out. Poisons might be transmitted by the skin as well as medicines. Most of the ointment bases in present use contained various toxic agents, as a result of the micro-organisms contained in them. Lard was generally septic. In order to overcome this ointments should be dispensed in collapsible tubes similar to those containing artists' colors. This would also prevent the carrying of infection, and was an economical way of using an ointment.

Idiosyncrasy against Mercury; a Case of Erythema Mercuriale.—Dr. A. Bernheim, of Philadelphia, presented this history of a case of erythema mercuriale, due to the ingestion of a small amount of mercury. There was a history of four such attacks in the same patient, following at each time the use of the drug.

The Unbroken Skin as an Absorbing Medium.—This paper was read by Dr. Thomas F. Reilly, of New York. He said that a medicinal agent to be absorbed by the unbroken skin either must become volatile during its application, or be incorporated in a fatty base and applied with friction. Occlusion was an absolute requirement in the case of volatile substances. Most of the absorption occurred in the crypts of the sebaceous glands. The effect was much slower, about one-fourth as intense, and continued longer than when the same agent was administered by the mouth. A large number of medicinal agents, which when given by mouth were intolerable to many patients, could be administered in this way with scarcely any unpleasant effects. The literature mentioned the following medicinal agents as having been successfully employed for their constitutional effects when applied in this manner: Mercury, iodine and iodides, salicylic acid and some salicylates, guaiacol, creosote, iodoform, turpentine, carbolic acid, pilocarpine, croton and cod-liver oils, metallic silver, quinine, digitalis, and belladonna.

Dr. Remington, of Philadelphia, said that cacao butter was one of the best bases that we possessed. It was practically sterile and could be softened if mixed with a small quantity of any fixed oil. For inunction purposes he placed oleic acid at the head of the list. The great advantage of cacao butter was that it was solid at 94° F., and fluid at 98° F.

Dr. Solomon called attention to the fact that some drugs were readily absorbed no matter what the ointment base might be. Ichthyol was cited as an example of this class.

The paper was further discussed by Drs. Rotter of Harrisburg, Lyon of Detroit, Wheatly, Reamy, and E. Boardman-Reed of Philadelphia.

The Metric System.—Dr. F. G. Wheatley, of North Abington, Mass., in this paper set forth the many advantages that would arise from the general use of this system.

Dr. Bartley, of Brooklyn, said that if the prescriptions were written only in terms of grams and milligrams much confusion would be avoided.

Report of Cases Illustrating the Value of Rectal Injections of Salt Solution in Hemorrhage.—Dr. T. B. Greenley, of Meadow Lawn, Ky., presented this report. The histories of several such cases were reported in which the procedure was a life-saving measure. From one to two quarts of decinormal salt solution was employed.

Preventive Treatment of Migraine.—Dr. E. W. Mitchell, of Cincinnati, Ohio, discussed in this paper the various theories that had been advanced to explain the cause of this affection. The theory of auto-intoxication had the most adherents. The paraxanthin theory had not been verified. He believed in an absolute withdrawal of all red meats. These attacks could generally be prevented by the use of the following mixture, to be taken each morning before breakfast: Sodii sulph. and sodii phosph., of each ʒ ii.; sodii salicylas, gr. x.; tr. nux vom., ♏ iii; water, ℥ iv. This was best administered in seltzer or Vichy.

Dr. A. L. Benedict, of Buffalo, said that as a general rule the amount of hydrochloric acid was very much diminished in the gastric secretions of these patients. He advised that it should be administered as a routine treatment.

Dr. I. N. Upshur, of Richmond, thought that the disease was in almost every case due to nerve strain. It was caused by dietetic disturbances in only a very small percentage of the cases. In many of these cases during an attack the fæces were clay-colored, and this was due to disturbances in the liver. Full doses of sodium phosphate in hot water on an empty stomach for several days had given him the best results.

Dr. J. M. Allen stated that in many of these cases in which he had performed autopsies there was a chronic ulceration of the common bile duct, which, when inflamed, penned up the secretions in the gall bladder, and then they were diffused throughout the system.

Dr. Bartley pointed out that Haig, in his work on this subject, confused xanthin with uric acid, and that many of his conclusions were faulty.

The paper was further discussed by Drs. Yasnall, of Washington, and H. Stern, of New York.

Dr. Mitchell, in closing, said that the white meats were less likely to cause fermentation than the red meats, and therefore were to be preferred.

The Rôle of Drugs in the Management of Consumption.—Dr. S. Solis-Cohen, of Philadelphia, presented a paper with this title. He said that tuberculosis was a curable disease. Drugs played a secondary part in its management. In the pretuberculous stage nitroglycerin was a valuable agent, causing the blood to penetrate to the utmost recesses of the lungs and thus to favor nutrition. All the tonics and good hygiene were to be employed during this stage. The building up of nutrition was the broad principle of cure, and should be pursued throughout the whole course of the disease. Digitalis was very valuable in cases in childhood and also in the florid or galloping variety, and in the bronchopneumonias occurring in chronic tuberculosis. Iodine and iodoform were the most useful drugs to influence the local condition. He began with doses of iodoform gr. ss. three times a day in pill form. This was gradually increased until in three months the patient was taking gr. v. t.i.d. As an inhalation both the iodide of ethyl and myrtol had given very satisfactory results. Myrtol if given internally was one of the best agents for the control of the bronchial inflammatory conditions accompanying the disease. Formaldehyde by inhalation acted well in the laryngeal form. Calcium chloride given in dose of gr. xv. every two hours continuously for three or four days would stop persistent hæmoptysis. It should not be continued for more than five days. Hydrastine hydrochlorate was also useful. Ergot was useless for this purpose. Camphoric acid and atropine usually would control the night sweats.

Importance of Early Recognition of Tuberculosis.—This paper was read by Dr. A. M. Holmes, of Denver, Col. He divided the disease into three stages: (1) The pretuberculous stage, in which there was no lesion but a susceptibility; (2) early incipiency—a lesion or tuberculous infection being established, but bacilli not being present in secretions or excreta; (3) when a well-established lesion was present and bacilli appeared in the sputa. Among the early suspicious symptoms might be mentioned a rapid and variable pulse. Pleuritic friction sounds were generally of tuberculous origin. The cog-wheel respiration was a very suspicious sign. This was heard most plainly toward the end of inspiration, and was accentuated if a strong heart action was present. Subnormal temperature in the morning was another early sign.

Dr. William H. Thomson, of New York, said that tuberculosis was either simple or complicated. In the lungs it was always of the latter sort. The disease would have no antitoxin because it was unlike the other infections in that nature did not tend to limit its growth. Birch-Hirschfeld was quoted as having found it present in seventy-eight per cent. of four thousand autopsies. In the lungs the constant movement in respiration was a great hindrance to its cure. The specific effect of the tubercle bacillus was emaciation. By this was meant a loss of fat in every tissue except the nervous system. The facial expression and contour of the consumptive was the result of this emaciation. As therapeutic agents iodoform and arsenic ranked foremost. He administered creosotal in doses of gr. xx. every two or three hours. There was no drug that would act so well in the septic cases as fresh air. Cod-liver oil was generally ordered when the stomach tolerated it.

Dr. I. N. Upshur said that the stomach was to be preserved at all hazards. Hygiene was to be relied on, and few drugs should be given.

Dr. Cohen, in closing, emphasized the point that the patient's vital resistance was the key to the whole situation, and everything possible should be devoted to the increasing of this resistance.

Heart Tonics.—Dr. I. N. Upshur, of Richmond, Va., discussed this subject. He said that digitalis was an unsatisfactory and uncertain remedy because its action could not be controlled. The same was true to a less degree of convallaria. Sparteine was of great service in weak and flabby hearts. Strophanthus was very much superior to digitalis. It was more prompt in its action and more permanent in its effects. When combined with strychnine it was a most valuable agent in fevers and weak states of the system. Atropine was of especial value in cases of cardiac insufficiency accompanied by bronchorrhœa. Caffeine was of considerable service when the kidneys were affected. Strychnine was our most valuable and reliable heart tonic. If given before chloroform anæsthesia it prevented cardiac failure. It was invaluable in the case of a weak heart from any cause. Nitroglycerin was not a heart tonic. It was contraindicated in weak states of the system, and especially in surgical shock. It was a motor depressant, and its too free use was fruitful of harm. In the late stages of typhoid, opium seemed to have a true tonic effect on the heart. Cactus grandiflorus was useful in cases of rapid heart due to tobacco poisoning.

Dr. Garlock, of Little Falls, N. Y., said that most of our therapy in heart diseases should be directed to the condition of the blood rather than to the heart itself.

Dr. Melvin, of Saguache, Colo., said he had employed cactus grandiflorus either alone or with strophanthus in various forms of cardiac disease, and was well pleased with its action. He gave the fluid ex tract every four hours in doses of ♏ ix.

Dr. Heinrich Stern said that adonidin was one of the safest and surest of cardiac tonics that we possessed. It was of especial value when nephritis was present.

Classification of Medicines Based on the Time Required to Produce their Effects.—Dr. William

H. Thomson, of New York, read this paper. He said that the vagueness of terms used to designate medicinal agents was the cause of much of the therapeutic scepticism of the present day. The classification should be founded on fundamental distinctions. He distinguished two general classes: (1) Functional or symptom medicines; these had no effect on structure. (2) Nutritive medicines; these should not produce symptoms no matter how long they were employed, and they affected structure solely. He outlined how the classification could be carried out in the case of the commoner drugs, and spoke of the different actions of large and small doses of the same drug.

GENERAL SESSIONS.

Third Day—Thursday, June 7th.

Oration on Medicine.—Dr. John A. Witherspoon, of Nashville, Tenn., delivered this oration. He first paid his respects, in a witty and pointed manner, to the manufacturing chemists and their commercial allies, who were so fond of deluging the profession with their products, and, at the same time, giving "instruction" to the doctor concerning the use of these products, and incidentally as to the best way for him to practise the healing-art. A strong plea was made for the establishment of a national department of health, and the advantages which would accrue to the whole nation from such an arrangement were clearly pointed out. The speaker then went on to sound a note of warning against the present tendency of physicians to give indiscriminately the preparations of opium. Too often, he said, the degeneracy produced by this insidious drug was transmitted to the offspring of the unfortunate victims. The "hypodermic shot" was too often given for a stomach-ache when a dose of oil was what was needed, or it was given month after month to relieve painful menstruation, until the brilliant eye of the young and healthy woman gave way to the dull expressionless eye and the muddy skin of the morphine habitué. The same was true of cocaine, and its careless and indiscriminate use in minor surgery and elsewhere. In approaching the subject of the useless multiplication of books and authors, the speaker declared that he did so with trepidation, and that he felt like taking off his shoes, for he knew he was standing on "holy ground." Many books and papers were written merely to satisfy the personal ambition of their authors. There was a prevailing tendency, amounting almost to a mania, among young men to rush into print and appear as "authorities." He did not mean that young men should stay in the rear, but he did contend that they should print their views, not in books, but in the medical journals—those great educators of our busy profession. In conclusion, the speaker averred that when the regal robes of ethical medicine should have been made aseptic, and should have been cleansed from their present pollution, we might be justified in exclaiming:

> "Sound the loud timbrels o'er Egypt's dark sea.
> Jehovah has triumphed; the people are free."

Military Education and Sanitary Knowledge.—On motion of Dr. Tuckerman, of Ohio, the following resolution was adopted:

"*Resolved*, That the national legislative committee, in conjunction with the special committee on reorganization of the army and navy medical corps, cause to be drafted a bill providing for adequate instruction in hygiene and sanitation in the national military and naval academies, such bill to be perfected at the next meeting of the joint national legislative committee of the American Medical Association and affiliated societies, and to be pushed through Congress as speedily as possible."

A Grant for Scientific Research.—In accordance with the suggestion in the president's address, the trustees were requested to set aside the sum of $500 annually for the encouragement of scientific research, this sum to be increased in the future if the finances of the association warranted such a course. The manner of expending this sum was left to the committee on scientific research, and it was directed that the money be distributed in sums not to exceed $50 or $100 to any one individual.

Fourth Day—Friday, June 8th.

This was only a short session for the transaction of routine business.

After the usual votes of thanks, the association adjourned at 11:30 A.M., to meet in St. Paul, Minn., on the first Tuesday in June, 1901.

The total number registered at this meeting of the association was 2,030.

SECTION ON PRACTICE OF MEDICINE.

Third Day—Thursday, June 7th.

Malaria and Mosquitos.—In discussing the paper upon malaria Dr. Thayer said the commonest mosquito was not capable of transmitting malaria. Those of one genus only did so, and these only when they were themselves infected. They could take in the poison from a case of relapse and transmit it in regions previously free from malaria. As to transmission by the gastro-intestinal tract, there was little evidence in favor of it.

Dr. Edwards, of Philadelphia, said that getting rid of ground-water and using rain-water or that from deep wells had seemed to do away with malaria in certain regions of North Carolina.

Dr. Howard said the Anopheles had been found at an elevation of one thousand feet, but it was usually found lower.

Dr. Woldert said that the mosquito remained infective for two to three weeks after biting a subject of malaria. Hæmoglobinuria was due to the malaria as a rule and not to the quinine administered.

Dr. Burns, of Arkansas, reported on sixteen cases of malaria showing hæmoglobinuria, more than half of the patients having died without quinine having been given. He gave quinine in one case, and although hæmoglobinuria came on the man recovered, and since then he had used quinine freely. He thought that quinine might often save life in these cases. He objected to the term post-malarial hæmoglobinuria.

Prolonged Fevers of Obscure Origin.—Dr. Robert B. Preble, of Chicago, in this paper confined his remarks to cryptogenic sepsis, leaving aside a great number of obscure fevers due to a wide range of causes, and these were termed "obscure" only because of their occurrence in unusual locations or because of being obscured in their symptomatology and course. The reactions recently introduced (Widal, diazo, etc.), more careful examinations of the blood, exclusion of the malarial parasites, etc., had done much to aid in the proper recognition of such confusing conditions. A wide range of diseases were included in this sepsis, such as malignant heart disease, purpura, etc. In treatment the strength must be supported, and antistreptococcic serum, salt solution, etc., used.

Dr. Bishop, of New York, said there was a class of cases usually referred to as blood-poisoning. He thought some of the cases were really typhoid, as another speaker had suggested. The blood should always be examined to exclude the latter.

Dr. Davis, of Chicago, thought the explanation made a certain class of cases much clearer. In obscure fever of septic origin we must watch for endocarditis just as in rheumatism.

Dr. Preble said he did not exclude a diagnosis because of the absence of the Widal reaction. He did not suggest doing away with terms of convenience, but students should be instructed that these conditions were but different manifestations of similar processes.

Pathology of Rheumatism.—This paper was read by Dr. David Riesman, of Philadelphia.

Some Thoughts on Rheumatism and Prevention of Heart Complications.—Dr. James J. Walsh, of New York, read this paper. He said that rheumatism was regarded as an infectious disease, probably a mild pyæmia, and was self-limited. Dampness was a secondary cause. The contagiousness seemed established. That rheumatism was not a simple disease was shown by the multiplicity of organisms giving a series of similar affections closely associated. The simple form was due to a diplococcus, in rapidly fatal cases to an anaerobic bacillus in all probability. The uric-acid theory has been practically abandoned. More than half the endocarditis was due to rheumatism. There was no specific, and no drug treatment lessened the liability to the involvement of other joints or of the heart. The salicylates alleviated symptoms better than any drugs previously recommended, and were less objectionable. For heart complications nothing equalled rest in bed. These were not complications, but integral parts of the general infectious process.

The Relation of Chorea and Rheumatism.—Dr. C. W. Burr, of Philadelphia, read this paper. He said there was frequently a history of rheumatic fever or less frequently of "growing pains" preceding Saint Vitus' dance. Chorea less often occurred during an actual outbreak of rheumatism. Valvular heart disease was frequent.

The speaker did not think the coincidence of rheumatism and chorea was of sufficiently frequent occurrence to show that the one had more than a predisposing influence over the other.

The Heart in Rheumatism.—This paper was read by Dr. De Lancey Rochester, of Buffalo. He looked upon rheumatism as an infectious disease involving the heart in a large percentage of cases. The younger the patient the greater the liability to endocardial involvement. Pericarditis because of its variety was to be looked upon as a complication, more severe in effects as a rule than was endocarditis. The myocardium became involved in the presence of both inflammatory processes, but was more pronounced in pericarditis. The occurrence of endocarditis or of pericarditis did not contraindicate treatment by the salicylates.

Pathogenesis and Clinical Features of Arthritis Deformans.—Dr. A. O. J. Kelly, of Philadelphia, read this paper. He thought that of all the names suggested, the one here employed was to be preferred. The pathogenesis excluded gout and rheumatism, though these might precede or complicate. Only two theories were worthy of present serious consideration, *i.e.*, the neural or nervous and the infectious or bacterial. The arguments advanced in support of each were reviewed. He believed the disease to be an infectious tropho-neurosis, and not a disease of spinal origin or the result of peripheral neuritis. It occurred after known infectious processes.

Dr. J. M. Anders, of Philadelphia, said he had observed a heart murmur disappear in chorea following rheumatism, and did not think such murmurs always indicative of endocarditis. Acute articular rheumatism as a primary affection was rare. It was common after infectious diseases and in convalescence from scarlatina. Osteomyelitis must not be confounded with acute articular rheumatism, or the results would be disastrous. The bones here became enlarged, and side-to-side pressure directly over or above or below the joint elicited tenderness and pain in the early stages. It was often monarticular, but might involve more than one joint. In septic ostitis the symptoms were more severe, but sweats were less profuse. Salicylates did not relieve the pain. Alkalies combined with salicylates tended to obviate heart complications.

Dr. C. G. Stockton, of Buffalo, said that we had not reached a point where we could say that rheumatism depended upon one single infection, as was the case in scarlatina. Arthritis deformans was an entity. By neuro-trophic infection was undoubtedly meant that neuro-trophic changes predisposed certain tissues to infection. This was a tenable belief. So-called diatheses might likewise predispose to infection at certain points. There were climatic influences which surely had an effect. Little could be at present positively affirmed.

Dr. L. F. Bishop, of New York, said he felt more clear in his mind than some speakers as to classification. There were disorders of the chemistry of the body and of nutrition which had an influence outside of infection on which acute articular rheumatism depended. Gout was a disorder of the chemistry of the body. Trophic disturbances accounted for some affections. Arthritis deformans might come on after shock, grief, etc. He did not look upon chorea and rheumatism as the same disease.

Dr. H. B. Favill, of Chicago, believed with Dr. Bishop that there was a chemical foundation. He thought, however, that we must wipe off the slate and begin the study of rheumatism anew. On one side there was a toxic relation, on the other infection, but he could not define his views more closely. Chorea did not result from rheumatism, but occurred in those in whom rheumatism was prone to develop.

Dr. McCaskey said that the use of the term rheumatism should be strictly limited to the clinical picture we all recognized, and the designation rheumatic dropped in speaking of other affections. In arthritis deformans cataphoresis with a solution of iodide of potassium had given him satisfactory relief of symptoms. Antiseptics could be used in the same way.

Dr. Solis-Cohen said arthritis deformans must be still further separated into several classes. He thought "toxic" tropho-neurosis was more appropriate than the term "infectious." Then all would agree. He referred to the tincture of the chloride of iron in treating acute rheumatism, especially combined with salicylates and alkalies, as means of preventing heart complications.

Dr. Riesman said that we had agreed that rheumatism was "several diseases." Polyarthritis would be found to be due to one organism, and one alone.

Dr. Walsh said that endocarditis always occurred in the left heart. The blood flowing here came direct from the lungs. If the organism was aerobic, this location might be accounted for. Choreic children had usually had rheumatism previously, and that is why they had it subsequently.

Dr. Rochester said that rest in bed for six to eight weeks, often between blankets, was necessary in every case of acute articular rheumatism. He advised milk diet, occasional doses of Rochelle salts, and salicylates in large doses at intervals of two or three hours day and night. It did not affect the heart. He had given 2 gm. of salicylate of sodium every three hours for several days. Oil of wintergreen disturbed the stomach more. Iron was of the utmost importance, especially the pyrophosphate ½ gm. to 1 gm., or ♏ xx.–xxx. of tincture of the chloride.

Dr. Kelly referred to different forms of arthritis deformans. Superheated air or steam over long periods of time had been of much benefit. The salicylate of strontium had given good results.

In What Relation does Occupation Stand to Tuberculosis?—In this paper, read by Dr. W. Freudenthal, of New York, the predisposition of tailors, sewing-women, printers, and others to tuberculosis was pointed out. The speaker gave the statistics of others and the results obtained in analyzing fifteen hundred cases. He found that in many instances the primary lesion of tuberculosis was not to be looked for in the lungs, but in the upper respiratory tract, especially the retropharynx.

Diagnosis and Treatment of the Prebacillary Stage of Tuberculosis.—Dr. J. M. Anders, of Philadelphia, read this paper. He thought there was reasonable certainty about accurate diagnosis before bacilli showed themselves in the sputum. He employed with this aim *x*-rays and the tuberculin test, and carefully studies the anamnesis, looking out for symptoms and physical signs in cases presenting unusual onset. It was possible for the bacilli to remain encapsulated until inroads had been made by the disease. He advocated early pre-bacillary treatment, and recognized the superiority of hygienic and climatic conditions in these early stages.

Rest in Pulmonary Tuberculosis.—Dr. Carroll E. Edson, of Denver, in this paper showed the importance of securing proper rest, many advising exercise in the early stages, especially to the disadvantage of the patient. There were indications in the pathology of the disease for rest, and while physicians followed them as they applied to articular and laryngeal tuberculosis, they ignored them when the lungs were in question. There were also physiological reasons why phthisical patients should do well under this plan of management. This was especially true as applied to those who sought high altitudes such as those of Colorado, and there was abundance of clinical proof to substantiate the claim.

Pulmonary Tuberculosis.—Dr. C. P. Ambler, of Asheville, N. C., read a paper showing the present condition of one hundred and six patients treated in 1898, upon whose cases he had reported to the section at the last meeting. Of the cases then reported apparently cured under serum therapy reports had been received showing that they continued for the most part in the same highly satisfactory condition. Tabulated data arranged for comparison with the previous report were presented. Serum therapy was highly praised.

Tuberculosis of the Lungs.—Dr. A. F. Lemke, of Chicago, read a report upon special cases treated by the Murphy method, with nitrogen compression, giving the rationale of the method, considering the pathology, and presenting the results of his experiments on dogs. The average quantity of nitrogen which could be introduced into the pleural cavity without injurious effects was 120 cubic inches. Healthy lung tissue could be compressed for a year, and retained its capacity to expand. He found intra-pleural injections curative, and there was no evidence that fresh tubercle could develop in a compressed lung.

Silver-Injection Treatment of Pulmonary Consumption.—Dr. Thomas Mays, of Philadelphia, who read this paper, said he believed that primary changes in pulmonary tuberculosis did not reside in the lungs, but in the nervous system. Basing his treatment upon this view the reader had employed nitrate of silver injections to cause irritation over the tract of the vagi in the region of the neck. The counter-irritation stimulated to vital resistance the vagi throughout their ramifications, modifying lung conditions. In a period of a year and a half in which he had employed the method the results had been good, and more than half the patients so treated were now, at the end of eighteen months, practically well.

Dr. Vaughan, of Ann Arbor, thought that out-of-door treatment was not sufficiently utilized, in the East especially.

Dr. Rochester spoke of dissemination of phthisis by sewing-women having the disease, who worked in close quarters and had a habit of wetting the thread in the mouth. The naso-pharynx as well as the mouth was a good culture-ground for the bacilli. It was important to watch the temperature. It was probable that in health there was a normal curve of variation. Hence temperature observations must be made carefully. The sanatorium treatment was the very best, with rest out-of-doors. The individual should be treated.

Dr. Solis-Cohen said that there was a disease present before the tubercle bacillus gained entrance to the tissues. Treatment must vary with the stage. The first point was nutrition, but in all cases we must individualize. The temperature of the atmosphere had more influence upon the patient's temperature in phthisis than in almost any other disease.

Dr. Knopf, of New York, had found that laundresses who sorted dirty linen, and rag sorters were more prone to consumption than others. Prolonged rest on the back produced hypostatic congestion, so we must alternate it with exercise in well-regulated stages. He gave as little creosote as possible. Counter-irritants were of value. The tenements of the poor must first of all be improved before sanatoria are established to counteract their evil effects. The State should contribute to the care of the consumptive poor close to their homes. Climate was not a specific. Consumption was a social disease.

Dr. Newton, of New Jersey, related a case in which there was an evening temperature in anæmia, tuberculosis being suspected.

Fourth Day—Friday, June 8th.

The Relative Importance of Valvular and Muscular Lesions in Diseases of the Heart.—This paper was read by Dr. S. Solis-Cohen, of Philadelphia. He said that in the great majority of cases of chronic disease of the heart, the exact site and nature of the valvular lesion. while always to be taken into consideration in treatment, were of less importance therapeutically and prognostically than the state of the cardiac muscle. The most important exception to this general rule was in the case of mitral stenosis with great narrowing. Aconite was often in use in this condition to reduce the excessive muscular effort, not only in the absence of hypertrophy in cases of compensation, but even when compensatory hypertrophy had not become sufficient. In many cases in which no evidence of valvular lesion could be detected during life, and in some of which slight valvular alterations, in others normal valves were demonstrable after death, there existed rational signs of cardiac incompetence which were due to diseases of the cardiac muscle. In the absence of valvular lesions, intermittence or irregularities of the pulse, disturbance of rate or rhythm by slight causes. and recurrent pain referred to the precordium, in non-hysterical and non-neurasthenic subjects, were the principal local symptoms. There was usually impurity or weakness of the first sound of the heart, with approximation of the two sounds in quality or relative accentuation of the second sound; later embryocardia and gallop rhythm might develop. Gout, syphilis, alcohol and tobacco, tea and coffee, sexual excesses, mental strain, and physical overwork were among the chief provocatives of disease of the myocardium. Among the acute infections, influenza was a frequent cause of cardiac-muscle disease.

Diagnosis.—Other than the general diagnosis of disease of the myocardium, there was not yet sufficient knowledge of clinical signs to permit accurate recognition of the lesion. The differentiation between neurasthenia of the heart and disease of the myocardium might be difficult. The chief importance of the subject lay in the avoidance of error—(1) in the prognosis and treatment of valvular disease, which might be over-treated or under-treated through failure to estimate properly the condition of the muscle; (2) in the recognition of serious lesions of the muscular structure of the heart in cases that had been supposed to be normal because of the absence of valvular murmurs; (3) in the distinction between organic and muscular lesions and functional disturbances, and in the realization of the fact that the latter might lead to the former.

Treatment.—In treatment, judicious regulation of diet, rest and exercise, avoidance of exciting causes and excesses of any kind, the good functional condition of the skin and eliminative organs were of the first importance. Warm, saline, carbonated baths and, in some cases, gentle massage and resistance exercises carefully adapted to the individual case, were of great benefit. Nitroglycerin was the most useful single agent of the materia medica. Strychnine, digitalis, adonis, cactus, strophanthus, and sparteine had usefulness in individual cases. Venesection should be made promptly in cardiac failure.

Clinical Study of Myocarditis.—Dr. Louis F. Bishop, of New York, said he believed the importance of recognizing myocardial lesions to be very great, as it had a decided bearing on prognosis in many affections. The myocardium was as important as the peri- and endocardium. The symptoms here gave us more aid than did the physical signs, but in many instances we must carefully differentiate from "nervous heart." A study of a series of cases which he referred to showed the relation of irregularity of rhythm to disease of the muscle.

Plea for More Rational Prognosis in Cardiac Affections.—This paper was read by Dr. J. J. Morrissey, of New York, and was based upon the study of two hundred and fifty-five cases. He said that accurate prognosis necessitated a complete diagnosis. This should not be based solely upon the physical signs present, which were frequently deceptive and limited in character, but upon a consideration of the cardiac efficiency, of the presence of hypertrophy, and of the condition of organs far removed from the thoracic cavity. We should obtain as accurate a history of causation and duration as possible. A gloomy prognosis should not be given upon the simple fact of murmur alone; the condition of the cardiac walls should be considered, the probable duration, the presence of dilatation or hypertrophy, and the occupation and temperament of the patient. There was no means of recognizing the strength of the individual heart except by its power of resistance to the effects of alcohol, tobacco, disease, occupation, and exposure. As Allbutt says: "Give your prognosis on the best suppositions, treat your patient on the worst." Prognosis based on the presence of a murmur was unjust and demonstrated incapacity upon the part of the physician. We wished to be just to the applicant, and at the same time to do our duty toward the insurance company. The fact that a man had a murmur at the apex, of which he was entirely unconscious, whose heart was doing its work thoroughly despite the existence of the lesion, whose occupation was not of an adversely laborious character, who had passed that period of life when acute rheumatic infection was liable to stimulate into fresh and renewed activity the latent inflammatory products of an endocarditis, should be factors in recommending a policy commensurate with the degree of cardiac inefficiency. A presystolic murmur did not always indicate mitral stenosis. From the standpoint of longevity aortic stenosis was a favorable lesion. The speaker differed from authors who stated that it appeared for the most part after middle life. He found it between the ages of thirty and fifty as part of general atheromatous changes, but it was more frequently present without such pathological manifestations than had been suspected. A young man between the ages of eighteen and twenty-five should not be informed that he had heart disease because some hypertrophy had been discovered, with no complication, the result in most instances of active exercise. The patient should return for further examination, as the condition might then have entirely changed.

Diagnosis of Diabetes.—Dr. J. B. Herrick, of Chicago, read this paper. He said that the detection of sugar was always the final test, but there were rarer manifestations which, if taken in time, would not only lead to proper diagnosis, but would permit of early proper treatment. Among such symptoms were neuralgias, neuritis, dry mouth, skin affections, impotence, psychical disturbances, angina, dyspnœa, somnolence, and irritability. The failure to detect or confirm diabetes was due to error in examination; to the fact that the urine was not examined or sugar was not present at the time of examination. Insurance companies should change their rule which required examination for sugar only when the specific gravity was above 1.015, since sugar was not infrequently found below 1.010. The variety of diabetes present should be studied.

Mortality from Diabetes Mellitus in the City of New York during the Decade 1889–99.—Dr. Heinrich Stern, of New York, read this paper, in which he drew deductions from statistics furnished by the city's bureau. In 1867, 931 deaths from diabetes occurred in females, a much larger proportion than that given in previous records. Tables by years were presented. For the eleven years the deaths by months scarcely varied; the limits being 190 and 134, showing that temperature, sunshine, etc., had but little influence on mortality. The increase in October was because the city was then most fully populated. The mortality in negroes was low.

Cutaneous Diseases Accompanying Diabetes.—Dr. M. B. Hartzell, of Philadelphia, read this paper. He said the importance of recognition of the relationship between skin manifestations and general conditions applied to many other affections besides diabetes. This was from both a diagnostic and therapeutic standpoint. In diabetes the skin was dry, the hair lustreless, the nails were brittle. Papular lesions might occur upon the arms. Eczema, beginning as a pruritus, especially about the genitals and anus, was one of the commonest forms. The prepuce might become thickened and fissured. Acne cachecticorum was often due to glycosuria, just as was furunculosis. Papillomatosis diabeticorum occurred as an inflamed patch upon the back of the hand. Gangrene might be moist or dry. Bronzing of the skin and xanthoma were characteristic features. Some affections might be prevented by proper bathing to remove all deposited sugar from the surface.

Dr. Solis-Cohen said that every case of glycosuria was not diabetes, although most cases were. It frequently followed influenza. Bilateral sciatica should make one suspect true diabetes.

Dr. Walsh said that tuberculous and nephritic subjects often died of unrecognized diabetes.

Dr. Morrissey said the same factors acting to produce the sugar produced the lessened sexual function. In examining a series of one hundred tuberculous subjects, he found sugar present in thirty per cent. In another series of fifty patients ten per cent. showed sugar.

Dr. Wahral, of Iowa, made a plea for the patient. Molecular changes in the nervous system should receive attention. Strict dieting was vigorously denounced as torturing the patient without good results.

Dr. Russell, of Philadelphia, thought fixed diet rules should not be laid down.

Dr. Osborne, of Connecticut, said that fifty per cent. of cases showed pancreatic disease. The other fifty per cent. occurred in a variety of affections, thyroid disease, etc. If we took away carbohydrates, we should slowly substitute fats.

Dr. Herrick spoke of obesity in regard to its predisposing to diabetes. He had never seen bilateral sciatica in diabetes, though he had been on the lookout for it for years. Too vigorous enforcement of diet was not advisable. All authors mentioned its dangers.

Dr. Stern said his statistics showed a large proportion of diabetes in the poor. The name diabetes mellitus was inappropriate. There were a pre-diabetic and a post-diabetic stage. Anti-diabetic diet was utilized only experimentally to determine the proper diet for each subject.

Exophthalmic Goitre.—Dr. O. T. Osborne, of New Haven, in this paper said that the name was a misnomer. He suggested that of Graves' thyroid disease. The cause of its frequency in women was the increased activity of the gland called forth by the normal sexual function, and the consequent susceptibility to permanent irritation. The relationship of the gland to the symptoms of the disease was discussed in relation to hypersecretion. Thyroid feeding, when it increased the symptoms in obscure cases, pointed to impending Graves' disease. Eighty per cent. of cases occurred in women. In treatment, those things which tended to diminish secretion and quiet the circulation did good, *i.e.*, strophanthus, with mental and physical rest. In an active case thyroid feeding would tend to do harm. Thymus-gland treatment at times did good. A portion of the gland should be removed if there were pressure symptoms. Ordinarily it was not justifiable to operate.

Dr. Herrick said that many patients suffered long before they presented marked symptoms, often giving signs of neurasthenia, or even of incipient tuberculosis.

Dr. Solis-Cohen thought experience showed mental and physical rest to be the most important factor. There was weight in favor of thymus feeding. The symptoms might spontaneously recede or disappear. Digitalis was to be used only when the particular heart showed its employment to be indicated. Hydrobromate of hyoscine, gr. $\frac{1}{200}$, for a maximum dose, and picrotoxin up to gr. $\frac{1}{20}$ every three or four hours, did good.

Dr. Osborne said it was a functional disturbance and not a disease at all. We must look to the emotional or psychic side of the individual for a cause of the hypersecretion.

Lesions of the Cauda Equina and Conus Medullaris.—Dr. Bertram W. Sippy, of Chicago, designated by the term conus medullaris that portion of the spinal cord at the lower end of the lumbar enlargement. He found that lesions here situated were characterized by well-marked disturbances, both sensory and motor. By means of diagrams he illustrated impairment of sensation in symmetrical distribution involving the perineum and the anal and scrotal regions. There might be loss of sexual power. That which chiefly characterized caudal disease was pain. The absence of pain indicated the conus affection.

Movable Kidney from the Standpoint of the General Practitioner.—Dr. A. Marcy, Jr., of Riverton, N. J., read this paper. He said that the disease was very frequent. All women who complained of reflex nervous symptoms, digestive disorders, hysteria, etc., and especially those of light weight, should be examined for movable kidney. Thin patients could be examined in the erect posture, the examiner standing behind and using one hand for either kidney. In stout subjects both hands should be used, the physician being seated at the patient's side. If necessary an anæsthetic could be given. A distended gall bladder or other organ must not be mistaken. Suitable cases should come to operation.

Dr. Cleveland, of Cincinnati, said that movable kidney was a general abdominal condition associated with enteroptosis and gastroptosis. He doubted the advantages of operation. There might be no painful symptoms.

Dr. Am Ende said that the first thing to do was to put away the corset.

Dr. Marcy replied that some patients were comfortable only when the corset was worn.

Antiseptic Treatment of Diphtheria.—This paper was read by Dr. D. Benjamin, of Camden, N. J. He said that statistics should be collected by an expert paid by the association. He had tabulated forty thousand cases of diphtheria. The success of germicidal treatment depended upon the thoroughness of application. For twenty years he had used local antiseptic treatment, chiefly tincture of iron chloride, and had not lost one per cent. by death. He gave tincture of iron coincidently in frequent doses.

Observations on Direct Antiseptic Treatment of Infectious Diseases.—Dr. C. Am Ende read this paper. He found that direct antisepsis gave gratifying results in diphtheria, as well as in a number of other infectious diseases. A pre-membranous stage could be detected, and medication could be applied early and prophylaxis thus be extended to others. Antiseptics modified the bacilli so that the microscope showed them changed. He used quinine with an excess of muriatic acid.

The Climatology of Arizona.—This was described in a paper by Dr. William Duffield, of Phœnix, Ariz.

The Clinical Examination of the Blood.—This paper was read by Dr. R. L. Watkins, of New York.

Certain Clinical Features of Influenza Recently Epidemic.—Dr. H. S. Anders, of Philadelphia, read a paper based on personal observations alone. Special features, as conjunctivitis, otitis media, laryngitis, purulent bronchitis, influence of previous affections on special features, complications, bradycardia during convalescence, antecedent and associated meteorological conditions and their bearing on symptomatology, were all discussed.

The section then adjourned.

SECTION ON SURGERY AND ANATOMY

Third Day—Thursday, June 7th.

Treatment of Hernia in Children.—Dr. A. J. Ochsner, of Chicago, read this paper. In considering the predisposing causes he laid particular stress on the descent of the testicle, and of congenital weakness of the abdominal walls. Long mesenteries he considered a questionable etiological factor. Among the exciting causes he mentioned: (1) Abnormal intra-abdominal pressure; (2) constipation; (3) phimosis; (4) coughing. These factors were, directly or indirectly, remote results of bad nourishment and evil hygiene. Hernia was, in support of this statement, by far more frequent among the children of the poor than among those of wealthy parentage. Another very interesting etiological factor was the nationality of the child, the lesion being particularly prevalent among the Jews. He suggested that here close intermarriage might be the cause, and believed that this subject would reward careful investigation. Herniæ in the young tended to spontaneous cure. At birth, one child out of every twenty-one was ruptured; at thirteen years of age there was but one in every seventy-seven. This spoke for itself. He felt that because of this, less than five per cent. of herniæ in adult life were congenital. He by no means insisted on early operation in childhood hernia; on the contrary, only acute conditions should lead to it. Intelligent medical treatment, however, was of the utmost importance, and in this connection he detailed some of the most important points. Posture was considered among the first. He recommended that the patient should be kept in a bed the foot of which had been elevated. The constipation, the coughing, the malnutrition were each to receive the most careful attention. A truss should be worn at night as well as by day, unless the recumbency kept the hernia reduced. Special attention should be given to the prevention of gaseous intra-abdominal pressure by the most careful feeding. In conclusion, he said that operation was indicated only under the following conditions: (1) Strangulation, (2) irreducibility, (3) abdominal hyperdistention, (4) irreducible hydrocele.

Treatment of Ventral Hernia.—Dr. M. M. Johnson, of Hartford, Conn., read this paper. He spoke first of the etiology, and cited the following factors: (1) prolonged use of drainage tubes; (2) healing by secondary intention; (3) division of motor and trophic nerves.

The speaker, after advising the avoidance of these, entered into minute detail of the technique of his operation, in the course of which he emphasized the desirability of (1) electrical incision; (2) silver wire; (3) kangaroo tendon. These were to be removed at the end of ten days.

Cure of Inguinal Hernia in Men.—Dr. H. O. Marcy, of Boston, read this paper. He spoke of the great safety of the modern operation, saying that scarce a decade had passed since it was fraught with the greatest danger. He felt the cause of hernia to be rather a failure in the development about the internal ring than any influence of the infundibular process. He urged that the wound should be made wide enough to permit of easy removal of cord and sac. In closing the sac, he recommended a suture rather than a ligature, citing a case in which the latter had slipped, with a fatal result. Especially he emphasized: (1) that danger was hypothetical; (2) that suture material should be absorbable; (3) that dissection should be free; (4) that the canal should be reconstructed; (5) that the wound should be sealed without drainage. In closing he thanked the section for their generous recognition of his services toward devising the modern operation.

Dr. De Garmo, of New York, urged the crying need of curing children. He paid high tribute to the ceaseless work of Dr. Marcy, who had been the father of the modern operation. He said that very frequently the immediate cause of hernia in infants was constipation. Operation he did not consider indicated before the fifth year of age, for earlier in life the hernia could generally be cured by a truss. He disagreed with Dr. Ochsner in that he thought that no ruptured child should be confined in bed, every one realizing how badly children did when so confined. In repairing ventral herniæ, the layers should be most carefully approximated, and, in thin cases at least, relaxation sutures were distinctly indicated.

Dr. Fergusson, of Chicago, felt that he voiced the sentiment of the section when he said that whatever progress had been made by Bassini and Halsted in the treatment of hernia had been due to the untiring efforts of Dr. Marcy. He cited an interesting anatomical point bearing on the relative infrequency of indirect inguinal hernia in women, viz., that in the female the internal oblique reaches three-quarters up Poupart's ligament, while in the male it involves but half the same area.

Dr. W. J. Mayo, of Rochester, Minn., praised Dr. Ochsner's conservative treatment. He felt that the great value of the so-called Bassini operation was that the scar was divided. This principle he would apply to umbilical herniæ.

Dr. Marcy again thanked the section for their recognition. He felt that the hernia question was settled, and expressed a wish that the three million ruptured citizens of the United States—the truss-bearing army—might all be operated upon.

External Drainage of Superficial Lung Cavities, with Report of Two Successful Cases.—Dr. W. L. Wills, of Los Angeles, Cal., read this paper. He drew attention to the vast interest which Western surgeons took in pulmonic surgery, because it was to the West that the great tuberculous population trended. He could see no reason why these cases should not be operated on, and strongly indorsed external drainage, citing two successful cases, as follows: The first one was that of a ranchman, of fine physique originally, at the time of operation dying of sepsis from the absorption of pus in a large cavity in the left lung. The speaker was disappointed, on resecting a rib, to be unable to locate the focus. This was due to delay caused by the very critical condition of the patient after the opening of the chest wall. Two days later, however, during a fit of coughing, there was a great discharge of very foul pus externally. The patient progressed to complete recovery. The second case differed from the first in that no internal drainage—via a bronchus—existed. That gravity drainage by external incision was indicated in these pulmonic-cavity cases seemed strongly supported by the immediate and permanent fall of temperature after its establishment. The speaker closed by suggesting that the free use of bichloride of mercury in solution as strong as 1:4,000, for irrigating these cases, was of very probable importance. Singularly, it did not seem to cause ptyalism.

In discussing this paper, Dr. Murphy, of Chicago, spoke of the importance of external drainage for the chest. In order, however, to accomplish it successfully, there must be pleuritic adhesions over the area to be operated on. When these were absent, he recommended internal drainage by gaseous compression of the lung. He advocated the admission of air to the pleural cavity through a hypodermic needle. He deprecated the use of the cautery in lung surgery, and urged that a sharp knife was free from danger.

Dr. Wills, in closing, spoke of the beneficence of the California climate, and said that it had an important bearing on these cases. He recommended the generous use of 1:4,000 bichloride.

Surgical Errors in Skiagraphy.—Dr. Carl Beck, of New York, read this paper. He felt that careful study of skiagraphs would enable us to make more general use of them. Many errors, indeed most errors, were due to a faulty interpretation. In the extremities, for instance, the arrangement of the carpus and of the tarsus were such as, in many positions, to cause a shadow to be cast from one bone to the other. Projection was an important factor in causing error. In fractures special thought should be given to the whereabouts of the epiphysis, which, particularly in children and often in the adult, gave a skiagraphic line of apparent breakage. In closing, Dr. Beck aptly said that it was extremely unwise to allow patients to examine united fractures with the rays, for a good functional union thus seen appeared often distressingly crude.

Diagnosis of Calculous Diseases of Kidney, Ureters, and Bladder by the Roentgen Method.—This paper was presented by Dr. C. L. Leonard, of Philadelphia. He spoke of the great advances which had been made in the diagnosis of these conditions by bacteriology, by cystoscopy, by urinalysis, segregation, and sedimentation. Ureteral catheterization, the sound being wax-tipped, after the suggestion of Kelly, the recurrence of attacks, and the proper interpretation of pain—all had a very useful end. He wished to bring before the section the latest, and perhaps the most important factor of use in the diagnosis of this obscure condition. When properly used, the Roentgen ray was almost absolute—would probably be absolute when technical errors had been eliminated. His last twenty cases of affirmative diagnosis had been correct. The work had been equally successful in negative diagnosis, and this often in the face of eminent clinical opposition. The *x*-ray admitted of very early diagnosis, an advantage which could not be overestimated. He cited cases in which, because of the presence of albumin and casts, diagnoses of nephritis had been made. In closing, he said that because of the *x*-ray exploratory incisions could now be avoided.

Treatment of Injuries of the Ureter.—Dr. B. B. Davis, of Omaha, Neb., read this paper. He said that ureteral injuries had been much more frequent than was generally supposed, and cited cases to prove this fact. Before the possibility of anastomosing the cut ureter was shown to exist, there was open to the surgeon but one of three very unsatisfactory procedures: he was obliged either to perform nephrectomy, to stitch the ureter to the skin, or to ligate its proximal end. The result of the first was never an enviable one; the second left the patient in a pitiable plight, while the atrophy which was supposed to follow the third was by no means constant. So much advance had recently been made, however, that none of these procedures was justifiable. He then described a method of anastomosis which seemed to him better and simpler than Van Hook's. Implantation into the bladder, that viscus having been freed from its attachments to a sufficient extent—after Kelly's method—to reach the proximal end of the ureter without tension, or uretero-ureteral anastomosis, seemed to him to offer a happy solution of the problem. In support of this statement he said: (1) The normal channel was thus preserved. (2) There could be no fistulæ. (3) Stenosis was not probable. (4) There was no leakage. (5) Cicatricial contraction gave no trouble.

Dr. Kelly, of Baltimore, said that Dr. Leonard was doing the finest work of any one in the world with the *x*-ray. He had recently failed to locate a stone with his wax-tipped sound, and Dr. Leonard had found it for him. He therefore heartily welcomed so valuable an aid to diagnosis. He demonstrated his cartridge-like instrument for uretero-ureteral anastomosis.

Dr. Bevan, of Chicago, also congratulated Dr. Leonard. He spoke of the very great value of the *x*-ray in urinary calculus and cited a case in which very small stones were located by its aid.

Dr. Bouvé classified uretero-ureteral anastomoses as follows: (1) end-to-end; (2) end-in-end; (3) lateral of Van Hooke; (4) lateral, as is ordinarily done with gut; this last had been done twenty-one times. Cysto-ureteral anastomosis was the next best. He believed there was a great future for sigmoido-ureteral anastomosis, which operation had been done eighty times.

Dr. Winslow, of Baltimore, spoke of the anatomy of the renal pelvis. It was not, as usually described, a dilated pouch within the kidney, but consisted of a series of tubes which frequently persisted well beyond the organ. If in one of these a calculus lodged, as was frequently the case, it might be seen how Dr. Kelly's wax-tipped sound would fail and the *x*-ray be of incalculable use.

Dr. Beck, of New York, said that the *x*-rays had not yet been fully appreciated. He spoke of the great need of making at least four or five plates in order properly to correlate the distances.

Dr. Somers, of Nebraska, emphasized the value of Kelly's operation of lifting the bladder to meet the too short ureter.

Dr. Carpenter, of San Francisco, reported a successful case of uretero-cystostomy. He showed a button for this purpose.

Dr. Leonard, in closing, said that by careful technique even uric-acid calculi could invariably be detected by the *x*-ray. This technique consisted in using for the ray a tube of such low vacuum that one could just see the muscular outlines. Formerly the rays were altogether too penetrating.

Exstrophy of Bladder, with Exhibition of Case.—Dr. Morgan Vance, of Louisville, presented this paper. He detailed the technique of the operation, which was plastic in character, and which was repeated in more than five stages, over a period of two years. The case had been a peculiarly evil one, had required a vast amount of patience, and had yielded a very brilliant success. The patient was a young man nineteen years old, and he had been enabled to enter business life successfully.

Dr. Willard, of Philadelphia, gave his heartiest congratulations to Dr. Vance. He said that an inward turning of the flaps is responsible for many failures; likewise a deposition of urinary salts. He recommended the use of the upper sigmoid or colon as a reservoir. He spoke of the desirability of transplanting the vesico-ureteral valve in these cases, to avoid infection.

Dr. Kelly, of Baltimore, said he had tried in vain to obtain a cure in these cases by a loosening of the sacro-iliac joints. He now shelled out the bladder far enough to meet the divided ureter; this failing, he urged the use of the colon for a reservoir.

Dr. Herzel, of Chicago, urged the use of the colon. He said that few cases of infection had resulted.

Dr. Connell, of Chicago, supported the use of the upper colon, thus doing away with the use of a rubber reservoir.

Dr. Vance, in closing, said that his was a very exaggerated case, and that he thought all cases could be cured by his technique.

Surgical Asepsis of the Urethra and Bladder.—Dr. Ferd. C. Valentine, of New York, demonstrated a new device, called the auto-irrigator, made of sterilizable rubber. The instrument occupied a space five inches long, three inches wide, and two inches thick in the instrument bag. It weighed about six ounces. The device had a capacity of 1,500 c.c. (about three pints). Its purposes were: (1) Urethral and intravesical irrigations before and after operative ingressions, preventing urethral fever; (2) an aid to the treatment of gonorrhœa in such cases as could not be irrigated in the physician's office twice daily; (3) as near an approach as was possible to aseptic catheterism in prostatic enlargements. The author appended to his paper a résumé of the treatment of gonorrhœa, the diet to be observed, and advocated the prevention of gonorrhœa by self-irrigation after suspicious coitus. These explicit directions were worded especially for those practitioners whose experience in genito-urinary diseases was not large. In closing he showed the old methods of irrigation to be incomplete and faulty.

Treatment of Prostatic Hypertrophy.—This paper was presented by Dr. Parker Syms, of New York. He dwelt interestingly on the very great prevalence of this condition. In considering the symptoms he spoke of the almost invariable prominence of dribbling, due to the dilated bladder, and of the frequency of micturition. Almost invariably a chronic cystitis was present, which, from time to time, was provoked to acute exacerbation. Formerly, indeed until very recently, catheter life was the ultimate and unhappy ending of these cases. Now, however, two alternates had come into the field: (1) prostatectomy, and (2) prostatotomy, or Bottini's operation. Dr. Syms made only a passing allusion to the latter, saying that he felt that for certain cases it had a brilliant future. Of the former, he spoke at length, devoting most of his considerations to a new and interesting technique. That the death rate was high in this operation he could not deny, but he was convinced that this was due very largely to the extreme physical and mental depression present in almost all cases operated on. For this reason the operation should not be undertaken as a last resort, but practised rather at the inception of the hypertrophy, or, at any rate, just as soon as the habitual use of the catheter became necessary. Physiological old age, however, contraindicated operation. Of technique he spoke as follows: In 1898 he advocated the perineal route, crowding down the prostate through a suprapubic incision. Now, however, he had given up opening the abdomen, using by preference a small opening in the membranous urethra. Through this, and into the bladder, he introduced a rubber bulb, tied to the end of a soft catheter. After introduction, the bag was filled with water and the tube was clamped. Traction on this simple device readily drew the prostate into the perineal wound.

Dr. Thayer, of Clifton Springs, New York, said that cystitis was always of bacterial origin, and was characterized by a loss of tissue. As to Dr. Valentine's method of irrigation, he had nothing to offer but praise. It was impossible properly to disinfect the canal by any other method.

Dr. Glenn, of Alabama, thought Dr. Valentine over-enthusiastic. He did not feel it necessary to irrigate before instrumentation except in pus cases.

Dr. Young, of Baltimore, had been greatly interested in Dr. Syms' paper. Nevertheless, he felt that the Bottini operation was the better because the median lobe only of the prostate was the area usually involved.

Dr. Chesmore, of Philadelphia, was pleased with Dr. Syms' method of pulling down the prostate, and especially advocated the abolition of the suprapubic incision.

Dr. Beck, of New York, supported Dr. Valentine. Too much care could not be given to antisepsis.

Dr. Robbins, of Detroit, said that of all drugs he considered terotropin to be the most valuable. He thought Dr. Valentine's auto-irrigator no better than an ordinary syringe.

Dr. Eastman spoke of the value of potassium bichromate in gonorrhœa, used hot, often, copiously, and under pressure. He preferred a blunt syringe to the auto-irrigator.

Dr. Grey, of Jersey City, testified to the value of enucleation, although he supported the suprapubic incision. He suggested the stretching of the sphincter ani in order that pressure might be brought upon the prostate through the rectum.

Dr. Guitéras, of New York, said that washing invariably did good even if it was but with sterile water. The patient should not irrigate himself, unless with an absolutely bland solution, if obstruction was present. He considered the auto-irrigator as incomparably superior to the syringe. He congratulated Dr. Syms on his very able paper. Prostatic surgery was still in its infancy. Enucleation should not be thought of if the kidneys were damaged or in the face of arteriosclerosis. Touch was very necessary in the determination of mid-lobe enlargement. The vesical side of the prostate often differed very markedly from the rectal. Enucleation was suitable only in the greatly enlarged glands, whereas Bottini's operation was to be chosen in the slighter cases. The mortality should not be above five per cent. Enucleation, however, would for many years probably give a death rate of twenty per cent.

Dr. Valentine said, in closing, that Bottini's operation had been made much simpler by the introduction of an incisor with cystoscopic attachment. He defended the auto-irrigator.

Dr. Syms pointed out that his device was to be inserted through the membranous urethra, not through the penile part.

Fourth Day—Friday, June 8th.

Treatment of Tuberculous Knee Joint.—Dr. Wisner R. Townsend, of New York, presented this paper. He divided the topic into constitutional and local treatment. The first, of the gravest import, was generally neglected. Diet, climate, rest, and creosote he spoke of in turn. The second involved—(1) rest of the joint; (2) correction of the deformity; (3) removal of diseased bone; (4) treatment of complications. Of the varied means of getting rest, the Thomas knee splint was doubtless one of the best, particularly if combined with a rubber footpiece. Again, the dressing must be snug, else a great deal of deformity might take place beneath it. As to the correction of deformity, he mentioned (1) weight; (2) traction; (3) force, with or without an anæsthetic—in no case violent. He absolutely excluded brisement forcé. (4) Tenotomy; (5) osteotomy or osteoclasis; (6) excision; (7) amputation. Decalcified bone must be early and thoroughly removed. Septic knees demanded a very thorough draining, this often leading to happy results. Cold abscesses in the region of the knee must be treated as though fulminating, for at any moment they might become septic. The local treatment of sinuses by drugs was negative; they often took two or three years to heal. Dr. Townsend closed by saying how promising was the outlook in tuberculous knee-joint cases.

Dr. Barton, of Philadelphia, agreed with Dr. Townsend. He suggested the total extirpation of cold abscesses.

Dr. Ochsler, of Chicago, said that he lived amid a great tuberculous-knee-joint population. He emphasized the absolute need of good hygiene.

Dr. Bullett, of Louisville, said that the protective treatment had given far better results than the operative.

Dr. Sullivan, of Chicago, said that early diagnosis was very necessary, and rarely attained.

Dr. Townsend said, in closing, that he emphatically indorsed evacuation; that the involvement of the lower epiphyseal cartilage often resulted in nine inches of shortening.

Fractures of the Patella.—Dr. J. M. Barton, of Philadelphia, read this paper. He spoke of the unsatisfactory results of the expectant treatment. Out of seven hundred and eleven cases operated on by American surgeons there had been but three fatal cases. The necessity of operation was caused by a falling of the pre-patellar membrane between the fragments. He urged that in uniting them, heavy silver wire be used, and that the ligature should pass well into the bone substance. He spoke of the need of strict asepsis and of the importance of removing all blood clots. Postoperative rest should not be over three weeks, when gentle motion should begin.

Operative Treatment for Unreduced and Irreducible Dislocations.—Dr. A. D. Bevan, of Chicago, read this paper. He cited cases and showed skiagraphs of three elbow dislocations, four dorsal of the hip, and one of the astragalus. He urged the open method—free incision and no drainage. This, combined with an intelligent use of the *x*-ray, presented the modern surgical treatment of these deformities. He concluded as follows: (1) Operation was justifiable if asepsis was perfect. (2) Dislocation was frequently complicated by fracture. (3) The best incision for the elbow was a double lateral. (4) No drainage was to be used. (5) The elbow should be dressed in semi-flexion, with the hand in pronation. (6) Passive motion should begin early. (7) The mortality was less than five per cent. (8) The patient should be warned of this danger.

Dr. Blake, of Chicago, agreed with Dr. Barton in all respects. He felt that the patella might unite as did any other bone.

Dr. Tinker, of Philadelphia, spoke of aluminum bronze as specially useful in bone work. It was first used in Germany in 1895. It was to a considerable degree absorbed, due to the aluminum being acted on by the plasma salts. Thus all sharp edges were worn away, making the tissues very tolerant of it.

Dr. Ochsler recommended a transverse incision, and said that the knee should be well elevated after the operation. He allowed the patient to walk three weeks after the operation.

Dr. McFarland, of Pittsburg, spoke strongly against operating. It was very well for the great joint cavities to be opened by men trained in the rules of absolute asepsis. But to him it seemed a very unwise procedure in the hands of the average surgeon.

Dr. Barton, in closing, said that he wished to lay stress on the use of rubber gloves and on the penetration of the bone tissue by the suture.

Dr. Bevan, in closing, said that, singularly enough, he did not support the open operation in fractured patella. It seemed incompatible with the tenor of his paper, but he begged to make the knee joint his one exception.

Report of Five Cases of Tetanus Treated with Antitetanic Serum.—Dr. J. D. Blake, of Baltimore, read this paper. He spoke of the rapidly growing importance of serum therapy. He urged the giving of large doses of the serum, and cited his last five consecutive cases, all of which had resulted in recovery.

Dr. Whitmore, of New York, stated that nine cases had been experimented upon at Roosevelt Hospital last summer. These had been trephined and inoculated sub duram. Seven patients had died.

Two Cases of Growths in Frontal Sinuses.—Dr. W. D. Hamilton, of Columbus, presented this paper. He said that these growths were often osteomata; that the diagnosis was rarely established till the deformity was marked, and that because of the septic nature of the area they yielded a mortality of thirty-three per cent. Occasionally, because of the proximity of the brain, pressure symptoms developed early, particularly in the eye. He cited two cases of successful removal, and spoke of the need of an early diagnosis of malignancy.

Dr. Dawbarn, of New York, said that this early diagnosis could often be very easily and surely made. For years he had been in the habit of thrusting the blunt end of a sewing-needle against the questionable area. Very early in the malignant process the hard parts of the bone are absorbed, and this blunt instrument would readily penetrate it long before there was any external evidence of disease. A second point established by Dr. Dawbarn was that the technique of crushing a passage through to the nasal cavity from above was open to severe criticism. As was shown by him long ago, in Wood's "Reference Handbook," by bending a probe at a particular angle the natural passages could be passed through from above downward, thus avoiding unnecessary and prejudicial crushing of the bone.

Laminectomy for Diseases and Injuries of the Cord.—Dr. Samuel Lloyd, of New York, read this paper. He had recently operated on fifteen cases of Pott's disease, making a total of one hundred and thirty. This operation was not dangerous *per se*, but at best offered little hope; it was absolutely hopeless if the anterior portion of the spine was diseased. If the disease was strictly localized posteriorly, an early diagnosis having been made, there was ground for hope. The lower the region of involvement, the better. He considered that the myelitis was generally due to the pressure from accumulated débris rather than to granulation tissue. The operation was hopeless if this change was well established. In Pott's disease, operation was rarely indicated after the inception of paralysis, because of the probable establishment, by that time, of pulmonary or other foci. Tumors gave a fifty-per-cent. mortality, but this was due rather to their being usually malignant than to a fatal outcome of the operation. Fractures in the cervical region yielded a very small percentage of recovery. The type of fracture was also a factor. Most vital of all was the consideration of elapsed time. He gave the following indications for operation: (1) If the cord destruction was incomplete; (2) when the lesion was incomplete but was extending; (3) when recovery, almost complete, was interrupted by callus formation. In closing, he advocated operation as a desperate chance.

Dr. Dawbarn said that he rose to emphasize rather than to criticise. This emphasis was particularly directed to the crying need of early operation. He cited two cases—the first that of a woman who fell four stories, sustained a fracture, presented the typical symptoms, and was operated on by him within two hours. The result, after enucleation of a large blood-clot and the removal of a good-sized bony fragment, was perfect recovery. In the second case, under the advice of certain nerve specialists, the patient refused operation until myelitis was well established. Although the operation was helpful to the patient, the paraplegia had been permanent.

Dr. Hough, of Massachusetts, cited a favorable early operation.

Dr. Lloyd, in closing, said that the operation should not cease till the normal pulsation had returned in the cord. Its membranes should be unhesitatingly opened if necessary.

Operations for Injury of the Median and Ulnar Nerves.—Dr. B. B. Eads, of Chicago, read this paper. He cited a number of interesting cases of neurorrhaphy, emphasizing these points: (1) the need of a wide incision; (2) asepsis; (3) the evil effects of tension; (4) use of a relaxation splint.

Results of Surgery in the Aged.—This paper was read by Dr. J. P. Tuttle, of New York. He wished to establish the point that old people stood operation well. His data were gathered from 168 operations on patients over fifty years of age, and 133 in which the average age was sixty-nine years. The anæsthetic used in 226 senile cases was: ether, 183; chloroform, 13; cocaine, 30. The mortality from operative causes was less than two per cent. Albumin was not a contraindication, nor were hyaline casts. He argued that because patients were aged, *ipso facto* the constitution was good and the resisting-power high.

Dr. Dawbarn spoke of the development of a second childhood in disease, as well as in intellect. Microbic infection was a very important factor in the aged. They possessed but little bactericidal power.

Dr. Hart, of China, said that aged Chinese stood operation very well.

Sarcoma of Colon, with Report of a Case.—Dr. C. Van Zwalenberg, of Riverside, Cal., read this paper. He said there was but little analogy between sarcoma and carcinoma of the alimentary canal. Sarcoma was rare. He then detailed the technique of his operation, which embraced the resection of gut and the exsection of a large sarcomatous nodule from the belly of a child five years of age. The Murphy button did not reappear for six months, but this did no damage. In summarizing fifteen cases he said that the age limits were between one and fifty-two years. Nine cases were in males, five in females; five were below ten years of age. The small gut was affected ten times. Nine patients recovered. Sarcoma was more common than was generally supposed. Stenosis rarely accompanied it, dilatation being the rule.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

Third Day—Thursday, June 7th.

Aseptic Minor Gynæcology.—Dr. Augustin H. Goelet, of New York, presented a paper on this subject in which he made an earnest plea for cleanliness in ordinary gynæcological examinations, laying stress upon the necessity for thoroughly sterilizing the hands and instruments. He outlined the method of arranging the examining-table, exhibiting a new clinical air-cushion. He described in detail the manner of washing the hands and cleansing instruments, for which purpose he used an antiseptic soap, which by actual bacteriological tests he had found would destroy all infecting germs. The advantages of a suitable reservoir and irrigating apparatus were specified, and an outline of the method of irrigation of the vagina for securing asepsis was given. As a lubricant for the examining finger and speculum he had abandoned all forms of grease because it was difficult to remove from the hands and genitals. To meet the requirements for aseptic gynæcological examinations and minor operations in private houses he exhibited an aseptic gynæcological emergency case made under his directions, containing all instruments needed, and in addition a clinical air-cushion and portable irrigating-reservoir with vulva-shield and nozzle, and leg-holder.

Dr. John M. Duff, in discussion of this paper, thought it was directed rather to the general practitioner. He emphasized the importance of thoroughly cleansing the vulva, laying greater stress upon this than upon the cleansing of the vagina because of the germicidal nature of the normal secretions of the vagina. The sterilization of the cervix was also important.

Dr. L. H. Dunning, of Indianapolis, thought that if the essayist carried out the technique in routine practice, much valuable time would be consumed. His own method in private practice was to have the nurse prepare the tampons and instruct the patient to make herself ready by douching, so that upon his arrival at the house everything would be ready.

Dr. J. W. Bovée, of Washington, thought it impossible to sterilize the hands in five minutes' scrubbing with antiseptic soap or with anything else; though the cultures might be negative, the hands were not sterile. For this reason he advocated the use of rubber gloves. He agreed with Dr. Dunn that the vaginal secretion was usually able to take care of the vagina. He was of the same opinion as Dr. Dunning, that if the elaborate technique was gone through, sufficient time would not be left for the calls on a busy man.

Dr. W. H. Humiston, of Cleveland, did not regard it necessary to go through all this detail in order to insure a proper amount of care and asepsis. He thought Dr. Duff correct in thinking the danger of infection was not so great from the vaginal secretions as from the vulva. He had met with hundreds of cases which, if properly treated aseptically while the condition was simple, would not have been converted into infected ones by wrong treatment. He quoted a case which he had been asked to explain. The patient had been treated by a general practitioner for a leucorrhœal discharge and difficulty in menstruation. The practitioner finally curetted her, as she got no better under other treatment. The result was a firmly fixed uterus, with the development of chill. Office work he thought should be limited to examinations, and further treatment for a chronic case should be carried on in the hospital.

Dr. Porter, of Indiana, thought that in the cleansing of the vagina or of any part harm was often done with a stiff brush; a few microbes he did not fear would do much damage in the presence of an intact covering. He had made it a rule to invite his nurses or assistants to speak of any lapses which might occur in carrying out his technique.

Dr. Goelet, in closing, said one thing which he had learned was the necessity for such a paper as this. The portable reservoir he had intended particularly for such work as examinations at the patient's house, for ordinary curettings, and for minor work when washing out the uterus. He recognized the difficulty of making the hands free from germs, but after scrubbing his hands with the antiseptic soap mentioned bacteriological tests had shown them to be absolutely sterile. He thought no man should complain of the time required for washing the hands in ordinary office work, and that a patient would appreciate the care taken. Five minutes he considered a sufficient length of time to give to this cleansing of the hands.

Dr. Engelmann, of Boston, chairman of the nominating committee, announced that Dr. H. P. Newman, of Chicago, had been nominated for chairman of the section, and Dr. C. S. Bonifield for secretary.

Technique of Vaginal Extirpation for Cancer of the Uterus.—Dr. R. B. Hall, of Cincinnati, read a paper by this title, in which he emphasized the necessity for careful preparation of the patient in vaginal hysterectomy. He advocated the extreme lithotomy position. The anæsthetic should be chloroform unless the drug was contraindicated. Should the case be far advanced with great sloughing, or one of epithelioma with a large mass of cancerous tissue, the operation might be done in two stages. The author preferred the ligature to the clamp. The technique was described.

Combined Abdominal and Vaginal versus Vaginal Hysterectomy for Carcinoma.—Dr. John B. Deaver, of Philadelphia, in this paper said that the choice of route for hysterectomy must be selected for each case. He gave a concise *résumé* of the reasons for the selection of each, with their advantages. He performed abdominal hysterectomy for the great majority of cases of uterine carcinoma, though granting that there were cases in which the vaginal operation might be better. He knew of no condition indicating vaginal hysterectomy which possibly could not be better dealt with by the abdominal route. He reviewed the anatomy of the lymphatic glands and their connecting channels involved in the morbid process of the uterus. In late carcinoma or even in the early stage of rapidly advancing disease, involvement of the broad ligament rendered worse than useless any operation short of total extirpation. The weak spot of vaginal hysterectomy, he stated, had always been the danger of injury to the ureters; though there was danger in either route, he believed there seemed to be less by the abdominal. He did not believe catheterization of the ureters an essential part of vaginal hysterectomy. There was also greater danger of hemorrhage in vaginal hysterectomy for carcinoma of the uterus, although this was liable to occur in either operation. The better command of the field of operation secured by the abdominal route aided in the placing of ligatures, and thus lessened the liability of hemorrhage. Another disadvantage of the vaginal route was the liability of the intestines to come in contact with fingers, instruments, and ligatures, which, having traversed the vagina in cases of carcinoma, were never sterile. Supra-vaginal drainage should be employed when drainage was needed in abdominal hysterectomy. Vaginal hysterectomies called for gauze drainage in all cases. Vaginal hysterectomy he considered applicable only in those cases in which the carcinomatous process was strictly confined to the vaginal portion of the cervix, the cervical or the uterine canal, and when the uterus was freely movable.

The Importance of Early Recognition of Cancer of the Uterus.—Dr. W. H. Humiston read this paper. He emphasized the importance of the early recognition by the general practitioner of malignant disease of the uterus. Immediate and complete operation should be insisted upon. The epitheliomatous variety he stated to be comparatively slow to give rise to metastasis and offered the best chances against recurrence after operation. The modes of recurrence were specified as follows: (1) Metastasis; (2) incomplete removal of infected areas; (3) by infection or direct implantation of malignant cells in previously healthy tissue at the time of operation. The principal import of the paper was summarized as follows: (1) Early differentiation of malignant growths of the cervix; (2) careful consideration of importance of lymphatic vessels and glands in their capacity of drains of different portions of the uterus; (3) abdominal section with complete removal of these special groups of lymphatics alone offered, in suitable cases, chance against a recurrence.

Treatment of Cancer of the Uterus.—Dr. William R. Pryor, of New York, read this paper. He quoted statistics to show that of all cases of cancer which came to the operator, but ten per cent. admitted of operation; that of these, 11.5 per cent. were fatal, and in the remaining but twenty per cent. resulted favorably after five years. He expressed his personal belief that all cases of clinical cancer occurred within five years, and that vaginal hysterectomy met none of the requirements of a successful operation. The operation of high amputation by means of the cautery gave few better results than abdominal hysterectomy, and was the operation for the ocasional operator to apply. He insisted upon the analogy of cancer in other parts of the body with cancer of the uterus, and stated that the anatomical requirements of successful operation were that the ovaries, uterus, broad ligaments, lymphatic glands, and upper third of the vagina should be removed; that this removal should be done in a bloodless field and in such a way as to prevent soiling of the field of operation by the cancer cells and mechanical forcing of the cancer cells into the absorbents. He advocated the application of the cautery by the vagina to seal the mouths of the absorbents, after which the abdomen was opened, the internal iliac arteries were ligated, and all tissues removed in which cancer was liable to occur. He quoted ninety-eight cases operated on by the Rumpf-Reis-Clark operation, by progressive ligation, and by ligation of the internal iliac arteries, showing a mortality of only 11.5 per cent. He insisted upon the abandonment of vaginal hysterectomy for cancer and the adoption of more radical work through the abdomen, stating that although not sufficient time had elapsed to show the remote results, observation demonstrated that by this method not more than one-half as many cases recurred in the first year as by the vaginal method.

Dr. H. J. Boldt, of New York, opened the discussion of papers on cancer of the uterus. He regarded the early diagnosis of cancer of the supravaginal portion of the uterus as most difficult. As to prophylaxis, it should be borne in mind that there was no form of disease which led to malignant disease as often as long-continued inflammatory conditions of the mucosa. He thought Dr. Hall's technique a most beautiful one, but questioned how many patients remained free from the disease after a time. The age of the patient was an important factor. He thought that the clamp must be used in an improper way if it could be said that as much broad ligament could be taken off with the ligature as with the clamp. Cases in which the broad ligaments had become infiltrated were better if not operated upon. The ultimate results so far as vaginal hysterectomy was concerned were not satisfactory. As to abdominal hysterectomy, his experience was too limited, and, as Dr. Pryor had said, experience *in toto* was too limited to admit of forming a positive opinion.

Dr. J. M. Baldy, of Philadelphia, said it was the practical aspect of the subject which appealed to him. In technique he agreed with Drs. Pryor and Deaver, that when a major operation was to be done the abdominal route was the one of choice. In the practical question of how many patients got well he did not consider it fair to consider the picked cases as was sometimes done. He believed that cancer of the fundus and cancer of the cervix gave very different results from operation; he did not know of a single case of cancer of the cervix in which he had been able to make a diagnosis clinically by hemorrhage and pain, upon which he had operated, in which the patient was alive to-day. On the other hand, of the cases of fundal cancer all the patients were well except four or five who had died at operation. He had done thirteen or fourteen operations in the eastern section of the State. The practical question was, by what means relief could be given. He thought that the curette used repeatedly, with scissors and knife, offered more advantages for the relief of the patients than operation in the cervical cases.

Dr. J. B. Massey, of Philadelphia, said that as long as the medical profession advised that cancer should not be touched until it became imperative, the limitations of surgical work would be very great. He called attention to a surgical method—though not surgical in the sense of being limited to the knife—a method of using the salts of mercury by electrolysis to destroy the cancer at once as thoroughly as the knife would do it. By the diffusion of the oxy-chloride of mercury a zone of sterilization was produced extending from one-half to one inch beyond the limits where the cancer was destroyed. Another advantage claimed was that the method was bloodless. He had used it upon four patients, of whom two were now living—one at the end of six years and one at the end of six months. The two who were not living had been temporarily benefited. In these the application was made daily for several months, controlling the hemorrhage and the odor. Both patients had been previously operated upon by the knife.

Dr. J. H. Carstens, of Detroit, urged that an honest survey be taken of all the cases of cancer of the breast operated upon with removal of the axillary glands and the glands beneath the clavicle, and a note be made of how many of these patients were alive to-day, three years after operation, without recurrence. His experience was that in all recurrence had taken place, and nearly all the patients had died, with rare exceptions. If all the glands in cancer of the breast could not be removed, he questioned how it was possible to remove all the glands in the abdomen in the soft tissues, and when it was sometimes necessary to work around the aorta. He was willing to predict that the gentlemen who practised abdominal hysterectomy would have as many recurrences in five years as the men who did vaginal hysterectomy. He had limited his operations, and indorsed the statement of Dr. Baldy that he could give his patients longer life by repeated curettings. Concerning electrolysis, he thought if cancer was due to a germ and electricity was a germicide, and if Dr. Massey could tell them of a method of killing the germs *in toto*, all should be under everlasting gratitude to him. He advised the greater use of the curette and microscope in the early stages.

Dr. Joseph Price thought that the point made by Dr. Baldy in regard to the malignancy of the upper and lower part of the uterus was the experience of many specialists. In the child-bearing woman malignancy occurred in the cervix and rarely in the fundus. In the desperate cases, those far advanced, with everything involved, he thought the curette and cautery, as Sims advised many years ago, offered the best results. With reference to the glands he observed that Dr. Humiston found three sets of glands, and Dr. Deaver, a very fine anatomist and excellent surgeon, found only two. He thought they would have to reconcile their differences between them. He felt that the general surgeons were neglecting their department and were too prone to take up the speciality of the gynæcologist.

Dr. Goelet emphasized three points in connection with the subject: (1) Early diagnosis. He thought the family practitioner could not be impressed too strongly with the importance of the early diagnosis of these cases. One case had been sent to him as one of cancer, which proved to be senile endometritis. (2) If a positive diagnosis of cancer was made, something should be done to relieve the condition. He cited a case in which he had advised operation, three years ago. A year later the daughter of the patient asked him to operate, and the excuse given for declining operation was that their family physician had advised them to wait. (3) If the cancer had attacked the body of the uterus the abdominal route should be insisted upon, which offered a better opportunity for more thorough work. He wished to place himself on record as being decidedly in favor of the abdominal route in these cases. He thought Dr. Humiston's diagrammatic illustration of the lymph channels one of the strongest arguments in favor of this route.

Dr. Byrne, of New York, agreed with Drs. Baldy and Boldt that what concerned the profession and the community most was the question of how many lives could be saved by operation for cancer of the uterus. He denied the legitimacy according to statistics of hysterectomy for cancer of the cervix in any case; in his opinion there was no case of malignant disease with adeno-carcinomata of the fundus for which hysterectomy was justifiable, according to the records. The primary mortality, he had observed, had increased from fourteen per cent. in 1892 to twenty and a fraction. For cancer of the cervix he advocated exsection, carefully and smoothly and thoroughly, of the diseased part with the heated knife, and deep cauterization of the cavity left by its removal. These patients he predicted would live from fifteen to twenty years. He knew of several instances in point. He hoped the day was coming when hysterectomy for cancer of the cervix uteri would cease to be popular in the profession. He believed the pendulum was swinging in the right direction, and felt that the reaction could not come too soon.

Dr. Phillips said he had been expecting to hear the converse side of the picture; it had been his fortune to see within the last six months several cases of complete hysterectomy which he believed were not for cancer of the uterus, but in which the condition was simple chronic erosion. He had seen many amputations of the cervix in cases which he was thoroughly convinced were never cancerous. Some of the diagnoses had been made by the general surgeon, the most by the general practitioner, and a few were made by the gynæcologist. He thought the general practitioner in every case before advising operation should have a thorough examination made by a microscopist.

Dr. Bonifield thought the general practitioner had been pretty well educated, and that rather the people should be taught to apply for relief early to the specialist. He thought, as Dr. Baldy had said, that the question was a practical one, and that until the friends who advised this radical operation of removing all glands in the abdomen and pelvis could prove by statistics their success, the majority of gynæcologists would continue to do the milder operations which relieved the symptoms and which seemed to offer about as good results.

Dr. Engelmann said he had never ventured to publish his results in this direction. It had been his experience to find improvement for a time, and then recurrence followed. He believed that an acknowledgment was due Dr. Byrne for his work. Our results showed the justice and correctness of his reports. He said that the position which gynæcologists now held on the subject was about the same as that of a quarter of a century ago—removal in the early stages, which would give relief for a time, freedom from pain, hemorrhage, and discharge, and then a rapid passing away.

Dr. P. F. Harris, of Paterson, N. J., called attention to the pre-existing leucorrhœa as an aid to early diagnosis. He thought it a mistake to wait for the appearance of blood.

Dr. J. G. Clark, of Philadelphia, stated that twenty-two years ago Froyne performed the first abdominal hysterectomy for cancer of the uterus, and quoted his present experience as of interest. He said that at times his confidence in his own operation had been shaken. He had tried all plans and all forms of local treatment, and was going back to the radical operation as being the best yet advised; but, like all others, he thought operative treatment at best very inefficient, and that it was necessary to have some other thing to look to for radical cure. In the early stage he performed a radical operation; in the more advanced stage he did vaginal hysterectomy, or simple curettage and cauterization.

Dr. Clark was glad to find Dr. Pryor advocating the radical operation from above. He felt that a combined method was advisable—first from above, and then the continuation by a very clever modification by Werder of Pittsburg.

Dr. Bovée said he was in favor of the abdominal route in operating for cancer of the uterus. He agreed with Dr. Clark as to the efficiency of the operation modified by Dr. Werder, one advantage of which was the avoidance of the contamination of raw surfaces by cancerous tissue. He had done fourteen operations without one primary loss, with one from recurrence; at least the patient had died of that which the family physician did not think cancer, but which Dr. Bovée thought from the description was. He believed that when the bladder had become involved it was too late to do any radical procedure.

Dr. A. J. Downes, of Philadelphia, referred to the electro-hæmostatic forceps modified after the method of Dr. Skene, with which he had been working with the view of having them control hemorrhage in thirty seconds. On the heated blade of these forceps a drop of water would boil in fifteen seconds. He had operated five times during the past winter.

Dr. Hall, in closing, agreed with the gentlemen who said we should conserve human life. He had always believed that in certain selected cases vaginal hysterectomy was the operation to be performed. He preferred the ligature to the clamp because it gave an opportunity to close the peritoneum, and thus prevented infection and the subsequent possibility of an intestinal obstruction, which those gentlemen using the clamp and a large quantity of gauze must admit was not an imaginary danger. He admitted that he occasionally did the combined operation. Cautery and curettage he believed should be done when cure was not possible. He recorded two patients living from four to six years after operation when the epithelioma had been entirely destroyed. The unfortunate fact that recurrence occurred in nearly all these cases made him hesitate to perform the radical operation.

Dr. Deaver said that with the involvement of the broad ligaments the radical operation promised nothing, and advised in those cases the use of the cautery and curette. He recommended early operation and removal of the glands before involvement.

Dr. Humiston said it was necessary in all cases of chronic disease of the uterus to examine carefully all tissue removed. If malignant disease of the cervix was found, he did vaginal hysterectomy; if malignant disease of the fundus, abdominal hysterectomy.

Resection of the Ureter.—Dr. Howard A. Kelly, of Baltimore, read a paper upon this subject. He specified cases in which the ureter was most liable to injury, with the character of the injuries received. The best methods of treatment of an injured ureter were considered, and the instruments needed were described. An essential point in the method of treatment was pulling up the bladder to reach the ureter, making a blunt dissection and holding it there without suspending the bladder to the psoas muscle. In anastomosing the ureter to the bladder he followed one of two plans: either bringing the ureter just to the vesical opening, or inserting it well into the bladder. He described a pair of alligator forceps which spread only at the jaws and which was pushed through the bladder. At the end of the forceps there was a long guide which prevented injury of the ureter when stretched. The forceps was practically that of Sanger, to which he had simply added the feature of the guide.

Acute Senile Endometritis.—Dr. L. H. Dunning, of Indianapolis, gave a detailed history of two cases upon which he performed hysterectomy. The cases were both in women sixty-three years of age, in whom the menopause had occurred many years previously. The clinical history in its main features was identical in both cases. The women had been well until a short time (one and three months) previous to examination. There had been no uterine discharge. At the beginning, the discharge was described as thin and irritating. Shortly it became sanguineous and offensive. Pain appeared in the pelvic region. General lassitude and rapidly growing ill-health followed. There were backache, bearing-down pains, and some vesical disturbance. The skin was dry and sallow. This was marked in the case of longest duration. In this case the general appearance suggested cancer. The uterus in one case was in normal position, in the other retroverted. A diseased tube and ovary could be palpated in one. The external os was patulous and the internal os permitted the easy passage of a uterine sound. There was senile vaginitis in both. Hysterectomy was done in both cases. Both uterine cavities were distended by a foul-smelling, sanguino-purulent fluid. A microscopical examination of both uteri was made, and the findings were reported. Microphotographs of sections were also presented. The author presented the following conclusions: (1) The lesion found in both uteri was an acute inflammatory process. It might properly be denominated acute senile endometritis. (2) The characteristic pathological features of the inflammation were: (*a*) a thickened endometrium, the free surface of which was devoid of its epithelial layer; (*b*) increased vascularity with peculiar arrangement of small blood-vessels; (*c*) round-cell infiltration; (*d*) diminished glandular elements; while a few glands were to be distinctly seen, in many of them the epithelium was desquamating and their lumen was filled with granular débris; they might be said to be functionless glands; (*e*) degeneration of the coats of the arteries of the muscular layer of the organ; in one specimen (No. 2) this degenerative process was distinctly hyaline; (*f*) in not one section examined from various parts of the organ could there be found any increase of connective tissue. (3) In one case the acute inflammation seemed to have developed without any preceding chronic inflammation. In the other case the acute attack might have been an acute exacerbation of a chronic inflammation. (4) The mucosa of both the cervix and body were involved in the inflammation, but it was more marked in both cases in the body of the uterus. (5) In the more acute case the small round-cell infiltration extended into the deeper muscular tissue, though the inflammation was more marked in the mucosa. (6) In both cases one uterine appendage was diseased; in one the ovary was cystic, in the other one ovary was cystic and the Fallopian tube was inflamed. In this case there were slight recent peritoneal adhesions. (7) The microscopical appearances in these cases bore but slight resemblance to those found in cases of interstitial endometritis. (8) In one case there was marked retroversion of the uterus, in the other the uterus was in normal position, and in neither case was there marked stenosis of the internal os, yet there was a considerable accumulation of fluid within the uterine cavity. (9) The presence of diseased appendages in both cases and of pelvic peritonitis (mild) in one would indicate that the inflammation was prone to extend beyond the limits of the uterus, and if such extension was demonstrable by combined examination an extirpation of the uterus and appendages was indicated.

Inflammation of the Fallopian Tube, with Special Reference to Specific Origin.—Dr. J. R. Guthrie, of Dubuque, read a paper on this subject. He referred to the fact that authorities differed widely as to the importance of the gonococcus as an etiological factor in tubal disease. A latent gleet in the male might be the cause of a fresh infection in the mucous membrane of the vagina. Only a few germs might be present, yet their development was incredibly rapid and they had a wonderful grasp on life. The speaker believed that in order to establish the existence of the gonococcus frequent careful examinations should be made before stating positively whether or not it was present. Failure to do this was often the cause of pronouncing tubal disease to be due to some other infection. The sources of infection were by the douche, unclean instruments, and careless examinations. The disease reached the tubes by extension. He advocated the appointment of a committee to investigate the effects of gonorrhœal infection in the female.

Tuberculous Peritonitis.—Dr. A. H. Cordier, of Kansas City, read this paper. He said that there were many demonstrable truths in surgery and medicine, and other facts plainly to be seen, yet no satisfactory explanation of the manifested phenomena had been discovered. Many explanations had been given of how an incision into the peritoneum cured a tuberculous peritonitis, yet not one had been accepted. He hoped, therefore, that he might be pardoned for advancing another theory which to him was new. He was disposed to believe that an explanation of how these patients were cured by a surgical procedure might be found in the production of a special antitoxin within the peritoneum owing to some unknown function of that organ. In no other way could he understand how a similar process in the pleura as a complication could be cured by a laparotomy. The bacilli present were killed, ceased to multiply, or were held in abeyance in the recurrent cases. The handling of the peritoneum and its contents at the time of operation stimulated that great organ to an increased activity in the production of an antituberculous toxin.

A Plea for the More Frequent Avoidance of Exsection of the Ovaries in Connection with the Removal of Diseased Tubes.—Dr. Philander A. Harris, of Paterson, N. J., read a paper with this title, in which he laid special stress upon the fact that the Fallopian tubes, when once infected by suppuration, so persistently harbored it that they became the natural habitats of pelvic suppuration. The ovaries should be regarded as the contiguous and comparatively unwilling participants in these suppurations. The ovaries generally recovered from the effects of inflammation when the adjacent suppurating structures had been cured. The author claimed that the good results which had followed removal of the tubes and ovaries for tubal suppurations could in most cases be secured without sacrificing menstruation, thus not entirely depriving such patients of the possibility of conception. The reader had observed one case of pregnancy following the removal of both tubes.

Appendicitis Operations in Young Women and Girls.—Dr. Joseph Price, of Philadelphia, in a paper with this title, said that for a number of years his experience in appendicitis had differed from that of many operators in that he had found the trouble to occur sixteen times in the male to once in the female; now the proportion in his practice was about even. It seemed to the author that young surgeons were more prone to the disease than any other class of medical men. He was satisfied that the error of treating appendicitis for typhoid fever was more common in the case of females than in that of males, the cause of this being that the pain and tenderness were at a lower level in the female than in the male. He believed that if it was made a practice to operate when the trouble was first recognized, without the delay of a day for consultation and for medical treatment, deaths would be few in number.

(*To be concluded.*)

AMERICAN ORTHOPEDIC ASSOCIATION.

Fourteenth Annual Meeting, Held in Washington, D. C., May 1, 2, and 3, 1900.

Harry M. Sherman, M.D., of San Francisco, President.

First Day—Tuesday, May 1st.

A Simple and Efficient Treatment of Calcaneus Paralyticus in Young Children.—Dr. V. P. Gibney, of New York, read this paper. He said that all orthopedic surgeons knew that the reverse catch was very prone to get out of repair. His experience had taught him that long-continued position contributed to the shortening of the paralyzed muscle. The treatment which he recommended consisted in the application of plaster of Paris with the part in complete extension, and changing the plaster every three or four months. Four cases were reported as evidence of the good effects of this treatment. He had not tried water-glass or leather splints on young children.

Dr. L. A. Weigel, of Rochester, spoke of the danger of producing excoriation in some cases of complete paralysis associated with much trophic disturbance, and instanced a case in which he had found it impossible to use any form of dressing without the danger of gangrenous ulceration occurring.

Dr. John Ridlon, of Chicago, pointed out that the treatment advocated in the paper was not new, as for many years the late Hugh Owen Thomas had treated his cases in this manner, and had claimed that it was entirely possible to get a return of function in all muscles that were not really paralyzed, if they were but retained in a position of relaxation. His apparatus for accomplishing this was, however, quite clumsy.

Dr. H. P. H. Galloway, of Toronto, felt that valgus would occur quite frequently after the shortening of the tendo Achillis. There seemed to be a class of cases in which the shortening of the tendo Achillis would cause either supination or pronation according to the direction the foot happened to be given.

Dr. A. B. Judson, of New York, said that he had abolished the joint at the ankle to make the apparatus more durable. The first effect of such an apparatus was to carry the weight of the body from the anterior part of the foot, by virtue of the strength of the muscles acting on the tendo Achillis, to the anterior side of the upper part of the shin. By these means, in cases of extreme calcaneus the gait could be made absolutely perfect.

Dr. Gibney, in closing, said that his experience had taught him to place very little reliance on the electrical examinations of the muscles in young children. He had not claimed to be presenting anything novel, but had simply advocated a simple method by which a permanently good result could be secured. His cases had presented the clinical appearance of paralysis, and without an electrical examination he was willing to have them go on record as poliomyelitis.

A Final Report on the Use of Pure Carbolic Acid in the Treatment of Tuberculous and Purulent Diseases of Joints and Bones.—Dr. A. M. Phelps, of New York, made this report. His practice had been to lay open abscess cavities, divide the capsule about two-thirds of its extent, and pull out the head of the bone. The joint was then irrigated freely with bichloride 1 : 1,000, after which pure carbolic acid was poured in and allowed to remain just one minute. This application was followed by irrigation first with strong alcohol, and then with a two-per-cent. solution of carbolic acid. He then inserted the largest possible glass drain that the joint would admit, and put the patient in bed with a weight and extension apparatus. In the last eighteen months he had operated on seventy cases, and had performed twenty excisions, whereas he would have ordinarily done fifty. In fifteen cases the head of the bone had been found separated from the neck, and lying as a sequestrum in the joint. In forty cases the capsule had ruptured anteriorly into the muscles. On an average, all of the cases requiring excision or extensive bone operations had been discharged from hospital at the end of three weeks.

Dr. Robert W. Lovett, of Boston, said that at the Children's Hospital the surgeons had endeavored to prevent the formation of these abscesses by putting the children to bed whenever there was a painful condition of the joint or deformity due to irritative muscular action, and they had learned to attach considerable importance to this as a preventive treatment. When an abscess occurred, it was the practice to open it up freely and drain, after irrigating the cavity with corrosive-sublimate solution.

The Movements of the Normal Spine in Relation to Scoliosis.—Dr. Robert W. Lovett, of Boston, presented in this paper the results of an elaborate study of this subject. He said that at present there was no satisfactory theory to account for the mechanism of scoliosis, and particularly the rotation. A large number of theories had been propounded, and the fact that they had not been generally accepted had led to the study on which this paper was based. The text-books on anatomy usually described four movements of the spine, viz., (1) flexion; (2) extension; (3) lateral flexion; (4) torsion. He had found that in side-bending in the flexed position a type of torsion was got in which the bodies of the vertebræ rotated toward the convexity of the lateral curve. In extension the rotation was more limited to the upper part of the spine than in flexion, and was the reverse of that seen in flexion. The construction of the spine being very complex, the next step in the present investigation had been to study, with the aid of the professor of mechanics of Harvard College, the action of a flexible beam or rod. The vertebral column apparently followed the behavior of a flexible rod—a matter well understood by students of mechanics. It was found, however, that one could not entirely leave out of account the articular processes. Apparently in side-bending in the extended position the articular processes merely served to accentuate what the column would do if they were not present. In the flexed position they appeared not to exert any influence. The author's conclusions were: (1) Scoliosis was a deformity that must always be acquired in the flexed position; (2) reverse rotation was possible on the ground of side-flexion occurring in the extended position; (3) extension exercises should be cultivated in the treatment of lateral curvature, and even forcible correction done in the extended position; (4) symmetrical exercises seemed much safer than the complex unilateral ones; (5) probably a safe and efficient method consisted in throwing the spine into positions which would bring the articular processes into play, and reversing the rotation acquired in the flexed position.

On Some of the Problems Involved in the Treatment of Lateral Curvature of the Spine.—Dr. Newton M. Shaffer, of New York, presented this paper, but spoke of only one of the problems. He said that clinical experience had taught him what Dr. Lovett had concluded from his mechanical studies, *i.e.*, that the treatment should be carried on in the extended position. He indicated the best directions in which to make pressure, by diagrams on the blackboard.

The Relation of Deformity of the Pelvis to Lateral Curvature of the Spine. — Dr. H. P. H. Galloway, of Toronto, read this paper. He said that the theory which considered the superincumbent weight the chief etiological factor in lateral curvature of the spine had been the one most generally accepted. In a faulty attitude, habitually assumed in a growing child, the conditions were ripe for this superincumbent weight to become a determining factor in the production of lateral curvature. His own observation had convinced him that the primary mechanical fault had received but scant consideration. Many writers had looked upon distortion of the pelvis as the effect of the lateral curvature, but his own belief was that cause and effect had here been confounded. It was not uncommon to meet with a sacrum the base of which was an incline. As the vertebral column was built upon this slanting foundation, the column must lean to one side, and this led the person to endeavor to restore the balance of the body. To his mind it was more logical to look for the faulty construction in the foundation than in the superstructure. It was unreasonable to suppose that the stable foundation, or pelvis, should fall a prey to faulty mechanical conditions belonging to the flexible vertebral column resting upon it.

Spasmodic Lateral Curvature of the Spine.—Dr. Arthur J. Gillette, of St. Paul, gave in this paper a record of a number of cases of hysterical curvature of the spine that had come under his observation.

The Results of my Observations in Lateral Curvature of the Spine, Clinically, Mechanically, and Pathologically.—Dr. B. M. Phelps read a paper with this title, in which he gave the results of an autopsy held on a patient with lateral curvature, dying at the workhouse of natural causes. The subject was a man about forty-five years of age, who had had a lateral curvature as far back as he could remember. There was extreme lateral curvature with rotation. The superficial layer of muscles was found in fairly good condition. Upon the side of the concavity the muscles were in fairly good condition, but upon the side of the convexity they were atrophied, and had undergone fatty degeneration. The quadratus lumborum and other deeper muscles were entirely destroyed by fatty degeneration and atrophy on the side of convexity, and on the concave side degeneration was present, but was not so far advanced. This condition of the muscles extended throughout the whole region of curvature. The intervertebral cartilages on the side of the concavity were completely destroyed. His conclusion was, that it was utterly futile to expect to cure a lateral curvature of the spine after bone changes had taken place. The most that could be hoped for from treatment was to prevent an increase of the curve. He was of the opinion that all of the machines for forcible correction now in use were of but little value.

Dr. E. H. Bradford, of Boston, said that while he agreed entirely with Dr. Phelps regarding the pathology, he could not accept the doctrine that there was no stage of lateral curvature in which treatment would benefit. There were certainly some cases in growing children which were benefited by treatment.

Dr. Weigel said that he had time and again seen patients with muscles as rigid as a bar of iron, in which absolute relaxation had been secured by forcible correction. This was certainly an improvement.

Dr. N. M. Shaffer said that if there was any one thing clear in his mind it was that lateral curvature was dependent primarily not on bone changes, but on changes in the muscles.

Dr. H. Augustus Wilson, of Philadelphia, suggested the possibility that asymmetrical hip action in apparently normal subjects might result in lateral curvature. In a number of cases he had found such action present, although the hips were apparently normal in other respects.

Dr. Phelps replied that in the early stages of mild cases of lateral curvature a very decided physiological curve was added. This latter curve could be cured, but in proportion as a curve developed in the dorsal region there was distortion of rib, and these patients could not be cured. It was not necessary to do myotomy in young children; nevertheless at the present time he was cutting more than one-third of all the cases of lateral curvature coming under his care. He did not believe any of the cases began in the muscles except those originating in a poliomyelitis.

Dr. A. B. Judson complimented Dr. Lovett on his ingenious and convincing model demonstrating the prevention of rotation by extension and its promotion by flexion of the spine. The speaker said that about 1876 he had himself advocated, and in one case practised, the application of a spinal brace for the production of extreme lordosis in cases of lateral curvature, on the ground that, as in rotation the anterior part of the column was affected by deviation from the median, just as it was affected by caries in Pott's disease, it was good practice to shift the weight of the body from the anterior to the posterior part of the column. If he had looked ahead as far and as keenly as had Dr. Lovett, he would have entertained a more favorable opinion regarding this method of treatment, which he now believed promised great advantages.

Anterior Support Supplementing the Taylor Brace in Pott's Disease.—Dr. George B. Packard, of Denver, read a paper on this subject. He said that plaster of Paris would be frequently the most satisfactory method of treatment were it not for the lack of adjustability. In the mid-dorsal region, in which there was apt to be the most deformity, the anterior support was of decided advantage. The sinking forward of the upper dorsal spine in these cases carried the ribs forward. The front piece could be made to extend higher than the apron.

A Suspension Pressure Chair for Scoliosis.—Dr. Phil. Hoffmann, of St. Louis, described this simple and inexpensive apparatus. It was the pressure chair that had been described by Dr. Bradford, with the lateral steel bars prolonged upward to the height of four and a half feet, and meeting overhead in the form of an arch, to which was attached an apparatus with compound pulleys. It was intended to be used only as an accessory to proper gymnastic exercises and other treatment.

A Brace for Cervical and High Dorsal Spondylitis.—Dr. Hoffmann also exhibited this apparatus, which belonged to the cuirass type.

Results of Treatment of Congenital Dislocation of the Hip.—Dr. E. H. Bradford, of Boston, presented this communication. It had been shown in recent years, he said, that congenital dislocation of the hip could be reduced, or apparently reduced, both by operative and by the bloodless method, and that relapses occurred after both methods. It had also been shown that both methods lacked precision. A specimen was presented illustrating the results of both methods. According to his study of this subject, one cause of failure in these cases was the covering of the acetabulum with what he called "the hymen of the acetabulum." By exposing this, and incising it deeply, and then retracting the parts, it would be found that there was usually a fairly deep acetabulum. He had operated about forty times by the bloodless method, and in only one case had there been no relapse. There were definite surgical conditions which were difficult to meet. If they could be met, a cure would usually result; if not, relapse would almost certainly occur. He had seen a few cases in which relapse had occurred after a year. He had endeavored to make the results more permanent by suturing the capsule. In his later operations he had made a straight incision from the greater trochanter to two or three inches below, or just above, the insertion of the gluteus maximus muscle. At the upper end the incision curved slightly upward between the tensor vaginæ femoris and the gluteus medius. He first exposed the lesser trochanter, and with the periosteal elevator pressed up the insertion of the psoas and iliacus muscles. He next opened the capsule by a transverse incision anteriorly and posteriorly, and inserted the finger into the acetabulum. After reduction the parts were kept immobilized for three or four weeks, and if then the head did not seem to be firm, he cut down and sewed it in. He felt that he could not operate successfully on patients over six years of age.

Dr. Gibney remarked that the suturing of the capsule, so as to make the results more lasting, seemed to him a capital idea.

Dr. Ridlon thought it was more important to control flexion than abduction. If the patient was young, and the head and neck were fairly well developed, it was possible to replace the bone by the bloodless method and retain it. This statement presupposed that very considerable abduction was maintained permanently, together with absolute control of both active and passive flexion.

Dr. Harry M. Sherman said that he had tried suturing in one or two instances, but had found it very inaccurate because he had to do it without the guidance of sight. He believed that the position of the head between the two lateral halves of the pocket made it as stable as if sutures had been used.

Dr. Galloway said that in one of his cases, a double dislocation treated by the bloodless method, apparently a perfect cure had been obtained.

A New Back Brace for Pott's Disease.—Dr. John Dane, of Boston, exhibited this brace. The object of the device was to combine the advantages of a plaster-of-Paris jacket with those of an antero-posterior brace. The two pad-plates were held by an arm which could be removed to facilitate fitting the pads to the child. There was a cross-piece very high up on the back, and straps passed around under the arms. The usual apron was dispensed with, thus giving the wearer a much better opportunity for deep thoracic breathing.

Tendon Transplantation in the Treatment of Paralytic Deformities.—Dr. W. R. Townsend, of New York, read this paper. He said that only during the past five years had tendon transplantation attracted much attention in cases of paralytic deformities. There were many patients suffering from drop-wrist whose deformities could be entirely done away with and the function more or less restored if this operation was done. Several cases were described, including one of his own—a case of equinus and drop-wrist. In this case the tendon was shortened by lapping one portion over the other. The method of fastening was that recommended by Dr. Goldthwait, and already reported to the association.

A Report of a Tendon Transplantation for Paralytic Club-Foot.—Dr. L. Porter, of Chicago, reported this case. The case was one of paralysis of the anterior and posterior muscles of the leg from poliomyelitis. All the muscles of the gastrocnemius group were paralyzed. The extensor proprius pollicis and the peroneus longus were intact.

Dr. Joel E. Goldthwait, of Boston, said that if tendons were to be transplanted, the more direct the route the better the result. He would certainly prefer the route taken by Dr. Townsend in going directly through the interosseus membrane, because in cases in which the anterior tendons had been carried around the leg and made posterior tendons, the result had not been very good.

Dr. Weigel said that in certain cases complete division of the tendon seemed an absolute necessity, particularly when the condition was the result of injury.

Dr. E. H. Bradford said that he had endeavored to avoid complete division by doing a myotomy, dividing the intermuscular septa, and over-correcting the hand. In that way the power of the muscle had been retained, and yet the contracted tissues had been overcome.

A Case of Tuberculosis of the Astragalus with Ankylosis and Subsequent Amputation.—Dr. V. P. Gibney reported this case. At first the case had seemed to be one of synovial tuberculosis, but it had gradually extended to the bone, and had involved the latter and the joint. A girl, aged sixteen years, had sprained her ankle. It had been treated at first by plaster of Paris, and subsequently by splint and crutches. She had kept up the latter treatment for about twelve years. A few weeks ago she had appeared at his clinic, with what seemed to be a typical example of tuberculosis of the astragalus. About eleven weeks ago he had made an incision over the astragalus, and had then found a mass of granulation tissue which the pathologist reported to be filled with tubercle bacilli. The surface of the bone was somewhat eroded, but the body was apparently intact. He had removed the astragalus and the surrounding tissues for about one-eighth of an inch in every direction. After a short time she had developed an abscess, and, after consultation, the knee had been amputated. The specimen showed an eroded condition of the inner facets of the malleoli, the rest of the bone being apparently normal. The astragalus was also exhibited.

(*To be Continued*)

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 9, 1900:

	Cases.	Deaths.
Tuberculosis	203	139
Typhoid fever	31	4
Scarlet fever	101	7
Measles	419	21
Diphtheria	294	43
Laryngeal diphtheria (croup)	7	5
Cerebro-spinal meningitis	0	8
Chicken-pox	20	0
Smallpox	4	0

Inoculation of Typhus Fever.—A Russian physician, Dr. Mochutkovski, has inoculated himself with the blood of a typhus patient. After feeling no ill effects for seventeen days he had a severe rigor on the eighteenth day, with fever, delirium, and a comatose condition lasting for a fortnight. The rash appeared on the fifteenth day of the disease and desquamation began eleven days later, he being convalescent on the twenty-third day after the initial rigor. This interesting experiment appears to prove that the virus in typhus fever resides in the blood. It should, however, be mentioned that Dr. Mochutkovski had previously attempted to inoculate himself with the blood of typhus-fever patients no less than seven times.—*The Lancet.*

The Nails in Insanity.—That acute diseases frequently involve defective nutrition of the nails, so that their occurrence at a previous date, which may be approximately estimated, is often indicated by transverse lines, is a well-known fact. According to Dr. Marco (*Gazetta Medica Lombarda*) this occurs with special frequency and regularity in the periodic psychoses known as alternating or cyclic insanity, folie circulaire, etc. "In patients so affected the periodic changes in the general and psychical condition are so countersigned on the nails in the form of grooves and ridges that a simple examination of the fingers will enable one in most cases to estimate the frequency and relative duration of the attacks. In some cases, especially cyclic forms, where the periods are frequent, short, and regular, the nails assume a characteristic aspect resembling in the richness of concentrically arranged dystrophic striæ the ridged shells of certain molluscs."—*Medical Magazine.*

The Failure of the Filters in South Africa.—*The Hospital*, referring to the large death list of the British troops in South Africa, and especially to the mortality from typhoid fever, remarks that it is doubtless due to a polluted water-supply, and speaking of the filters says: "Much of the knowledge which has been gained in recent years about filtration has tended to throw doubt upon the power of ordinary filters to produce a safe and drinkable water. Indeed a sort of despair has seized upon scientific men upon this subject. We are, however, by no means sure that the last word has been said upon the purification of water by mechanical and perhaps chemical means. Bacteriologists have set up so high a standard as to have condemned off-hand all the old-fashioned filters, and have given us instead some very beautiful and perfect arrangements, which, however, clog up directly with South African mud. But we are beginning to appreciate the biology of the subject, and to understand what a very tender organism the typhoid bacillus really is, and it is on the cards that some better way of getting rid of these microbes may be devised than the apparently simple but really very difficult method of straining them out."

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended June 9, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Colorado, Logan Co	May 25th	1	
Mesa Co	May 25th	1	
District of Columbia, Washington	May 26th to June 2d	1	
Florida, Jacksonville	May 26th to June 2d	1	
Illinois, Chicago	May 26th to June 2d	1	
Indiana, Indianapolis	May 19th to June 2d	5	
Iowa, Des Moines	May 1st to 31st	6	
Kansas, Wichita	May 26th to June 2d	1	
Kentucky, Covington	May 26th to June 2d	11	
Louisiana, Caddo	May 12th to 26th	5	
New Orleans	May 26th to June 2d	57	16
Massachusetts, Fall River	May 26th to June 2d	1	
Lowell	May 26th to June 2d	3	
Michigan, Grand Rapids	May 19th to June 2d	5	
Minnesota, Chippewa Co	May 15th to 29th	4	
Duluth	May 15th to 29th	2	
Hennepin Co	May 15th to 29th	4	
Houston Co	May 15th to 29th	4	
Jasper	May 15th to 29th	2	
Meeker	May 15th to 29th	2	
Minneapolis	May 15th to 29th	38	
Northfield	May 15th to 29th	4	
Pine Co	May 15th to 29th	7	
St. Paul	May 15th to 29th	8	
Sheldon	May 15th to 29th	4	
Waverly	May 15th to 29th	4	
Wright Co	May 15th to 29th	3	
Ohio, Cleveland	May 26th to June 2d	24	
Dayton	May 26th to June 2d	1	
Portsmouth	May 26th to June 2d	1	
Pennsylvania, Pittsburg	May 26th to June 2d	3	
South Carolina, Greenville	May 19th to June 2d	4	
Utah, Salt Lake City	May 26th to June 2d	5	
Wyoming, Aspen	May 19th to 26th	6	
Rock Springs	May 19th to 26th	8	
SMALLPOX—FOREIGN.			
Austria, Prague	May 12th to 19th	3	
Belgium, Antwerp	May 12th to 19th	2	
Brazil, Bahia	April 21st to May 5th	1	1
Canada, Winnipeg	May 1st to 30th	16	8
Egypt, Cairo	May 6th to 13th	..	5
England, Liverpool	May 12th to 19th	2	
London	May 12th to 19th	3	
Southampton	May 12th to 19th	1	
France, Lyons	May 12th to 19th	5	
St. Etienne	May 1st to 15th	4	1
Greece, Athens	May 12th to 19th	2	1
India, Bombay	May 1st to 8th	..	33
Calcutta	April 7th to 14th	..	31
Kurrachee	April 29th to May 6th	16	14
Madras	April 28th to May 4th	..	1
Mexico, Vera Cruz	May 16th to 23d	6	4
Russia, Moscow	May 5th to 12th	9	3
Odessa	May 12th to 19th	11	2
St. Petersburg	May 5th to 12th	216	9
Warsaw	May 5th to 12th	..	1
Scotland, Glasgow	May 18th to 25th	30	1
Straits Settlements, Singapore	April 7th to 14th	..	7
Uruguay, Montevideo	April 1st to 8th	1	
YELLOW FEVER.			
Colombia, Barranquilla	May 5th to 12th	1	1
Panama	May 22d to 29th	3	1
Cuba, Cienfuegos	May 16th to 23d	1*	
Havana	May 16th to 23d	1	
Mexico, Vera Cruz	May 19th to 26th	22	6
	* Santa Clara Barracks.		
CHOLERA.			
India, Bombay	May 1st to 8th	..	28
Calcutta	April 7th to 14th	..	113
Madras	April 28th to May 4th	..	1
PLAGUE—UNITED STATES.			
California, San Francisco	March 8th to June 8th	Reported present.	
PLAGUE—FOREIGN.			
Arabia, Aden	April 7th to 28th	..	266
Australia, Sydney	April 28th to May 5th	38	10
China, Hong Kong	April 22d to 28th	33	28
Egypt, Alexandria	May 8th to 11th	5	2
Port Said	May 3d to 5th	8	3
India, Bombay	May 1st to 8th	..	340
Calcutta	April 7th to 14th	..	465
Kurrachee	April 29th to May 6th	219	173
Japan, Osaka and Hiogo	May 7th to 13th	8	
Kurdistan	April 2d to 17th	158	122
Turkey	May 29th	1	

Medical Record

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A MEMORIAL ADDRESS UPON DR. FESSENDEN NOTT OTIS.[1]

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NEW YORK.

No man ever passes through life, who, if a careful, candid, and unprejudiced study were made of his character and career, would not furnish a lesson of greater or less moment for humanity. If he has achieved great results, profit would accrue from a consideration of the qualities and methods which secured him fame and fortune. If he has passed through his existence a sluggard and a dolt, the suggestion of avoidance would reward the biographer. If he has been a criminal and a malefactor, the interest of the investigator would grow in proportion to the depth of infamy to which his subject has sunk, and the brilliancy of the exhortation which could be based upon his depravity.

But to give to this consideration of individual careers the universal interest which I claim for them, it should be made with fairness, justice, fearlessness, and honesty; the investigator spurning the absurd maxim, "De mortuis, nil nisi bonum," and making truth the pivot of his work.

You have met together to-night to listen to the unvarnished and impartial account of one of our colleagues, whose life and character were such that I dare to tell the truth of both, holding up before them the mirror, showing you an honest reflection, and telling you a simple tale based upon an intimate acquaintance of nearly half a century.

In the year 1852, I was a member of the resident staff of Bellevue Hospital. One of the amusements of this staff on summer afternoons was to row upon the East River in the staunch yawl of the warden, and one day we called upon the resident staff of Blackwell's Island Hospital, which was then under the charge of the brilliant and lamented Dr. Kelly, who just after the time of which I speak was lost at sea, upon a voyage to Europe for the purpose of perfecting himself in the study of venereal diseases, of which he intended to make a specialty. To one of Dr. Kelly's staff I was particularly attracted by his kindly, genial manner, his simple, unostentatious ways, and his striking appearance. He was nearly six feet in height, of dark, almost swarthy complexion, with a head large and somewhat Websterian in shape. Meeting him casually, one might have supposed him to belong to one of the so-called "Latin races," from his raven-black hair and huge black moustache, which entirely shrouded his mouth and gave to his face a sternness of expression which ludicrously belied the gentle nature of the man.

I recall the fact that before the two staffs, strangers to each other up to this time, had conversed very long, Dr. Kelly arose, and, pointing to a fine life-size oil portrait of himself, told us that it had just come from the hands of the framer, and descanted upon its merits, its accuracy as a likeness, and the great pleasure which he experienced in its having been painted by a member of his staff, bowing as he went on to the dark and striking-looking man of whom I have just spoken.

From that day to the day of his death an intimate friendship existed between this man and myself, a period of forty-eight years. From this statement you may judge of the fulness of the knowledge from which I speak to-night. I shall endeavor in dealing with my theme to make candor and impartiality go hand-in-hand with knowledge.

Fessenden Nott Otis, the subject of this memorial address, was born at Ballston Springs, Saratoga County, N. Y., May 6, 1825. The family from which he was descended settled in New York State prior to the American Revolution, and is a branch of the Otis family which came from England toward the close of the seventeenth century, and settled at Hingham, Mass. Oran Gray Otis, the father of Dr. Otis, was one of the early graduates of Union College, Schenectady, N. Y. He became prominent as a lawyer, advocate, and legislator, although dying at the age of forty-one years. He was selected to deliver the oration on the one hundredth anniversary of the birthday of Washington, before the joint legislative bodies of the State of New York, at Albany, in the year 1836. On the maternal side Dr. Otis was descended from another well-known New England family of English origin; his father having married Lucy, daughter of David Kingman, a leading citizen and shipping merchant of Bridgewater, Mass.

Dr. Otis began the study of medicine in 1848, and came to New York City, matriculating in the medical department of the New York University; also entering the office of Dr. John Whittaker, demonstrator of anatomy, as a private student. Subsequently he left the university with Dr. Whittaker, who had received an appointment to the chair of anatomy in the New York Medical College, just then organized. In 1852 he was graduated from that college, receiving the competitive gold medal for his graduating thesis, as well as prizes in the departments of physiology and practice.

Immediately after his graduation, he was appointed one of the resident assistant physicians of Charity Hospital. At the close of this service he received an appointment as surgeon in the United States Mail Steamship Company, the service of which covered that portion of the route between New York and the Isthmus of Panama. Subsequently he continued in this and the Pacific Mail service up to 1859, when he left the ocean and settled in the practice of his profession in New York City in 1860.

In January, 1862, he was appointed to a lectureship in the College of Physicians and Surgeons, New York, which he continued to fill until 1871, when he succeeded to the clinical professorship of the department of genito-urinary and venereal diseases. This chair he occupied until his resignation from it, on account of failing health, in 1890, when he received the degree of professor emeritus. In 1861 he was elected a fellow of the New York Academy of Medicine, and subsequently was made a member of the New York County Medical Society, and also of the New York State

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[1] Delivered before the New York Academy of Medicine, June 7, 1900.

Medical Society, the British Medical Association, and the Society of American Genito-Urinary Surgeons. He had also become a member of the medical board of Charity Hospital, and was attending surgeon at Blackwell's Island Hospital for over ten years.

Dr. Otis' career of professional activity extended over a period of exactly thirty years. During this time he labored as a practitioner, as an operative surgeon in his speciality, the genito-urinary organs of the male; as a lecturer; and as a steady contributor to medical literature. An enumeration of the most important of his contributions makes his industry quite apparent.

In 1883, "Practical Lessons on Syphilis and the Genito-Urinary Diseases," a work of six hundred pages, was published; and this was followed by "The Physiological Pathology of Syphilis," in book form. Soon after the following brochures were published·

"The Limitation of the Contagious Stage of Syphilis, Especially in its Relations to Marriage"; "Some Important Points in the Treatment of Deep Urethral Stricture"; "Temporary Overstrain of the Bladder, Producing Localized Atony and Chronic Retention of the Urine;" "Résumé of the Experience of Seventeen Years in the Operation of Dilating Urethrotomy"; "The Perfected Evacuator in the Operation of Lithotrity"; "Reflex Irritations and Neuroses, Caused by Stricture of the Urethra in the Female"; "The Radical Cure of Urethral Stricture," a work of three hundred pages. For him who has not written for publication, the enumeration of an author's works may signify little; for him who has done so, it will carry home a meaning which will appeal to his memory.

In the course of his practice, and in order to carry out his special surgical procedures most completely, Dr. Otis invented various instruments of precision, which came into very general use. A case containing these was ordered, in 1889, by the surgeon-general for every post of the army of the United States. I remember quite well the peculiar pleasure which the inventor experienced from this act on the part of the medical executive.

In this most wonderful era of the world's history; this age in which progress, advancement, and development in all things are startling the minds of men by their exuberant growth; this magic age in which the science of medicine is rapidly being elevated into the position of one of the bulwarks of society and one of the mainstays of civilization—it is most difficult for one, strive he ever so hard, to score for himself more than a mediocre success; and most happy should be the man who succeeds in writing his name among those whose works shall live after him and be recognized as deeds which will prove of lasting good to his fellow-men. This claim can honestly and fairly be made for the subject of this memoir; for he has so decidedly left the imprint of his labors upon the whole subject of urethral pathology and treatment that it would be idle to dispute his claim. So long as the God-given art of surgery lives, its history will be impossible without reference to his name and acknowledgment of his contributions to it as a science and as an art.

In some of the views advanced by Dr. Otis in his public teachings he was opposed by leading authorities at home and abroad. This resulted in much spirited discussion in the various medical societies and journals, and also in the publication of the last work mentioned in this enumeration. This was soon after republished in London. Previous to this publication, Dr. Otis, by invitation of Prof. Berkeley Hill, had addressed the profession from Professor Hill's chair in the University Medical College of London, and had also presented his advanced views at the meeting of the British Medical Association at Edinburgh, in 1875.

Now that the laborer is at rest, it becomes a matter of deep interest for those who stood near him during his life and watched his efforts, to inquire into the forces and methods which crowned them.

Where and how shall we class Fessenden Nott Otis among the workers in our calling? Among the brilliant geniuses, like Marion Sims, who like a meteor swept athwart the dark field of gynæcological surgery, flooding it with light? No. Shall we place him among the deep thinkers, the profound philosophers, like John W. Draper? No. He was not in any respect a quick, brilliant, striking man. He belonged to an entirely different class; to the class which holds within itself the greatest number of men who have lifted up humanity and advanced civilization; that class occupied by men who are slow of thought, deliberate of speech, and cautious of action; the class to which belong George Washington and Ulysses S. Grant. I count upon you not to do me the injustice of supposing that I am in any way comparing the subject of my essay with either of these great men. The class is large and it is comprehensive. From my standpoint, there are men in all positions of life who belong to the same class as those whom I have mentioned. As we look back upon our comrades of college life, we will recall them as belonging to three classes: First, the thoughtless, giddy youths, whose aim was pleasure and whose lives were froth; second, the talented, brilliant, witty, fascinating fellows, who gave great promise for the future, and who held among their number the "first-honor man" and those of lesser note; and third, the quiet, slow, well-balanced fellows, who, while not in the front ranks of college scholarship and college honors, always held positions of dignity; men of reserved force who took life gravely, avoided scrapes, and plodded on through the college career, the real bone and sinew of the class. To this class of men we all look back as that which has furnished the largest number of those of our classmates who have shed lustre upon their alma mater, gained honor for their own names, and accomplished worthy deeds for society. To this class belonged Fessenden Nott Otis. What he accomplished in his profession was attained by careful, devoted thought, devotion to details, strict and unbiassed examination of results, and honest regard for truth.

Upon his reading a paper before a European society, a man eminent in the specialty to which both belonged rose against it with undue warmth and uncalled-for severity. He appeared to feel that the slow-talking man who was opposed to him would readily fall before his flowing, flowery logic, and leave him undisputed victor upon a stricken field. A friend who was present described the encounter to me as a signal exhibition of methods between the brilliant and rather superficial man, and the deep, thoughtful, slow-moving one, whose staying powers wear out only after long conflict. Success on that occasion undoubtedly rested with the subject of this memorial and added largely to his then growing reputation.

But Dr. Otis presented other bright and attractive sides to his character, apart from that connected with his profession. He was an artist by nature, and to a certain extent by practice; for he always kept in touch with artists and with art, even to the end of his life. A mutual friend, the late W. H. Beard, once said to me in discussing his character and career: "The gain of your profession in attracting Otis was the loss of mine. Had he followed his natural bent, as in my judgment he should have done, he would have made an artist of merit and distinction, perhaps even of renown." An accident received in early life to a certain extent modified the course of his career. At this time and owing to this fact, perhaps, he devoted himself to landscape drawing and perspective.

with such success as to result in the subsequent publication, through the house of D. Appleton & Co., New York, of several books on these subjects. Their excellence and his reputation as a lecturer and teacher were recognized by the faculty of Union College in the presentation to him of the honorary degree of Master of Arts in 1849. And thus it was that on my first introduction to him in 1852, when he was twenty-eight years of age, I heard Dr. Kelly allude with enthusiasm to a life-size portrait in oil, painted by him.

It is quite evident that when Otis in due course came to the parting of the roads, one of which led to the temple of Æsculapius and other to that of art, he considered the course which would be his path in life with all that coolness, caution, and judgment which always characterized him, and decided definitely. Nevertheless, he loved art to the day of his death, and always kept in affectionate touch with it. Among his most intimate friends were artists of world-wide fame, such as Church, Beard, Winslow, Eastman Johnson, Bristol, and many others. But it was not only, or especially, the well-known and distinguished devotees of art that he cultivated. He was to my certain knowledge the medical adviser and counsellor of a host of poor students, who in time of need sought his guidance and aid, and sure am I that they never sought him in vain. In many an artist's humble home his loss will be deeply felt, and from many a studio prayers from grateful lips have ascended to heaven in his behalf.

In 1849 he published two volumes, entitled "Lessons in Drawing," and "Studies of Animals and Landscapes" ; and later he put forth a brilliantly illustrated work upon "Tropical Journeyings." In 1860 he published an illustrated "History of the Panama Railroad, and its Commercial Connections."

But I have kept back for you the most charming phase of his character, the loveliest feature of his nature, until the close of this address. A few words only, as I tell those of you who did not know him well, of his social, genial, humorous personality, and his gentle and affectionate nature. His friendships were tenacious and lasting, and his enjoyment of the society of his friends almost childlike. Fond of a good joke, he was an effective raconteur, and he had one virtue rarely seen in such men: he enjoyed the jokes told by others. I cannot refrain from telling you how deeply he enjoyed the following incident. Some years ago a dinner was given at the old Delmonico's restaurant to an eminent English surgeon, by some physicians of New York, and for a part of the evening I had the honor of sitting next to the guest of the occasion. For some reason I found it very difficult to interest him in my conversation, and, growing desperate, I pointed Otis out to him and said, "I have just returned from London, and on a visit of exploration I saw in a hostelry in the 'Seven Dials,' a portrait of that man in a picture hanging there which represented him standing not ten feet from Queen Victoria." Had I set off a bomb under his chair I could not have aroused the attention of this true Englishman more effectually. He was eager for an explanation, and evidently suspected me of insanity, or worse. You are all aware of the fact that when the British ship *Resolute*, which England sent out to search for Sir John Franklin in the Arctic Ocean, and which was lost, was recovered and returned with honors by the United States, Otis, in full naval uniform, and with a huge sword hanging by his side, was acting in the capacity of secretary to Commander Hartstene of our navy. The queen and the prince consort came on board to receive the ship, as Commander Hartstene delivered her to the English government. This striking scene was committed to canvas, and large engravings of it were struck off. It was one of these that I had seen hanging in a saloon in the questionable precincts of the "Seven Dials," and which represented Otis and the queen within ten feet of each other. After this the Englishman was eager to be presented to the enviable American, and to Otis' astonishment, I soon placed him in my seat and gave him my place of entertainer. The Englishman's extreme warmth and delight in knowing him, and his great desire to cultivate his acquaintance, amused him ever afterward, and was the subject of much merriment.

In his own home he was the soul of hospitality, and many of his friends will recall with pleasure the hours spent with him in his cottage upon the magnificent bluffs of Montauk Point, overlooking at once an endless expanse of ocean and hundreds of acres of pasture land, which recalled the prairies of Colorado. Here, surrounded by wife and children, and free from the cares of an arduous practice, the guest saw his true nature face to face, and learned to comprehend the charm of character which made for him in his three-score years and fifteen such a host of friends. Brilliancy, wit, and eloquence make men rich in admirers; simplicity of nature, sincerity, and kindliness produce, in their place, friends.

Dr. Otis was for many years a member of the New York Century Association, to which he was very deeply attached; of the New York University Club; the New York Medical and Surgical Society; a member in perpetuity of the New York Metropolitan Museum of Art; medical examiner and honorary member of the New York Artist Fund Society; and a life member of the New England Society.

For the last nine years of his life, failing health caused him to spend his winters in milder climates than that of New York, and he sought health in Southern California, Jamaica, Thomasville, Tallahassee, and New Orleans. He even tried lengthy journeys to India and Japan. On my last meeting with him I urged him to write a guide-book to the best winter resorts for invalids; but with a smile he rejected the proposal, saying: "Too late, too late, I am up to no more work." Then came to my mind the lines of Whittier,

> "Of all sad words of tongue or pen,
> The saddest are these, it might have been."

Such a work from such a man would have filled an important place as an aid to the physician of our day; for his dicta would have been freighted with a plentitude of practical knowledge.

His last winter was spent in New Orleans, where, in the early part of April, he was attacked by double pneumonia. During his convalescence a carbuncle appeared, and in his already debilitated state of health resulted fatally on May 24, 1900.

He leaves a widow, two daughters, and a son to mourn his loss. To them his death was a dire calamity, but to him it was not so. He fell like ripened fruit in due season, and as it is allotted to all men once to die, what happier ending could have come to any man than that which took our colleague from us? His career was one of honor and usefulness; his hour had fully come; no task was left unfinished, no demand of duty unfilled.

As we draw the pall over the quiet face which we shall look upon no more, we murmur, "A fitting exit for a true and noble man."

Snake Bite in India, on the recommendation of Major Lyons, is to be treated as follows: Bind a string or handkerchief as close as possible to the wound on the proximal side. Wash with a fresh solution of hypochlorite of lime diluted to 1 : 60. Inject a dose of antivenomous serum into the subcutaneous cellular tissue of the flank.

A NEW PLAN FOR WASHING THE BLADDER, WITH A DESCRIPTION OF APPARATUS.

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In the general practice of washing the bladder, the repeated filling and emptying of the organ is apt to excite contractions and limit the duration of the procedure. If, to avoid inducing bladder spasm, the irrigation is made more gently, it is mechanically less efficient.

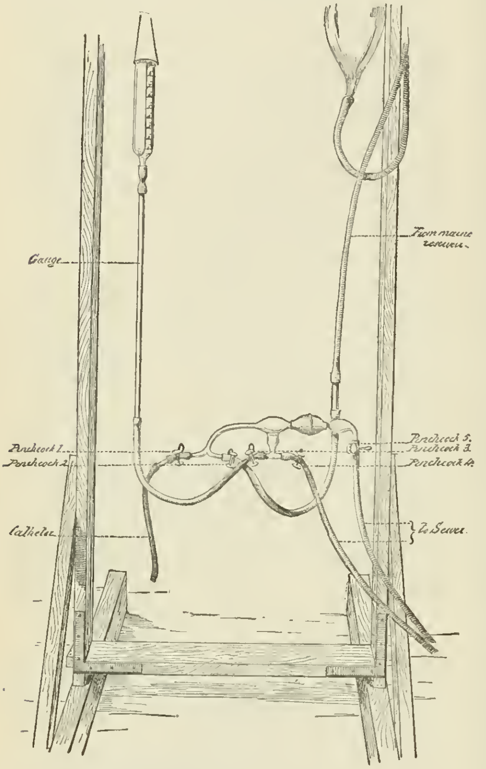

Fig. 1.

For the most thorough washing of the bladder, in the writer's opinion, two conditions must be realized: First, the bladder must be held in a state of comparative rest in any given capacity of contents, during the procedure, and, second, while the bladder is thus at rest, the liquid it contains must be more or less agitated. If the washing can be practised while the bladder is at rest, spasm of the organ can be avoided; the procedure can be prolonged, and the probability of disinfecting a foul bladder correspondingly increased. Ordinarily, the antiseptic impression made upon the bladder is brief. If it is lengthened by increasing the strength of the antiseptic, it is with the chance of causing irritation. If, however, the conditions allow a lengthening of the period of antisepsis without increasing its intensity, irritation may be avoided and a more thorough disinfection attained without subtracting from the energy of the bladder. A thorough freeing of the bladder of its foul contents, and a prolonged extension of the period of disinfection without undue irritation, brings into view the possibility of accomplishing the complete cleansing and disinfection in a few prolonged sittings rather than spreading many, perhaps ineffectual efforts over weeks and months, with the attendant risks.

According to the first proposition, not only should the bladder be washed while at rest, but in varying degrees of capacity of contents from a state of very small contents to that of full capacity and distention. It is understood that the gross impurities are best removed when the bladder has only a small amount of contents; but it should also be appreciated that for its thorough cleansing the bladder should be washed while filled sufficiently to smooth out its folds and expose all pouches and depressions to the action of the irrigant. To suppose that a trabeculated bladder with all its numerous pouches can be cleaned by simply a repeated filling and emptying of liquid contents is unreasonable. Such a bladder should be washed while held at comparative rest in different capacities of contents from partial to full distention.

Over-distention, unless for the special purpose of increasing the absolute capacity of the bladder, is to be avoided. Straining the bladder by overpressure upon its wall is apt to excite spasm and limit the washing procedure, and is consequently to be avoided. The reaction of the bladder to internal pressure is a characteristic special to the individual and is best determined by a gauge connected with the bladder. This consideration also has its application to a dilated and insensitive bladder.

That the liquid contents of the bladder should be agitated during the procedure of washing will be conceded. Apart from the mechanical washing of the bladder, the disinfection of its wall is best accomplished while it is held at comparative rest and the contained liquid is made to circulate within it. By this means the whole disinfectant energy of the irrigant is utilized. It should be remembered that the time element is an important factor in disinfection.

In the usual procedure of washing, care is taken, very properly, not to have the end of the catheter project far into the cavity of the bladder, for the collapsing organ striking against the catheter may be irritated and thrown into spasm. In the washing according to the plan of the writer, this restriction to the position of the end of the catheter is removed, except while emptying the bladder. Indeed, when the bladder contains considerable liquid it is an advantage to have a free length of catheter in its cavity, for then the loose end takes different positions and the currents of agitated liquid take different directions.

To carry out the foregoing ideas, the writer has striven to contrive an apparatus, after many changes in design, that will give the surgeon complete command over the irrigation of the bladder, and that shall at the same time be simple in construction and operation, inexpensive, and easily cleaned.

The apparatus comprises a main and secondary reservoir with a distributing or washing apparatus. The smaller, or graduated measuring-reservoir, contains about eight ounces, and is mounted only high enough above the bladder to make the attached gauge operative. The main reservoir, which should contain a large amount of irrigant, should be at a higher level than the upper level of the smaller or measuring-reservoir, for it is convenient to be able to fill the latter from the former through simple gravity. The main reservoir is connected with the washing-apparatus proper through rubber tubing which is attached at the intake (*a*). To the bottom of the measuring-reservoir is attached by a rubber coupling a glass tube about twenty inches long, of three-sixteenths of an inch bore. This tube is to serve as a gauge upon the bladder. The lower end of this glass tube or gauge is attached by a rubber tubing to the washing-apparatus at the branch tube from the trap. This form of gauge and its attachment were adopted after using mercurial and other gauges attached to the washing-apparatus itself. The washing-apparatus proper consists of two glass bulbs with tubular glass extensions, which for controlling the circulation or distribution of the irrigant connect with properly attached rubber tubings. The flow of liquid is checked and controlled in its distribution by pinch-cocks, the glass construction being so designed as to bring these pinch-cocks under the easiest manipulation. The glass bulbs expose the charge of irrigant to convenient inspection. The larger glass bulb creates a partial dead water when the apparatus is in action, allowing clots and coarse particles, grit, etc., to fall into the trap constructed on its lower side. This trap communicates through a branched tube with a pipe leading to the sewer, and also with the gauge and measuring reservoir.

Attached to what may be called the distal end of the bulb is a common rubber bulb. This rubber bulb is the means by which the irrigant may be pumped to determined points of distribution, and also serves as an agitator to give motion to the contents of the bladder. It is an injector and aspirator, and by its suction, controlled by the hand, the bladder contents can be withdrawn with gentleness. Attached to the distal end of the rubber bulb is another and smaller glass bulb terminating in a bent short glass tube which by means of rubber tubing communicates with the sewer. This smaller glass bulb serves as a tell-tale to indicate when charging the apparatus that the unseen contents of the rubber bulb are clean. There are therefore two courses to the sewer, one through the trap and the other through the distal end of the apparatus.

The rubber coupling and small glass tube at the proximal or bladder end of the apparatus are to facilitate ready attachment to a soft-rubber catheter. It is premised that only a soft catheter of simple construction should ever be used in washing the bladder. The apparatus is brought into action by expelling its contained air and filling with the irrigant. This is done by opening pinch-cocks 2 and 5, while at the same time holding the distal end of the apparatus upward. Any imprisoned bubble of air can by appropriate handling be driven toward the sewer. The connection with the catheter should be so managed as to avoid pumping any air into the bladder. Perhaps this is best done by allowing some urine to flow through the proximal end of the apparatus down through the trap. The ingress and exit of the bladder liquid are controlled by a pinch-cock upon the catheter, or upon its rubber coupling. For the first emptying of the bladder, it is advisable that the eye of the catheter should be just within the bladder cavity. The urine in the blader is siphoned into the sewer through the trap by opening the catheter pinch-cock and cock No. 4. If any air is caught in the apparatus, it is driven out for good. The surgeon now has it in his power to introduce a definite quantity of irrigant into the bladder, it being practically empty. He will probably, however, by compression of the rubber bulb, throw some of the charge in the apparatus into the bladder and by releasing the compression withdraw it, repeating the manœuvre. He has thus stirred up any residuum, slightly cleansed the bladder, and correspondingly fouled the charge in the apparatus. He now replaces the foul charge in the apparatus by a clean one; opening pinch-cocks 2 and 4 or 2 and 5, for that purpose. The apparatus has been thus flushed from the reservoir of supply, and a new charge of pure irrigant stands ready to be shifted back and forth, in communication with the bladder and with any degree of force of agitation.

A definite amount of irrigant may be sent into the bladder by first transferring a definite amount from the main reservoir to the measuring reservoir, either by opening direct communication with the main reservoir or through the medium of the forcing rubber bulb. In the same way it may be injected into the bladder from the measuring-reservoir, either by the force of gravity, at low pressure, or by means of the rubber bulb with any degree of pressure. To operate the gauge, the liquid is drawn off from the measuring-reservoir into the sewer till its level in the gauge is near the presumed level in the bladder; then the bladder level or pressure can be exactly taken by opening the catheter and gauge pinch-cocks. Vice versa, the amount of liquid withdrawn from the bladder can be definitely known by forcing it into the measuring-reservoir before directing it into the sewer. It will be seen that some study and a little practice will be required for the surgeon to develop the full capabilities of the apparatus. In manipulating the rubber bulb, injecting and withdrawing liquid, through delicacy of touch quite a knowledge may be gained of the sensitiveness of the bladder. The patient can feel a forcible churning of contained contents and may complain of the force of the agitation. The least force necessary to clean the bladder should be used. Sometimes there is a diminishing sensitiveness as the washing proceeds and the bladder is cleansed. The sensitiveness of the bladder wall, as it is drawn by aspiration against the eye of the catheter, may be well observed. The surgeon has control over the eye of the catheter to prevent its obstruction. Perhaps the bladder wall persistently blocks the eye of the catheter; then it is easy to shift the position of the catheter eye, by allowing the partially collapsed rubber bulb to fill by opening pinch-cock No. 2, then injecting more liquid into the bladder and pushing the catheter further into its cavity. Many little features that need not be described, that will be met with in practice, can with little thought be easily dealt with.

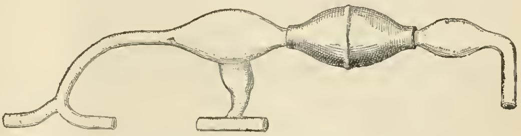

Fig. 2.—Rubber Forcing N-Bulb. Glass connections.

Having freed the bladder, while containing a small amount of liquid, of its principal impurities, a larger, definite amount of irrigant may be introduced, and by means of the rubber bulb the contents of the bladder can be kept in motion and mingled with the charge in the apparatus. By constantly renewing this charge and repeating the commingling, the bladder contents, without being materially varied in quantity, are constantly approximated in quality to the purity of the irrigant fed to the apparatus. The smaller reservoir may be used to inject a different liquid from that contained in the main reservoir, the washing-apparatus serving quite simply as a manageable means for distribution.

The washing-apparatus is thrown out of use by first emptying the smaller reservoir and gauge through the trap. The connecting rubber pipe is then detached from the lower end of the gauge. A little suction is made by opening and closing pinch-cock No. 5, at the distal end of the apparatus. The apparatus is disconnected from the catheter and is thus freed without spilling any liquid.

Finally, the apparatus is cleaned by connecting its proximal or catheter end with the hydrant and allowing a stream of hot water to course through it and the attached pipes by opening the different pinch-cocks. If desired, although to the writer it has seemed unnecessary, the apparatus may be taken apart and disinfected. It can be readily reassembled.

CERUMINOUS AND EPITHELIAL IMPACTIONS IN THE EXTERNAL AUDITORY CANAL.[1]

By SAMUEL KOHN, M.D.,
NEW YORK.

Impacted cerumen in the external ear, to the mind of the general practitioner, is a condition at once simple and benign; the diagnosis is usually made by him from the subjective symptoms alone, without recourse to local or any other examination; we cannot wonder, therefore, if, with this mistaken idea of the positive harmlessness of the affection in mind, he accords the treatment and the sequelæ scant attention. Be it understood that these prefatory remarks do not refer to otologists or to those physicians who are versed in otology; but so many cases of all forms of aural disease, and of this affection in particular, are treated, for a time at least, by the general practitioner, that it is a matter of moment to direct the attention of the profession to the great importance of aural affections in general, and of the greater importance of treating them properly in their incipiency.

No pretence to an exhaustive treatment of the subject-matter is made for this paper, its object being mainly to throw light upon conditions in the external auditory canal, whose power for ill to the organism is much underestimated. This can best be accomplished by considering the subject under the following headings: Frequency, classification, causation, dangers, symptoms, diagnosis, prognosis, treatment.

Frequency.—In ear clinics, the frequency of the affection has been shown statistically to be from ten to twelve per cent. of all cases (Roosa, Burkner). This is a large proportion, but I am convinced, from my personal experience, that in a general practice the percentage of cases is relatively even larger than this, because accumulated cerumen may for a long time cause no noticeable symptoms, and the patients do not, therefore, come under observation. The number of persons who are found upon examination to have accumulations of cerumen in one or both ears, but who consider their ears perfectly "clean," is surprisingly large; the percentage of cerumen inspissatum will in my opinion amount to fifteen per cent. of all cases of ear disease.

Classification and Causation.—The variety of aural plug most frequently met is that consisting of the more or less thoroughly inspissated secretion of the ceruminous and sebaceous glands of the integument lining the external auditory canal. It is caused either by an individual tendency to hypersecretion of the glandular elements of the skin, or by a sudden bend or narrowing in the canal obstructing the outflow or evaporation of the secretion; or both causes may be at work in the same case.

The fresh accumulation of secretion is light yellowish in color and so soft that it exercises no pressure on the surrounding tissue; even though it entirely fills the canal it usually does not markedly reduce audition. In time the watery constituents evaporate, the plug shrinks somewhat, receding from the walls of the canal and from the drum; this slight air space about the plug accounts for the absence of symptoms for a long time in many cases, as sound waves reach the drum not only through the plug itself, but outside of it, between it and the wall of the canal. This plug, seen through the speculum *in situ*, presents a light yellowish, yellowish-brown, or black oval surface, corresponding to the circumference of the canal; it is usually concave, owing to the evaporation of its watery constituents, and about one-half inch from the external meatus. If it is recent, the probe lightly applied will sink into it, but if it has been in process of formation for years, as is often the case, it may be of considerable hardness, the probe in touching it sometimes producing a perceptible sound.

When such an old ceruminous plug is removed *en masse*, as is often the case, it is at times found enclosed in a perfect epithelial cast, the lining of the external auditory canal, its inner end presenting an impression of the drum with its prominences and depressions well marked. The plug consists of fat globules, hairs, epithelial cells, detritus, and water. It may have for its nucleus some foreign body introduced years previously, which was the original cause of setting up the irritation which resulted in the hypersecretion, such as a piece of cotton, a pea, a small button, or a dead insect. The size of the plug varies; it may be 3 cm. in length, or there may be only a thin layer of dried waxy scales lying upon the drum, and so lustrous as to escape the observation of the specialist.

The second variety is the epithelial plug; it is formed principally of epithelial scales, and is due to a chronic desquamative dermatitis of the external auditory canal; the concentric layers of epithelial scales thrown off by the recurring attacks of inflammation finally form an occlusive plug, which may be dry, crumbly, and without shape, or the scales may be rolled up into round balls, or if there be an accompanying hypersecretion of the ceruminous glands permeating the epithelial lamellæ, a more or less cohesive homogeneous mass is formed. This is seen through the speculum to be of a grayish or pearly hue, usually not so smooth as the ceruminous plug, and removable with considerable difficulty.

The third variety is cholesteatoma of the external auditory canal, showing through the speculum as a pearly-gray mass. It originates most frequently in the mastoid cells, and by bone absorption works its way toward the external auditory meatus, or it may originate in the external canal and eat its way by erosion toward the mastoid. Cholesteatoma may complicate the epithelial plug, and vice versa. Absorption of the osseous portion of the auditory canal may proceed to such an extent that its enlarged lumen may permit the finger to be pushed down to the drum. Strange to say, the drum membrane is rarely injured by cholesteatomatous tumors, but bone readily yields to them; a fissure or foramen is formed, the growth finds its way through this into the mastoid, and, unless thoroughly removed by operation, the case may end fatally, through mastoid involvement and its consequences.

The fourth variety is associated with chronic suppuration of the middle ear and perforation of the drum. Appropriate treatment may have caused the disease to become quiescent for a time; the patient ceases to attend to his ear trouble. A slight perforation remains, however; a very scanty secretion, which the patient scarcely notices, starts up in time; before it reaches the external ear its watery elements have evaporated. Or it may also be that a ceruminous plug interferes with the outflow of the secretion, and a desquamative otitis externa may cause the scales to be intermixed; all of these constituents combine to form a hard, grayish, ill-smelling plug, which closes up the perforation in the drum, and which requires much care, judgment, and skill in its dislodging. It forms an admirable nest for the bacteria of putrefaction. In the case of the epithelial plug or the one just described, associated with suppuration of the middle ear, the ceruminous secretion may so predominate as to mask its real character; great care must, therefore, be exercised in the making of diagnosis and prognosis, as the removal of the mass may, if improperly performed, lead to an acute exacerbation of the inflammation of the middle ear with its unfortunate train of sequelæ.

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[1] Read before the Metropolitan Medical Society at the meeting of Tuesday, March 27, 1900.

Causes and Dangers.—It has been claimed by Roosa that every case of impacted secretion in the external ear is due to an existing or to a pre-existing inflammation of some part of the auditory apparatus. While this view is admitted to be true in the majority of cases by most otologists, it is deemed too sweeping in attributing every case of impacted cerumen to inflammation. As has been pointed out in the classification, external desquamative otitis is the cause of the epithelial plug; or a chronic suppurative otitis with scant secretion may be the causative factor primarily.

It has been claimed that chronic pharyngitis with its accompanying derangement of the glandular secretion of the mucous membrane may, by extension, lead to catarrhal otitis media, which in turn may cause hyper-activity of the ceruminous glands resulting in the accumulation of cerumen in the external auditory canal. It has even been said that diseases of the labyrinth may cause hyper-activity of the ceruminous glands, nerve anastomoses being the supposed etiological factor.

That, as a rule, after the removal of the ceruminous plug there is not that complete restoration of hearing which the general practitioner and the patient confidently expect, is the experience of every otologist. As long ago as Toynbee's time the observation was made that in sixty per cent. of the cases of impacted cerumen there was more or less impairment of hearing after the complete removal of the plug. This corresponds with the experience of specialists to-day; whether the impairment is due to a chronic otitis media sicca, or to the long-continued pressure of the plug upon the drum, with the consequent interference with the motility of the ossicles, must be determined by the further observation of the individual case. In some cases it is impossible to decide positively which is the causative factor.

Dangers.—From what has been said, it is evident that the simple ceruminous plug, being nothing but the result of hypersecretion, is harmless to the patient; still it is well not to be too positive in venturing a prognosis; for, as stated, an old ceruminous plug may have caused a chronic dry otitis with intractable deafness. Dench observed an effusion of serum, completely filling the tympanum, in a case of impacted cerumen of twenty years' standing. The drum may be depressed to such an extent as to become adherent to the promontory, which condition naturally causes radical impairment of hearing. Epithelial plugs, either simple or associated with cholesteatoma, may cause perforation of the drum, although this is rare; these accumulations cause absorption of the osseous canal more readily; they may, through admixture with cholesteatoma, eat into the mastoid, and produce conditions requiring immediate operative interference; if not promptly and thoroughly treated they may lead to sinus thrombosis, cerebral or cerebellar abscess, or meningitis. These plugs are often associated with slow suppuration of the middle ear.

Symptoms.—A fulness in the ear may have been noticed by the patient for some time; but since the plug is often dry and shrunken, hearing is not sufficiently impaired to attract the patient's attention, sound waves still reaching the drum through the air space; as a result of a bath, either in the tub or surf, the plug absorbs water, swells up, and completely occludes the canal; the patient notices the sudden onset of deafness in one or both ears, and hurries to the physician with the idea that the sea bath has produced the hardness of hearing because of water being left in the ear, as he supposes. Other symptoms that have been noted are dizziness, due to pressure on the labyrinth through the ossicles; at times, pain due to the desquamative inflammation of the external canal, or to the middle-ear catarrh; tinnitus is oftentimes a symptom. Both auditory canals may contain plugs for years without causing any symptoms to attract the patient's attention, when a sudden jar of the body, as in jumping aboard a car, a fall, or a mis-step, may cause such a shifting of the plug as to occlude the entire canal, producing deafness which arouses the patient's anxiety. A patient may never have noticed any trouble whatever with his ears, until, after a sea bath, as I have frequently had occasion to note, he becomes suddenly deaf. Other symptoms which have been noted in rare cases are facial paralysis, melancholia, reflex cough, bronchitis. In isolated cases audition may be improved by the presence of the hard plug. In a case recorded by Roosa the brain symptoms were so marked that a diagnosis of sunstroke was made by the attending physician, who tortured the patient with blisters, etc., until the true nature of the disease was discovered. A case of convulsions and coma has been recorded by Rischawy as due to impaction.

Objective Symptoms.—The writer would here lay emphasis on the dictum that no physician should attempt to do anything locally for any case of ear disease, who is not versed in the use of the ear speculum and forehead mirror; and he would add, as a corollary, that every practising physician should familiarize himself with the use of these instruments. The practice of ordering laudanum, glycerin, sweet oil, or camphorated oil for patients who complain of ear trouble, without a careful local examination with the speculum, is so vicious and so fruitful of evil consequences as to merit the severest condemnation. By means of the speculum and head mirror, the ceruminous plug is easily recognized as a black or brownish-yellow mass completely filling the external auditory canal. The epithelial plug presents a grayish appearance consisting either of a number of detached scales or small round masses; if admixed with thin pus, the fetor is intolerable; if with cholesteatoma, it presents a lustrous, pearly-gray color. The tuning-fork applied to the forehead or teeth is heard with exaggerated loudness in the ear containing the impaction. After the removal of the plug, which frequently brings with it the epithelial lining of the canal, this and the drum are often seen to be deeply red from congestion; sometimes there are erosions from which there is slight bleeding, which at times may be considerable from granulations from old fetid, purulent inflammations of the tympanum with perforation. The older the plug, the more apt is the epithelial lining to be macerated and to come away with it.

Diagnosis.—This is the division of my subject upon which I desire to lay most stress for the benefit of the general practitioner. I want to make an urgent plea for a better knowledge of ear diseases, for a greater familiarity with the proper modes of examination, and familiarity with the simple methods of treatment which are, after all, most efficient. It seems almost supererogatory to say that the ear speculum and the forehead mirror are absolutely necessary to make a diagnosis; but we are only too familiar with the laxity prevailing among many practitioners when brought in contact with ear diseases; without a proper examination they hazard treatment which, not being based on even a partial knowledge of the cause or nature of the affection, results in making matters worse; and frequently the specialist is called upon to repair the mischief, in addition to the getting rid of the original disease.

A patient who complains of deafness coming on suddenly, fulness in the ear, dizziness, perhaps of autophony, who hears the tuning-fork applied to the middle of the forehead more markedly on the deaf side than on the normal, has in all probability an occluding plug in the external auditory meatus; the speculum will reveal it. In some cases the plug is so near the external meatus that it is visible without the aid of the speculum.

Prognosis.—From what has been said, it is evident that the prognosis as to audition should be guarded. The general practitioner, having made the correct diagnosis, is prone to tell his patient that the function of hearing will be completely restored with the removal of the plug. As stated, this is true of only a small percentage of cases, from thirty to forty per cent. Even in cases of simple ceruminous accumulation of long standing, hearing will be found markedly lessened on account of the prolonged pressure of the plug upon the drum and ossicles, and through these upon the delicate labyrinthine structures.

In an epithelial or cholesteatomatous plug, seemingly harmless, it should be borne in mind that an old purulent otitis media or a cholesteatoma of the mastoid may lurk behind it, markedly lowering the function of audition if not abolishing it entirely; not only this, but the forcible or improper removal of the plug may light up a train of grave symptoms, which hitherto had been kept quiescent by the plug *in situ*, through its acting as a bar to fresh infection. With the improper removal of the accumulation, the perforative otitis is laid bare, and an infection may occur which will result in serious consequences.

Treatment.—Even among authorities opinions differ as to the proper method of removal of these accumulations. The consensus of opinion is that gentle and careful syringing with warm water, all things considered, is the best method. Peroxide of hydrogen, more or less diluted, and neutralized with sodium bicarbonate, or pure, is used by many physicians; to the writer, pure sterilized water is preferable, for the reasons, first, that whatever matter may have occluded the canal emerges unchanged with the water, thus aiding the diagnosis materially; and second, that the delicate and sensitive epithelial structures of the auditory apparatus are unduly irritated by the peroxide.

Buck prefers the small curette, forceps, and probe, in the hands of the otologist throughly conversant with the auditory apparatus, and cognizant of the danger of wounding or injuring the delicate structure of the ear with steel instruments. This method of removal through the speculum and under ocular inspection is safe in skilful hands, though damage may be done by instruments in the most practised hands by involuntary starts or movements of the patient's head, the integument being lacerated and a new source of infection opened up.

For syringing the ear, the first requisite is absolute cleanliness. A glass and-metal syringe, if possible, which can be thoroughly disinfected and which holds two or three ounces, having three rings, one for the thumb and one each for the second and third fingers, should be used. The water should be of a temperature easily borne by the back of the hand, say about 80° F. About a pint of water unmixed with anything else should be used, although corrosive sublimate 1 : 5,000, physiological salt solution, and bicarbonate of sodium one per cent., have been recommended; I give the preference to lukewarm water which has been boiled. A sterilizable syringe is to be preferred; this can be purchased of any instrument maker. The latest in this line, from Germany, is Professor Jacobson's "aseptische Ballon-Ohrenspritze," consisting of a rubber ball with ivory or bone nozzle encased in a removable glass tube; the entire syringe is to be boiled for from five to ten minutes before use.

The second requisite is gentleness of manipulation. Any undue force must not be used in expelling the water from the syringe into the ear. The reason for these warnings is manifest from what has been said. If an old syringe which has been lying about, exposed to dust, is used, and the case be one of otitis media with small perforation, masked by the plug, a new infection may be introduced by the syringe which will set up a violent inflammation; or, if too much force be applied, the stream may force its way into the middle ear through the perforation, and drive the cholesteatomatous particles or inflammatory products into the mastoid cells or antrum, setting up mastoid disease. Too much force in using the syringe also may cause, by sudden pressure upon the drum, transmitted through the ossicles, circulatory changes in the semicircular canals, producing extreme dizziness and syncope; even the cerebral centres may be temporarily affected in this way.

After removal of the occlusion, continued syringing should be done with caution, as the danger of causing labyrinthine dizziness is increased. Too forceful a jet of water communicated through the plug to the drum, and thence through the ossicular chain to the membrana tympani secundaria, causes increased intralabyrinthine pressure, whence such dizziness may ensue as to compel a cessation of the syringing process. It is frequently the case in old, dry masses that four, five, even six syringefuls of water make scarcely any impression; in such a case the hard mass must be softened, in order to be more readily removable; for this purpose a saturated solution of bicarbonate of sodium, or a two-per-cent. solution of carbonate of potassium in equal parts of glycerin and water, may be dropped into the ear three or four times a day. The drops should be warm. From five to ten drops should be instilled into the ear, and these should be allowed to remain *in situ* for about three minutes, when they may be allowed to flow out. Two days' treatment of this character will so soften the plug that its removal by gentle syringing with warm water is a matter of the greatest ease, the first syringeful frequently dislodging the whole plug, especially if it be entirely ceruminous. Epithelial plugs, as already stated, even after softening need care, time, and patience for their removal. They frequently require several sittings for their thorough removal and the complete cleansing of the external canal of all scales and detritus. The amount of force in using the syringe must be graduated according to the needs of each case. Skill in the use of the ear syringe is acquired only by long practice. The rule is to commence the ear syringing by gently forcing the piston home so as to send the jet of water into the ear under the minimum of pressure. The next may be a trifle more forcible, gradually increasing the force but never sending a powerful stream of water against the delicate mechanism of the auditory apparatus, with its intimate relationships to the brain. Another rule worth remembering is that these cases should be, if possible, attended to at once when they present themselves for treatment. A patient should not be sent home with instructions to syringe the ear himself, or use certain drops. As soon as the diagnosis is made, the physician himself should attempt to remove the plug either by syringing or otherwise (Dench). If the syringing seems insufficient after a few syringefuls have been injected, it will be wise to follow the advice of Blake and remove portions of the periphery of the plug by means of a small curette; the water can then pass through the opening thus created to the space between the drum and plug, and force the latter outward.

Roosa relates a case in which the plug was so hard that he was forced to have recourse to fuming nitric acid to soften it. In such old, hard masses, Blake advises the use of liquor potassæ for the purpose of softening. It should be mentioned that some authorities are opposed to syringing altogether, and advocate the use of the curette and probe.[1] In the case of epithelial plugs, it is well to use a bichloride of mercury solution 1 : 5,000 for syringing. The rules of asepsis should be observed in every case as thoroughly as possible. The use of olive oil in the ear should be absolutely discountenanced, as it favors the growth of the aspergillus fungus in the accumulation.

After the contents of the canal have been removed, it is well to inflate the tympanum with a Politzer bag because of the possible depression of the drum from the plug. A small, loose wad of cotton should be placed in the canal, to protect the sensitive and oftentimes denuded integument of the canal from the cold air and dust.

The tendency to recurrence is one of the characteristics of ceruminous accumulation; it is attributable to the hyperactivity of the secretory glands, which has not been in the least affected by the removal of the impaction. The same patient frequently returns after several months for the purpose of having his ears syringed. To prevent this, it is advisable to instruct the patient to wash out his ears thoroughly with a mild alkaline solution (ʒ i. of aqua ammoniæ to the quart of warm water, and castile soap) once every week. The ordinary tub bath, which the patient considers efficacious, has, in my experience, no effect whatever in removing the accumulation of wax in the ear.

In closing this paper the writer again would urge upon the general practitioner the necessity and desirability of some knowledge of otology, the more the better for him. So many cases of incipient ear disease are, of necessity, first seen by the family physician immediately after measles, scarlatina, and diphtheria, etc., and the consequences of even the simplest ear disease, if improperly treated, are so lamentable, that a better knowledge of this branch of medicine in the profession must save many lives. The organ of hearing, besides being of incalculable importance to the individual, stands in intimate relation with the brain and nerve centres; improper, injudicious, or careless treatment at the outset of affections of this organ may, as has been shown, result in fatal disease of the sinuses and brain. It seems almost incomprehensible to the writer why this important organ is accorded such scant attention by the general profession, and if he has succeeded, in this paper, in awakening a new interest in diseases of the ear, his object will have been accomplished.

Women as Surgeons.—An interesting speech was made at the annual meeting of the new Hospital for Women, London—of which all the physicians, surgeons, and students are women—by the eminent surgeon Sir Henry Smith. He stated that he had lately been present at a number of most serious operations performed by the lady surgeons, and had come to the conclusion that the small hands and delicate touch of women were particularly suitable for surgical work. The same tactile skill that makes a good needlewoman, he intimated, is of the highest use in modern "conservative" surgery; and he added that the results gained in that hospital would compare favorably with those recorded anywhere else.—*London News.*

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[1] Buck: "Treatise on Diseases of the Ear," 1898.

DAMPNESS OF THE SOIL AS A FACTOR IN THE PRODUCTION OF HUMAN TUBERCULOSIS.[1]

By RICHARD COLE NEWTON, M.D.,

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If an apology be needed for taking up the time of the association with the histories of a few cases of tuberculosis and an imperfect and crude discussion of the points which the cases seem to emphasize, I think that the importance of the subject chosen will provide the excuse. I will first recite a few family histories which have come under my observation.

The D—— family, Germans of vigorous stock. No cases of phthisis have been known to occur among the ancestors of this family for generations. The father, a farmer, died of some non-tuberculous trouble at a good old age. The mother is living, over seventy, and in good health. They had twelve children. The first-born, a son, is now living and in good health. When he was one year old, the family moved into a small stone house, now standing, which was exceedingly damp. Eleven children were born in this house, in the eleven years during which the family lived there. Then they moved into another house, which they had built on the same premises. It was built of wood, was much less damp than the first one, but had too many shade-trees around it. The second child, a female, died of consumption, "following grippe," at thirty-nine. The third child, male, died at thirty-seven of apoplexy. The fourth child, male, died at forty of consumption "following grippe." The fifth child, female, had consumption, for which she went into Sullivan County, New York State. This change of residence, she says, saved her life. She has lost a child from tuberculosis and is herself still suffering from chronic bronchitis. The sixth child, female, died at twenty-six of pneumonia. The seventh child, female, died at twenty-seven of consumption "following grippe." The eighth child, a male, is living and in good health at thirty-six. The ninth child, a male, is living and in good health at thirty-four. The tenth child, a male, is living and in good health at thirty-two. The eleventh child, a female, died in childbed. She had a diarrhœa for four weeks after the baby came, and had had a cough. She is not known to have had lung trouble. The twelfth child, male, died at eighteen of dropsy. He had no cough. He was said to have fallen and "bruised his liver."

C—— family, Irish laborers and carpenters, lived in a damp house. Their kitchen was in the basement and there the family lived a great part of the time. The children were frequently seen lying in their cradles in the basement. There was no phthisis so far as known among ancestors. The father and his sister and mother's sister are now living. The mother died of heart disease. They had twelve children, all of whom except two died of consumption.

H—— family, Irish laborers. The father is living; the mother died of some disease not tuberculous. Their house was built for them thirty years ago. They had three children living when they moved into it. The place was very damp. The fourth child was born there. In about twenty years the oldest daughter died of phthisis at the age of twenty-two. Seven years ago the son, a printer, died of phthisis at the age of thirty-one. In the year 1900 the youngest daughter died of phthisis at the age of twenty-seven. One daughter, now living, has a sensitive throat and abnormally red cheeks.

B—— family, American. They explicitly deny all traces of phthisis among their known ancestors.

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[1] Read before the American Climatological Association at the fifth triennial session of the Congress of American Physicians and Surgeons, held at Washington, D. C., May 1, 2, and 3, 1900.

The eldest daughter complained of cough, indigestion, nervousness, etc. She got well after going into central New York to live. The second daughter, a teacher, has advanced tuberculosis, and is now in Colorado Springs under the care of Dr. Hart. The eldest son is anæmic and very "nervous." The younger son is delicate, slender, and pale. The house has been very damp. Now the surroundings have been improved by drainage.

These are all cases that have fallen under my personal observation. I dare say that by taking the experience of others the list might be indefinitely extended.

However, there have been enough cases cited to serve as a text for what I wish to say. I have long felt, as no doubt many other observers have, that something besides direct contagion by the reception of the tubercle bacilli into the body is necessary to establish the morbid process which we know as phthisis pulmonalis.

Jaccoud says:[1] "The tubercle bacillus belongs to a class of pathogenic microbes called 'etiological dualisms,' because they exist in healthy organisms indefinitely without injury to the latter and become noxious only in consequence of changes in the organism itself from other causes." If this be so, the bacillus of Koch acts as we know that the Klebs-Loeffler bacillus, the pneumococcus, and the streptococcus act. That is to say, it may be present in the human body and produce no overt symptoms. And it is reasonable to suppose that we are exposed over and over again to this infection. Perhaps our bodies never are free from the presence of the tubercle bacilli, and yet only ten or twelve per cent. of the inhabitants of the Atlantic seaboard die of consumption. Why does not the entire race perish from this disease? It may be said that the contagion is rather feeble and takes a long time to develop, and that the organism must be in a fit state to receive and nourish the germs, else they will not grow.

It is so easy to glide off into glittering generalities and to hide our ignorance under some half-statement, or the plausible conjecture of some writer. It is a fortunate thing that we have at last adopted more exact methods of studying disease. Still, with all the care that has been bestowed upon the study of tuberculosis there is still very much that requires elucidation.

Squire[2] and Kanthack[3] assert that some other influence or influences must be acting in conjunction with the bacillus before the latter can produce consumption in human beings. This being so, the latter argues: "It is likely in practice to be far easier to remove the conditions causing this predisposition than to eradicate the bacillus so long as fitting conditions for its development are left. The problem then is no longer a matter of isolation and antiseptics, but of improved surroundings and better conditions of life." He mentions in this connection the divergent conditions regarding the behavior of certain animals to anthrax infection; as, for example, "pigeons, which are usually resistant to anthrax, are rendered susceptible by starvation, and dogs, horses, pigeons, and frogs are made susceptible by being deprived of water. So a predisposition may be established in some animals by continued over-exertion, fatigue, loss of blood, and by unsuitable diet. Guinea-pigs and white mice, which are ordinarily resistant to avian tuberculosis, can easily be infected after being kept for a time in a warm chamber at 33°–35° C." Precisely what changes are produced in the animals by these disturbances of their ordinary mode of life we do not know; we only know that whereas before we interfered the animal was insusceptible to the action of these various pathogenetic germs, afterward it was easily infected. The war against tuberculosis then becomes a matter of sanitation rather than of disinfection and isolation, against the surroundings of the people rather than against a microbe, which can grow only when a predisposition is set up.

On the other hand, we have long known that under certain conditions the bacillus of Koch does little harm to the animal into which it may be injected. You will all remember Dr. Trudeau's rabbits. All of those which had been injected with the tubercle bacilli and allowed to run at large got well, while all of those which were closely confined after inoculation died of tuberculosis. Perhaps one of the most conclusive experiments recently tried is reported from the Storrs Agricultural College in Connecticut.[1] Four cows were subjected to the tuberculin test in March, 1896 and did not respond. In October, 1896, they were again tested and all responded. They were then placed in a light, airy stable, where it is estimated that each animal had fifteen hundred cubic feet of air space. In January, 1897, another test was made and all responded, but in April, 1897, after a test, only two responded, and in July of that year none of them responded. For two years their milk was fed to eight healthy calves, only one of which contracted the disease, and that calf showed evidence of tuberculosis only six months after it had ceased drinking the experimental milk, so that the tuberculous infection was probably due to some other cause.

Admitting, then, that the infection is wellnigh universal, and that it cannot become effective except under certain conditions, is it not our obvious duty to pay more attention to these conditions?

The whole trend of present scientific opinion is to minimize, if not to deny, the danger of tuberculous infection from cow's milk. The discovery of the timothy-hay bacillus and its resemblance to the tubercle bacillus has cleared up some of the threatened danger from the alleged discovery of the latter bacilli in milk, butter, etc., the bacilli so discovered really being the timothy-hay bacilli. Baldwin,[2] Guthrie,[3] Carr and Northrup,[4] Bouviard, Still,[5] Moore,[6] and others are disposed to deny that the mode of infection by the bacillus is through cow's milk or other food. On the other hand, Law,[6] Smith,[6] Park, Robison, and others believe that while there may be danger from infected milk it is small compared to the danger from human infection. And human infection itself is doubtless, as a general thing, comparatively weak. I will quote a few examples. Knopf[7] shows that the villages of Goerbersdorf and Falkenstein have had fewer deaths from consumption since the sanatoria were established there than before. W. S. Searle[8] says that twenty-two hundred and eighty-six patients have been treated in the Brooklyn Home for Consumptives during fifteen years. The number of employees besides the staff is at present twenty-one. Of these three nurses have been employed over three years. In not one of these employees has consumption developed. Solly[9] says that in spite of every neglect of hygiene and cleanliness in the poorer lodging-houses at Colorado Springs not over one case a year of tuberculosis originates there.

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[1] Semaine Médicale, January, 1897

[2] Review of book by I. Edward Squire, in British Medical Journal, July 14 1894, p. 72

[3] Medical magazine quoted in British Medical Journal, October 14, 1893, p. 857.

[1] Medical Record, February 3, 1900, p. 195.

[2] *Ibid.*, March 25, 1899, p 431.

[3] *Ibid.* April 8, 1899, p. 499

[4] *Ibid.*, March 11, 1899.

[5] Clinical Journal, London, September 27, 1899.

[6] Journal of the American Medical Association, January 27, 1900, p 197.

[7] Medical Record October 3, 1896.

[8] *Ibid.*, May 1, 1897 p 644.

[9] *Ibid.*, February 6, 1897, p. 215.

Da Costa[1] had traced the histories of the doctors and nurses in the Pennsylvania Hospital for a period of seventy years without finding a case of phthisis transmitted by contagion. In a discussion before the Glasgow Medico-Chirurgical Society Dr. Alexander Robertson and Mr. H. L. Clark,[2] one from his long experience in the town hospital and the other from his experience of surgical tuberculosis in the wards of the Royal Infirmary, stated that no case of infection among patients or attendants had come under their observation.

I think that we must agree with Professor N. S. Davis,[3] who says that if the bacillus of tuberculosis had been as infectious as that of variola and rubeola the human race would long ago have become extinct. If, then, we have a feeble contagious element, which is apparently inoperative except under certain conditions, are we not neglecting our duty if we do not more fully investigate the entire surroundings, including the conditions of the soil in those localities in which the disease is rife?

As has been from time to time pointed out, the disease flourishes in some quarters of a town or settlement, and will not flourish in others. Flick[4] showed that for twenty-five years (1863–87) all the deaths from tuberculosis in the fifth ward of Philadelphia occurred in less than one-third of the houses. The famous communication of Dr. Bowditch to the Massachusetts Medical Society in 1862 proved beyond question the influence of the soil in the propagation of phthisis. The varying prevalence of the disease in certain localities he attributed chiefly to the dampness or dryness of the soil, and modern criticism has not been able to refute this conclusion. So, also, the fearful mortality from consumption in the German prisons has been shown by Baer and Cornet[5] to be due in part, at least, to the damp and unsanitary buildings. And Buchanan's[6] observations in England scarcely need comment, in which, for example, he showed that the general death rate for Salisbury had been reduced nine per cent. by drainage, while that from phthisis had been reduced forty-nine per cent., and in other localities the reduction of the death rate from tuberculosis was nearly as startling. Professor Welch[7] says: "Although the nature of the relationship between the conditions of the soil and the presence of tuberculosis is not well understood, practical experience has shown that many localities have secured by good drainage great reduction from the mortality from this most deadly scourge of the human race, a reduction amounting in some places to nearly fifty per cent. of the former death rate."

I may have taken up too much time in endeavoring to prove what few will attempt to confute. But the great importance of the subject and the extreme desirability of drawing the attention of the profession and of the laity away from the contemplation of direct contagion by the bacilli and of the contagiousness of milk and meat as the only dangers to be guarded against, must be my excuse. Buller,[8] Unterberger,[9] and Revillod[10] point out that tuberculosis originates in certain areas in much the same fashion as other infectious diseases. It has, however, this difference: one class of people in a community will suffer from it and another will not. And people will contract the disease by a change in their habits or occupation, as, for example, "the percentage of Indian boys and girls that develop tuberculosis after giving up their out-of-door lives for the school-room is enormous. . . . Tuberculosis in all of its manifestations has increased among the Mexicans in the same ratio as among the Indians."[1]

So also at present the American negro, at one time considered immune, suffers severely from this disease.

Dr. J. H. Girdner informs us[2] that in tuberculosis it is change rather than a particular climate that does good. He had spent the first twenty years of his life near Asheville, N. C., and could assert positively that the percentage of tuberculosis among the inhabitants of that region was fully as great as on Manhattan Island. His father, who had practised medicine in that region, was accustomed to send his tuberculous patients away from home to the seaside. Cases of tuberculosis in the Adirondacks are by no means rare among the natives, where poor food and unhygienic surroundings counteract the beneficial influence of the fine climate.

As Dr. Samuel West has wisely observed,[3] it should be remembered that no climate is proof against the emanations of a filthy soil either in city or country. And Dr. Robert Barnes, who as long ago as 1855 was a health official for a part of London, wrote graphically of the dangerous properties of the superficial soil of cities, "the investigation of which," he asserted, "would solve some of the mysteries of high civic mortalities. After solving the problems of the water supply, the problems of the soil will become urgent, and as they, too, are solved, life-saving will begin in good earnest." After speaking of the so-called "pest stratum," that is, surface soil made up mainly of refuse, organic matter, excreta, etc., he says: "If this 'pest stratum' could be kept dry, laden as it is with putrescent matter, it would be comparatively harmless. Moisture is a necessary element for the evolution of its pestiferous properties."

That disease is not engendered by a residence on the water itself is rendered very probable by the following facts (I still quote Dr. Barnes): "The population actually living on the Thames, whose every breath is a distillation from its water, is not especially liable to fever, not so much so indeed as the population whose dwellings skirt the banks." Solly says:[4] "Apparently humidity of the air apart from other factors does not in itself produce phthisis. The comparative immunity from consumption among the men of the British navy contrasted with those of the army, and the rarity of the disease in many islands, such as the Faroe, the Hebrides, the Shetlands, and Iceland, show this."

Referring back to the history of the D—— family, with which this paper began, we see that the second, fourth, seventh, and probably the eleventh and twelfth children died of tuberculosis. The fifth contracted the disease and probably still has it. All of those who escaped were males, and were, of course, less in the house than their sisters. The oldest one was not born in the infected house, and the younger ones lived in it a very short time. They were all exposed to the same contagion and all lived under the same conditions. It seems to me that it is more reasonable to impute the high mortality of this family to the unsanitary condition of their residence than to any other cause. In other words, I think that the damp and polluted soil over which they dwelt supplied the necessary factors to make the inroads of the tubercle bacilli upon their bodies efficient. In the case of the B—— family I think it more reasonable to impute the consumption that attacked Miss M—— to her place of residence than to any other cause, and especially will this seem to be true if, after the improved drainage of the house, the other children shall escape tuberculosis, particularly as they have been more or less exposed to infection from their sister.

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[1] British Medical Journal, May 26, 1894, p. 270.

[2] *Ibid.*, January 2, 1892, p. 34.

[3] Journal of the American Medical Association, March 24, 1900.

[4] *Ibid.*, May 5, 1894.

[5] Journal of the American Medical Association.

[6] Buck: "Hygiene and Public Health," vol. ii., p. 577.

[7] Baltimore Health Magazine, January, 1898.

[8] MEDICAL RECORD, February 3, 1900, p. 195.

[9] St. Petersburg. med. Wochenschrift.

[10] "La Tuberculose" January 30, 1895.

[1] Journal of the American Medical Association, September 3, 1898, p. 494.

[2] MEDICAL RECORD, May 14, 1898, p. 709.

[3] Journal of the American Medical Association, January 1, 1899, p. 19.

[4] Therapeutic Gazette, vol. xiii., p. 588.

Not to take up more time, I feel thoroughly convinced that I have proved my case, and that we had better, instead of expecting to annihilate the tubercle bacillus, turn our attention to altering the surroundings of our patients and correcting their vicious methods of life. We must agree with the editor of the MEDICAL RECORD,[1] who says: "The causes of the health-giving properties of a change of air are obscure; at any rate up to the present time they have not been explained." No doubt frequently all that is needed to arrest phthisis is that the vicious combination of a damp and polluted soil, and want of sunlight and ventilation, together with poor food and perhaps an unwholesome occupation should be broken up by the withdrawal of one or more factors. The results of sanatorium treatment have so far been practically identical, so that while a life in Colorado is desirable, it is not necessary to save at least a third of our incipient cases of phthisis. And while sunlight and life in the open air, and pure milk and a wholesome occupation are necessary and essential, a dry, properly constructed cellar to one's dwelling, which should be built over a pure, well-drained, sandy subsoil, is just as essential to the alteration of the predisposition so that the bacillus of Koch cannot gain a foothold in the human organism, as any of the means named. And it is our duty to insist upon this point over and over again, until our patients shall cease to worry about milk and meat, and while not neglecting to burn tuberculous sputa, they shall insist in living over properly constructed cellars and away from swamps, cesspools, sluggish streams, and all stagnant and unwholesome bodies of water.

Colonel Wingate's remarks on this head are to my mind quite applicable, and I don't know that I can close this paper more fitly than by quoting them. He says:[2] "I am inclined to think that the health of the community is more affected by the sanitary state of the soil than by all other influences. If Manhattan Island could be thoroughly drained, consumption would undoubtedly diminish."

A Large Dermoid Cyst of the Ovary in a Child of Seven Years.—James Herbert McKee reports a case from the history of which he draws the following conclusions: (1) In attempting to make a diagnosis of an abdominal tumor in a female infant or child, one should bear in mind that ovarian tumors must be considered as possibilities. (2) As aids to diagnosis, rectal examination under anæsthesia, as recommended by Carpenter or Kelly, should be performed as a routine measure; and whenever possible, the services of the *x*-ray should be enlisted. (3) An exploratory incision is not only a justifiable procedure, but it is to be advised whenever a large tumor of the abdomen is found in a child.—*University Medical Magazine*, April, 1900.

The Relation of Eye-Strain to Epilepsy, Insanity, and Allied Conditions.—T. E. Satterthwaite relates a series of cases bearing on this subject, and makes an earnest plea for the addition of an eye specialist to the staffs of institutions devoted to the care of nervous patients. Eye-strain is a frequent cause of various neuroses, and its relief will often afford a cure when medication, rest cure, travel, and other means have utterly failed. Whenever an excess of nervous expenditure is made by one organ over the normal amount which should be furnished, this excess must be at the expense of other organs, which in consequence must suffer sooner or later.—*Medical Age*, April 25, 1900.

Indigestion.—T. Lauder Brunton lays down the following rules for the treatment of chronic functional dyspepsia: The first rule is to eat slowly, masticate thoroughly, and insalivate completely, three things which are by no means always the same. The next rule is to take solids and liquids separately, the latter in the shape of hot water on rising in the morning, between eleven and twelve in the forenoon, about four or five in the afternoon, and at night before going to bed. When these rules do not suffice to remove the dyspepsia, the patient must take his farinaceous and proteid foods at different meals alternately, a farinaceous meal at breakfast time and again at five o'clock, and meat or fish meals at midday and at eight o'clock. In some cases it will be found advantageous to supplement the gastric juice with a little acid and pepsin. A little alkali with calumba may be given before meals, or if there is gastric catarrh some substance containing tannin, such as infusion of gentian, may be preferable. In cases with flabby tongue, perchloride of iron with quassia will probably be of more service. When there is gastric dilatation which will not yield to the measures above mentioned, it may be necessary to wash out the stomach in the morning or at night.—*The Clinical Journal*, April 25, 1900.

The Alleghanies for Our Tuberculous.—Under this title Charles F. Spangler enters a plea for a trial of the Alleghany Mountains in the climatic treatment of tuberculosis. All that portion of the Alleghanies extending through the middle west and northern section of Pennsylvania is suitable, but the section that offers the most natural advantages for the tuberculous is the summit region comprising the vast plateau extending northward through McKean County into the State of New York, with an average elevation of two thousand feet. Kane, in the southern end of the county, is the gateway to this region, which has been appropriately termed the health belt of the State, and has been frequented for many years by asthmatic and hay-fever subjects, an occasional consumptive, convalescents, and many others suffering from general debility. The soil, for the most part, is sandy and porous; the surface is undulating and moderately well covered with timber.—*Pennsylvania Medical Journal*, April, 1900.

On Heredity in Disease.—J. Hamilton gives the following conclusions to his article: (1) There is no evidence proving that diseased conditions of body, excited by external agencies, using the term in its broadest sense, can be transmitted hereditarily through generations; (2) that the various hereditary tendencies or predispositions to disease of the hereditary type have arisen as variations in the germ-plasm; (3) that these predispositions to disease probably extend far back into the history of the human race, and break out only occasionally, in accordance with the laws of atavism; (4) that external agencies are merely the means of bringing them to light; (5) that there is little if any reliance to be placed in the evidence bearing upon the influence of maternal impressions; (6) that there is no reason to believe that telegony may not prevail in the case of hereditary predisposition to disease, as it evidently does in regard to other characteristics.—*The Scottish Medical and Surgical Journal*, April, 1900.

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[1] October 23, 1897.

[2] MEDICAL RECORD, May 1, 1897, p. 644 *et seq.*

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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MANILA FROM A HEALTH STANDPOINT.

WIDELY conflicting views are held in this country as to the healthfulness or otherwise of Manila and of the Philippines generally. By many, perhaps by the majority of Americans, the belief is current that the island of Luzon is a hotbed of malignant fevers, and that it is indeed a veritable death-trap for white men. This is undoubtedly a pessimistic manner of regarding the situation, which is not borne out by facts. The diseases that flourish in Manila and in the Philippines are either those which are almost entirely confined to the natives or prevail owing to the lack of prophylactic and sanitary precautions. It is undeniable that Manila is under the existing conditions an unhealthy town, but not more so than any other town in the tropics over which the Spanish had held sway for generations. For instance, both Havana and Santiago were at the time of the outbreak of the Spanish-American war in quite as bad a sanitary state as Manila is at the present time. Mr. George Becker, writing in the June number of *Scribner's Magazine* concerning the Philippines and speaking of the climate of Manila, says:

"It is almost identical with that of San Juan de Puerto Rico, and is comparable with that of the Gulf States during the warmer portion of the year. The climate, too, is equable. The mean temperature of the year is 79° F. The coolest month is February; the mean temperature is 76° F. The hot season at Manila includes March, April, and May, the last being the hottest month. May has an average temperature of between 85° and 86° F. The sun is far less trying than in British India. The rainy season lasts from June to November. The total rainfall at Manila during the drier months is about ten inches, and during the wet season sixty-seven inches. Although a swampy country, there is comparatively little malaria. The census of Manila has recently been taken, and discloses the fact that its population has been greatly overestimated. Former censuses and estimates have given the city a population of 300,000. The new census, which has been carefully conducted, gives a population of 190,714, of whom 30,000 are Chinamen. This numbering does not include several villages within the city limits nor the Americans and Europeans and priests in the monasteries, which will add about 50,000 more to the previous total. The death rate is calculated at over forty per cent. Some of the causes of death were: Beri-beri, 570; tuberculosis, 385; bronchitis, 314; dysentery, 229; fevers, 287. Three diseases are now epidemic in Manila, bubonic plague, beri-beri, and smallpox. The latter and leprosy are always present to a greater or less extent. So far as beri-beri is concerned, being a malady resulting entirely from diet, it is in no wise feared by members of the white race. The prevalence of smallpox among the natives is due to lack of efficient vaccination; and lastly the bubonic plague, which has invaded Manila on a somewhat extended scale, is doubtless chiefly owing to the filthy habits of the native and Chinese population. There have, it is true, been several cases of smallpox, some of which have resulted fatally among the American troops, but there has been nothing resembling a widespread epidemic, which, considering the risk of infection to which the soldiers have been necessarily exposed, speaks volumes for vaccination as a safeguard against the disease. With regard to the bubonic plague, as in India and throughout the far East, the authorities in their endeavors to stamp out the pest have not only to contend with the unsanitary condition of the districts inhabited by the natives and Chinese. but also with superstition and misguided religious sentiments. Every person dying of plague should be cremated, but it is found impossible to carry out this measure, as any attempt at compulsion would result in concealment of cases and possibly in serious riots. The rainy season, it is hoped, will wash away the plague, and even if it does not have that effect the surgeons in Manila have no fear that they will be unable to control its ravages, considering that it is an easier disease to deal with than is yellow fever. The statement may then be made that for a tropical country Luzon is not peculiarly unhealthy, and that Manila is not so bad in this respect as it has been painted. The truth should not be lost sight of, that as yet comparatively little has been done toward improving Manila from a hygienic point of view, partly because the requisite funds have not been forthcoming and partly because the military authorities have been compelled to concentrate their energies upon crushing the rebellion. The city has no sewers; a few houses drain into the waterways, but as a rule cesspools under the courtyards or streets are loaded with the accumulated filth of years. When the war is ended sanitary engineers will be able to devote their attention to rendering Manila a clean city, and there would seem to be no reason to doubt that methods tending to this end will be as successful as in the case of Havana and Santiago."

TRAINING NATIVES IN MEDICINE.

THE policy of expansion to which this country has now committed itself will, as a matter of course, bring in its wake many responsibilities. The acquisition of territory situated in the tropics will necessitate the teaching in our medical schools of all that is known concerning the diseases common to those climes and of the best manner in which to treat their victims. It is also to be hoped that, following the example of Great Britain, the government of the United States may see fit to recognize the advisability of establishing schools of tropical medicine, by means of which investigations may be conducted with the object of discovering the origin and cause of several of the maladies peculiar to dwellers in the torrid zone, in regard to which our knowledge is lamentably defective and vague. Much missionary work, too, will be undertaken in our new possessions, and the missionary of to-day is required to possess a competent acquaintance with the healing-art, so as to be able to administer to the body as well as to the soul diseased. Unfortunately the supply of medical missionaries is not equal to the demand, and as representatives of this praiseworthy class of men are to be found in every part of the world, native help must be relied on in order to enable them to perform their arduous labors efficiently. Consequently the training of natives in medicine is one of the most important duties of the medical missionary.

The proposal has lately been made, both here and in Great Britain, that a larger number of natives than will be needed for the medical work of the mission should be educated with the view that they should practise independently among people of their own race. Dr. Albert P. Peck, dean of the medical department of North China College, recently read a paper in New York on the above subject, and referring to this question said: "The peculiar conditions of the various countries where our interests lie will determine largely our attitude. But broadly speaking, if we recognize and admit the value of the medical profession as a social factor in our own civilization, we shall be ready to see the importance of such an element in the infusion of a new life into the effete civilization of the East. When the medical missionary, as a pioneer of a new civilization, can come in touch with the old order so as to give to the adult generation of practitioners even a little empirical instruction, it will be time and labor well spent." Dr. Peck is, however, of the opinion that it is upon the members of the younger generation that the hopes of the future rest, and therefore advises that the native youth should be educated in medicine after a sound preliminary general education, and concludes as follows: "The average intelligence of such communities as, for instance, we have in China is not very high. They cannot follow very advanced hygienic teaching, nor appreciate the most scientific practice. A plain, practical and somewhat empirical education is the best for an undeveloped state of society, teaching the best uses of the imperfect equipment, the rude surroundings which they must have." Dr. Peck's recommendation is rather for what we would now call an old-fashioned education for our native medical students.

The points to be discussed, before passing an opinion, is as to whether the idea, if capable of realization, is a rational one; whether it would be for the benefit of the natives themselves to have doctors of their race who have received a thorough medical training on modern lines, and again whether it would be to the advantage of the dominant race. *Health*, an English journal, thinks that the plan is both desirable and feasible, and argues thus:

"If the natives by their own sons are made acquainted with the ravages of diseases peculiar to their own race or special district, if they are further taught that many of them are curable and others are preventable, we are sure that common sense, which some of these people possess to a large extent, will induce them to use the precautions which study of medicine has discovered to be useful and which can be best taught by those who have passed a medical curriculum."

With all due deference to the views of the writer in *Health*, and while freely admitting that it is possible, nay, in a high degree probable, if such a plan could be carried out, the natives would greatly benefit by it, yet at the same time we are rather inclined to agree with Dr. Peck, and to imagine that the time is scarcely ripe for so radical an innovation. Of one thing, however, there can be no doubt—that much more attention should be paid to the study of tropical diseases in this country than is at present the case. In fact, it may be asserted without much fear of contradiction that the knowledge of some certain tropical diseases possessed by the average medical graduate from American schools would not warrant him in posing as an instructor in these matters. At present it may be said that the training given to natives in medical missionary colleges is sufficient for the purpose.

News of the Week.

International Medical Conferences at Paris.—There has been organized at the International Hospital, 95 Boulevard Arago, Paris, a system whereby all French and foreign physicians may hold clinics, lectures, and scientific demonstrations without cost to themselves. The idea which has led to the establishment of this service of conferences is that, owing to the great number of international congresses to be held in Paris, the attendance of medical men will be very large. Many of these will have demonstrations to make for which there will be little or no time in the section meetings, and it is for the accommodation of such that the extra service has been organized. Those desiring to avail themselves of this are requested to communicate with the organizer of the conferences, Dr. S. Bernheim, No. 9 Rue Rougemont, Paris.

The Association of American Medical Colleges.—At the annual meeting of this association, held at Atlantic City, June 4th and 5th, fifty-six colleges were represented. Amendments to the constitution excluding "sun-down" medical colleges were adopted, to take effect in July, 1901. Officers were elected as follows: *President*, Dr. Albert R. Baker, of Cleveland; *First Vice-President*, Dr. Thomas H. Hawkins, of Denver; *Second Vice-President*, Dr. W. H. Earles, of Milwaukee. Drs. Parks Ritchie, W. W. Keen, and J. M. Dodson were added to the judicial council. The Cooper Medical College of San Francisco, the Medical Department of the University of Kansas, and the American Medical Missionary College of Chicago were elected to membership. A committee was appointed at the request of the federation of State examining-boards to co-operate with a similar committee appointed by them, to consider common interests. This committee consisted of Drs. W. J. Holland, Dudley S. Reynolds, W. E. Quine, W. J. Means, and Parks Ritchie. The papers and proceedings of the Association are published in the *Bulletin of the American Academy of Medicine.*

The New York County Medical Association.—At a meeting of this association on Monday of this week, the following officers were elected: *President*, Dr. Parker Syms; *First Vice-President*, Dr. J. Riddle Goffe; *Second Vice-President*, Dr. Emil Mayer; *Recording Secretary*, Dr. Ogden C. Ludlow; *Corresponding Secretary*, Dr. J. W. Draper Maury; *Treasurer*, Dr. Charles E. Denison.

The Harlem Medical Association.—At a meeting of this society, held June 11th, the following officers were elected: *President*, Dr. Montrose R. Richard; *Vice-President*, Dr. Joseph E. Lumbard; *Secretary*, Dr. William H. Luckett; *Treasurer*, Dr. William F. Farrell; *Trustees*, Drs. Henry W. Mooney, David Franklin, and M. C. O'Brien.

A Tale without a Moral.—There exists in Chicago an excellent organization among schoolboys, known as the Cook County Anti-Cigarette League, the laudable aim of which is expressed in the name of the association. According to a story in the New York *Times*, the league had a field day on June 15th, and one of the events was a fifty-yard dash. Just before the start a newsboy with a cigarette stump in his mouth came along and requested permission to enter for the race. The superintendent of the games, who thought this was a good chance for a telling object-lesson, readily gave permission, and the "fiend" lined up with the other boys—and won the race.

Deaths from Lightning.—In a report on thunderstorms recently issued by the United States Weather Bureau, it is stated that the number of deaths from lightning in the country, reported to the bureau during the year 1899, was 562. The total number of those struck was 1,382, 820 of whom survived the stroke. It is believed that this record is fairly complete, though doubtless some cases occurred of which the bureau had no cognizance.

A Woman Medical Graduate in Sweden.—Miss Anna Stecksen has recently received the degree of M.D. from the University of Stockholm. It is said that this is the first time this degree was ever given to a woman in Sweden.

The Alumni Association of St. Vincent's Hospital, of this city, was organized at a meeting held on Monday evening. The following officers were elected: *President*, Dr. Charles H. Lewis; *Vice-President*, Dr. Charles L. Weeks; *Secretary*, Dr. Joseph A. Dillon; *Committee on By-Laws*, Drs. Charles Benedict, Francis Murray, and John Curtin. Meetings of the association will be held every three months.

The American Institute of Homœopathy held its fifty-sixth annual meeting in Washington this week, in union with several societies of homœopathic specialists. Of the latter the Ophthalmological, Otological, and Laryngological Society elected officers for the ensuing year as follows: *President*, Dr. Thomas L. Shearer, of Baltimore; *Vice-Presidents*, Drs. Thomas M. Stewart, of Cincinnati, and F. D. W. Bates, of Hamilton, Ont.; *Secretary*, Dr. Herbert D. Schenck, of Brooklyn; *Treasurer*, Dr. C. Gurnee Fellows, of Chicago. The Surgical and Gynæcological Society adopted a constitution and by-laws and elected the following officers: *President*, Dr. James C. Wood, of Cleveland; *Vice-Presidents*, Drs. W. Louis Hartman, of Syracuse, and Horace Packard, of Boston; *Secretary*, Dr. J. Wylis Hassler, of Philadelphia; *Treasurer*, Dr. G. C. Jefferey, of Brooklyn.

Yellow Fever is reported to be prevalent in all parts of the isthmus of Tehuantepec in Mexico. Several hundred Americans, principally from Ohio, Indiana, and Illinois, have settled on the isthmus during the past few years, engaging in the cultivation of coffee, and a number of these, as well as many of the railway employees, have been attacked and have died. The disease has also made its appearance in Vera Cruz, and fears are entertained by the health authorities that it will spread to all the Gulf ports of Mexico. From Cuba it is reported that yellow fever has broken out at Quemados, eight miles from Havana, where United States troops are stationed. Thus far there have been fourteen cases, three of which proved fatal. At present six are under treatment, and all are expected to recover. This is the first time in several years that there have been any cases of yellow fever at Quemados. Havana city is exceptionally clear, only three cases being under treatment, less than during any month of the winter.

The Methodist Episcopal Hospital in Brooklyn.—The new pavilion for surgical operations in this hospital was opened for inspection on the afternoons of June 12th, 13th, and 14th. There was a large attendance each day of medical men and of friends of the hospital.

A New St. John's Guild Hospital.—The cornerstone of a new hospital building to be erected on the Seaside Hospital grounds of St. John's Guild at New Dorp, Staten Island, was laid on June 12th. The building is the gift of Mrs. Frederick Elliott Lewis, in memory of her son. The building will be known as the Cottage Hospital. It is to be a frame structure one hundred and three feet long and about thirty-one feet wide. It is expected that the building will be ready for this summer's use.

A Gift to the Presbyterian Hospital.—An anonymous benefactor has offered to erect a new building for the Presbyterian Hospital in this city. It will be for the accommodation of the nurses and house staff, who now have quarters in the main building. It will stand on the northwest corner of Park Avenue and Seventy-first Street, directly opposite the hospital, on property already owned by the trustees. Room for no less than one hundred additional beds will be secured by the change, increasing the capacity of the hospital one-third. Work on the new building will begin soon, and it is expected that it will be ready for occupancy in the spring or early summer of next year. The style of architecture will be the same as that of the other hospital buildings.

The State Orthopedic Hospital.—At a recent meeting of the board of managers of the New York State Hospital for the Care of Crippled and Deformed Children, the committee on site reported that it had leased the residence of Dr. Angell, Paulding Avenue, on the Hudson River, in Tarrytown. The changes necessary to equip the building for hospital use will be made at once, and the work will be formally inaugurated early in the autumn. The following were elected members of the consulting medical board: Drs. Francis Delafield, Robert F. Weir, W. Gilman Thompson, Joseph D. Bryant, Lewis A. Stimson, A. Alexander Smith, and Reginald H. Sayre, of New York; Roswell Park, of Buffalo, and L. A. Weigel, of Rochester.

Medical Examination of School Teachers.—It has been decided by the board of education of Chicago that all applicants for appointments as teachers in the public schools must submit to a medical examination before coming up for their technical examination. A corps of woman physicians has been appointed to examine all applicants for admission to the normal school.

Women's Medical Institute in Moscow.—A society has been formed in Moscow to collect funds for the establishment of a medical institute for women in that city. The annual subscription is 5 rubles; life members pay 100 rubles, and the donor of 5,000 rubles becomes an honorary member. In addition to the income from these dues, money will be raised by means of lectures, concerts, benefit performances at the principal theatres, balls and fairs. It is hoped that a sufficient sum will be secured to permit of the inception of the work within a short time.

Smallpox on the Hudson.—An epidemic of smallpox has prevailed for some time among negro brickyard laborers at Stockport. The State board of health ordered all negroes vaccinated, and the local board carried out the order as far as they could, but about fifty of the negroes refused to submit. Quarantine was ordered on all suspected cases, including the men who had defied the vaccination order, and a company of the State militia has been ordered to Stockport to enforce the quarantine rules.

The Late Dr. Landon Carter Gray.—At a meeting of the Medical Association of the Greater City of New York, held at the New York Academy of Medicine on June 11, 1900, the following minute was presented and adopted:

"Dr. Landon Carter Gray, a charter member of the Medical Association of the Greater City of New York, died on May 8, 1900. Dr. Gray was well known to the profession in Manhattan and also in Brooklyn, the latter being the scene of his earlier activities. He had attained a high reputation by his varied work in the special branch of medicine to which he had devoted himself. Dr. Gray was essentially genial in his temperament, and especially cordial in his relations with the younger members of the profession. He had held many positions of honor in the various societies with which he was affiliated, and his removal from a busy career in the prime of life will be a loss to the profession.

"*Whereas*, It has pleased an all-wise Providence to remove our colleague from our midst; be it

"*Resolved*, That while we submit to the decree, we, as an association, desire to express our sorrow in our loss, and direct that this resolution be spread on the minutes of the association, and that a copy thereof be forwarded to the family.

"Edward D. Fisher, chairman, Frederick Peterson, W. H. Katzenbach, committee."

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended June 16, 1900:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
California, Oakland	May 12th to June 2d	5	
Colorado, Arapahoe Co	May 28th to June 4th	1	
Archulita Co.	May 28th to June 4th	1	
El Paso Co.	May 28th to June 4th	2	
Logan Co	May 28th to June 4th	1	
Mesa Co	May 28th to June 4th	1	
Delaware, Wilmington	June 2d to 9th	1	
District of Columbia, Washington	June 2d to 9th	4	
Illinois, Cairo	May 26th to June 2d	4	
Chicago	June 2d to 9th	4	
Indiana, Evansville	June 2d to 9th	1	
Kansas, Wichita	June 2d to 9th	5	
Kentucky, Covington	June 2d to 9th	28	
Louisiana, New Orleans	June 2d to 9th	41	21
Maine, Portland	June 2d to 9th	4	
Massachusetts, Fall River	June 2d to 9th	9	
Lowell	June 2d to 9th	1	
Michigan, Grand Rapids	June 2d to 9th	1	
Jackson	June 2d to 9th	1	
N. Hampshire, Manchester	June 2d to 9th	2	
New York, New York	June 2d to 9th	4	
North Carolina, Newbern	June 6th	Several.	
Ohio, Cleveland	June 2d to 9th	22	
Tennessee, Memphis	May 20th to June 2d	13	
Utah, Salt Lake City	June 2d to 9th	2	
SMALLPOX—FOREIGN.			
Austria, Prague	May 19th to 26th	5	
Belgium, Ghent	May 19th to 26th	..	1
Egypt, Cairo	May 12th to 20th	..	4
England, Liverpool	May 19th to 26th	1	2
London	May 19th to 26th	5	
France, Paris	May 19th to 26th	..	1
Mexico, Chihuahua	May 26th to June 2d	..	2
Philippines, Manila	April 21st to 28th	3	
Vera Cruz	May 26th to June 2d	..	7
Russia, Moscow	May 12th to 19th	11	2
Odessa	May 19th to 26th	7	1
St. Petersburg	May 12th to 19th	33	10
Straits Settlements, Singapore	April 21st to 28th	..	2
YELLOW FEVER.			
Colombia, Panama	May 29th to June 5th	3	
Cuba, Havana	May 26th to June 2d	3	
Mexico, Vera Cruz	May 26th to June 2d	..	9
CHOLERA.			
Siam, Bangkok	April 19th	Epidemic.	
PLAGUE.			
China, Hong Kong	April 28th to May 5th	34	32
Egypt, Alexandria	May 12th to 19th	3	1
Port Said	April 20th to May 28th	41	21
Philippines, Malabon	April 20th	2	
Manila	April 7th to 28th	41	30
San Pedro Macote	April 20th	Reported.	

The Pan-American Medical Congress.—The Academia de Ciencias of Havana has appointed the following committee on organization of the third Pan-American Medical Congress: *President*, D. Santos Fernández; *Vice-President*, Dr. Gustavo López; *Secretary*, Dr. Coronado; *Treasurer*, Dr. Acosta. The secretary of state of Cuba has been requested to issue official invitations to all the governments of the republics and colonies in America.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending June 16, 1900. Appointment: Charles N. Fiske to be an assistant surgeon from May 15, 1900. June 8th.—Surgeon T. A. Merryhill ordered to the naval laboratory and department of instruction, Brooklyn, N. Y., June 14th. Passed Assistant Surgeon F. C. Cook ordered to temporary duty at naval hospital, Norfolk, Va. June 11th.—Medical Inspector G. E. H. Harmon detached from the *Oregon* upon reporting of relief, and ordered to the naval hospital, Yokohama, Japan, as the relief of Surgeon F. Anderson. Surgeon Frank Anderson detached from the naval hospital, Yokohama, Japan, upon reporting of his relief, and ordered home to wait orders. Surgeon P. Leach detached from the *Yosemite* upon reporting of relief, and ordered to the *Oregon*. Surgeon F. A. Hesler detached from the naval hospital, Chelsea, Mass., upon reporting of relief, and ordered to the *Yosemite* as the relief of Surgeon P. Leach, sailing from San Francisco, via *Doric*, June 30th. Passed Assistant Surgeon C. D. Brownell detached from the naval training-station, Newport, R. I., upon reporting of his relief, and ordered to naval hospital, Chelsea, Mass. Assistant Surgeon C. H. DeLancy detached from the naval hospital, Washington, D. C., and ordered to the naval training-station, Newport, R. I. June 12th.—Passed Assistant Surgeon J. F. Leys ordered to temporary duty on the *Franklin*. Surgeon G. M. Pickrell detached from the naval station, Cavite, P. I., and ordered to the naval hospital, Yokohama, Japan. Passed Assistant Surgeon Horace B. Scott, retired, died May 20, 1900.

Obituary Notes.—Dr. S. Burke Pillsbury died at his home in Middletown, N. Y., on June 17th, from the results of an operation. He was a graduate of the Harvard Medical School in 1876.

Dr. George M. Beabes died at his home in Bloomingburg, N. Y., on June 15th, at the age of sixty-eight years. He was a graduate of the Albany Medical College in the class of 1856. During the Civil War he served as surgeon in the Fifty-Sixth New York Volunteer Infantry. He served two terms in the legislature of this State in 1890 and 1891.

Dr. William Pierson, of Orange, N. J., died at his home there on June 12th. He was born in Orange on November 30, 1830, and was graduated in medicine from the New York University in 1852. He had been secretary of the New Jersey State Medical Society for over thirty years, and was elected president, although then ill, at the recent annual meeting of the society. He was the first president of the board of education in Orange, and held that position for twelve consecutive years. Dr. Pierson was descended from a long line of medical ancestors, the first one of the name having begun practice in Orange in 1764.

Thermo-Cautery should not be used on the cartilaginous septum on account of liability to perforation. In cauterizing turbinates, the septum should be protected by tinfoil.—H. H. Curtis.

Progress of Medical Science.

The New York Medical Journal, June 16, 1900.

A Contribution to the Technique of Modern Uranoplasty.—J. F. McKernon advocates the performance of a preliminary tracheotomy, packs the cavity of the mouth for a week or more, treating it as any other wounded surface, and feeds by the rectum. He has never had any difficulty with nourishing his patients. If no vomiting has taken place, the packing should be removed at the end of forty-eight hours, the wound gently cleansed, and the packing replaced. This should then be done daily, and the stitches carefully inspected. If any are found drawing, they should be severed at once, but not removed until the next day. The tracheotomy tube should be retained until the twelfth day, by which time the patient is able to take food by the mouth. The introduction into the bowel of a warm saline solution diminishes thirst, adds to the general comfort of the patient, and seems to be an adjuvant to nutrition. The advantages claimed for the method are as follows: The restoration of speech function, complete or partial. It allows the patient to eat without regurgitation of food, giving little or no trouble thereafter, so far as deglutition is concerned. It allows the patient to mingle on a par with his fellow-beings. It does away to a very great extent, if not entirely, with the facial contortion while trying to speak. It lessens the catarrhal inflammation of nose and throat, and improves the deafness, when existing, as well as relieving the distressing subjective sounds so frequently complained of by these patients. There will be a decided increase in weight, and when persistent headaches have been present and can be attributed to no other cause, and have received treatment without avail previous to the operation, they will often clear up completely when the cleft is closed, allowing a normal nasopharyngeal function to take place.

Juvenile Hysteria and Neurasthenia.—C. L. De Merritt believes that much of the neurasthenia of adult life has had its foundation laid in childhood. He condemns the introspective methods of the educational system of the present day, claiming that children are overworked in school and are not given proper exercise. Other causes are poor food, anæmia, and infectious fevers. Treatment should begin with the parents. If they are neurotic, we must get them into some sort of trim before we can secure a proper regimen for the child. Tonics such as hæmic reconstructives are generally indicated. Bathing is a useful adjuvant, followed by small doses of hyoscyamus. Attention should be paid to exercise, and if the child's school has a gymnasium, it is often better to have the child continue at school, for the resultant effect is better than that from no school and no gymnasium.

Hernia Abdominalis.—H. A. Duemling submits the following propositions: (1) A hernia is the escape of a viscus from the abdominal cavity covered with the structures peculiar to its point of exit. (2) The folds and depressions of the peritoneum, occasioned by the passage of various structures under it, create weak points in the belly wall. (3) The success of a radical cure depends on the restoration of the muscular and fibrous tissues to their pristine relationship and elasticity. (4) The production of scar tissue, artificial or accidental, lessens materially the possibility of a permanent cure. (5) Destruction of the inguinal canal and suture of the external abdominal ring do not prevent recurrence. (6) Destruction of the inguinal canal and of the internal abdominal ring (or its fortification) offers the largest percentage of cures.

A Case of Tetanus Treated with Antitetanic Serum.—By J. F. Clarke.

Typhoid Infection of the Uterus.—By A. J. Lartigau.

Perimetric Diagnosis.—By J. W. Sherer.

Philadelphia Medical Journal, June 16, 1900.

An Experimental Study of the Origin of the Epidemic of Tetanus following July 4, 1899; Report of Case with Recovery.—H. Gideon Wells calls attention to the large number of wounds made by blank cartridges which were followed by tetanus. He records an instance of recovery; the only one in five occurring at the same time which did not prove fatal. The patient was a laborer, forty years old, who was shot above the knee. Stiffness of the jaw began to come on ten days after receipt of the injury. Two pasteboard wads were found at the bottom of the wound, and from them as well as from the pus was isolated the tetanus bacillus according to the Kitasato method. Tetanus antitoxin 10 c.c. was injected and repeated twice at intervals of twenty-four hours. Chloral and bromides were given regularly, and perfect quiet was secured. Morphine was also given hypodermically to a point of maintaining drowsiness. Bacteriological investigations with various makes of blank cartridges failed to show that the origin of the infection was attributable to the blank cartridges, while this origin was not absolutely excluded.

A Case of Hereditary Ataxia with Generalized, Bilateral, Choreiform, and Athetoid Movements.—Bernard Oettinger relates the history of a girl aged six years, who was the only one in the family to be affected so far as known. Developmental defect was believed to underlie the condition. The pathology, symptomatology, prognosis, and treatment are all considered. Under the continued administration of small doses of bromides the involuntary movements diminished noticeably.

The Necessity for State Aid in the Treatment of the Consumptive Poor.—By Howard S. Anders.

Mütter Lectures of the College of Physicians of Philadelphia.—By John B. Roberts.

A Contribution to the Study of Exophthalmic Goitre.—By Alfred Gordon.

Angina Pectoris.—By Clifford Allbutt.

The Boston Medical and Surgical Journal, June 14, 1900.

The Mechanics of Lateral Curvature of the Spine.—Robert W. Lovett sums up thus a study of the subject: Torsion and side flexion of the spine are parts of one compound movement, and neither exists to any extent alone. Lateral deviation of any part of the spinal column is therefore necessarily associated with torsion (rotation) at the seat of the deviation. In flexed positions bending is associated with torsion in one direction, in extended positions by torsion in the opposite direction. From the kind of torsion observed in scoliosis it is obvious that the deformity originates in the flexed position of the spine. The correction of the rotation would therefore seem to be logically made by throwing the spine into extended positions, and in taking side bendings from extended positions. The immediate cause of lateral deviation is, as a rule, to be found in some asymmetry of development or posture which leads to an oblique direction of superincumbent weight, causing the spine to deviate from the middle line.

Malaria and Mosquitos.—Irving G. Rosse opposes the modern theory that mosquitos transmit the malarial organism to man, and thus cause malaria, basing his belief on the fact that Arctic voyagers do not suffer from the disease after encountering the insect in so great abundance that they actually interfered with the use of instruments in taking observations. On the Chesapeake peninsula, which has a notorious reputation for malaria and mosquitos, a healthy New England crew escaped malaria, although distracted by the annoyance of the mosquitos. On the other hand, he is told that malarial fevers are common in the foothills of Virginia, as at Charlottesville, where mosquitos are such a negligible quantity as to be almost unknown.

Closing Statement for the Remonstrants to the Massachusetts House Bill No. 917, Entitled "An Act for the Further Prevention of Cruelty to Animals," before the Joint Committee on Probate and Insolvency, March 15, 1900.—By Harold C. Ernst.

Realism in Medicine.—By A. J. Cabot.

Journal of the American Medical Ass'n, June 16, 1900.

Medicine and Disease in the Philippines.—D. J. Doherty gives in condensed form the data gathered from various authorities. There are two seasons: that in which the northeast monsoon blows (October to February), and that in which the southwest monsoon prevails (June to October), with an interval of calm. The second is the wet period. The climate is the most healthful of any in the tropics. Among diseases fevers occupy the first place, malarias predominating; next in order come dysentery, phthisis, and other pulmonary affections, skin diseases, leprosy, smallpox. Endemic diseases due to telluric, paludal, microbic infections, as well as rheumatism and dyscrasias, are studied. Hemorrhagic smallpox is the most frequent form seen. Barcones is quoted in loud condemnation of the vices incident to the introduction of opium and the abuse of tobacco and alcohol. The curanderos are akin to the barber surgeons of Europe. They use native plants. The Spaniards are given much credit for regulation of sanitary matters, vaccination, and medical education. Rules for Americans going to the islands are laid down.

Neurasthenia, Some Points in its Pathology and Treatment.—G. W. McCaskey points out the probable antiquity of nerve prostration. He finds that it is often most difficult to determine whether the neurasthenia or gastro-intestinal disease was the primary condition. If it is true that primary gastro-intestinal disease can cause neurasthenia, it follows, as a necessary corollary, that gastro-intestinal disease, even when secondary to the neurasthenia, will act as an auxiliary etiological factor. For this very reason the sequence of events in the evolution of any given case is a matter of subordinate importance from a clinical point of view, although always of the highest scientific interest. The real practical question is whether or not the gastro-intestinal disease is capable of exerting a prejudicial effect on the progress of the case. The stomach tube is advocated for a large number of cases. There is often much reflex irritation from the colon, which must be cleared out by local treatment.

Report of Case of Splenectomy, with Attempted Surgical Cure of Ascites due to Cirrhosis of the Liver.—T. N. Rafferty reports a case, with death on the fourteenth day, due to embolism. The patient, a widow, thirty-one years old, measured fifty inches at the umbilicus. No tumor could be made out with certainty. Three gallons of fluid were withdrawn. Twenty days after an exploratory incision the spleen was removed.

Dental and Oral Surgery: its Relation to the General Field of Medicine and Surgery, and the True Professional Status or Rank of the Properly Educated Practitioner of Dental and Oral Surgery.—By N. S. Davis.

Encouragement of Higher Education and Original Research.—By William Ernest Walker.

Laryngeal Papillomata Requiring a Special Instrument.—By Seth Scott Bishop.

Technical vs. Theoretic Training.—By John S. Marshall.

Address on Stomatology.—By M. H. Fletcher.

Gastric Hemorrhage.—By William L. Rodman.

Report on Massage.—By Douglas Graham.

Course of Study.—By W. A. Evans.

Medical News, June 16, 1900.

Periods in Gynæcology.—Henry J. Garrigues reviews the changes in gynæcological practice which have taken place in the last quarter of a century. In describing the operation for abdominal hysterectomy as he performs it at the present day, he says that he can the more freely recommend the method described, as he does not claim any part of it as his invention. Paul Ségond has adopted it, and calls it the "American method." As American gynæcologists, it behooves us to give due credit to Henry O. Marcy for the use of the buried continuous animal suture (1881); to J. A. Emmet for the retroperitoneal treatment of the stump (1884); to Lewis A. Stimson for the substitution of the direct ligation of arteries for the unsafe mass ligature (1889); to William R. Pryor for having shown the advantage of coming from below upward on the second side (1894); and to Howard A. Kelly for having combined most of these ideas in a clear, precise form (1896).

Causation and Relative Frequency of Typhlitis, Perityphlitis, and Appendicitis in Infancy and Childhood.—By Joseph Henry Byrne.

The Prophylaxis and Control of Leprosy in this Country.—By Prince A. Morrow.

The Lancet, June 9, 1900.

On Suprapubic Lithotomy in Old Men with Enlarged Prostate.—W. T. Thomas believes that calculi are frequently lodged in the pouch behind the middle lobe of an enlarged prostate, and that they may lie there for months even before their presence is suspected. The special steps for the removal of these small calculi are thus described: After the bladder is reached and opened the finger is passed in to locate the calculus and ascertain its size. If small, the stone can be readily extracted by Tait's gall-stone forceps, which takes up less room than the unnecessarily clumsy lithotomy forceps; if large, the wound in the bladder is extended, the mucous membrane being divided to a lesser extent than the muscular coat; blunt hooks are inserted above and below to keep the opening on the stretch, and a pair of lithotomy forceps is used to seize the calculus. The bladder wound is sutured, continuous chromic gut for the mucous membrane and continuous silk à la Lembert for the muscular coat being employed. The bladder suture is now tested by air distention, and if secure a few ounces of lotion are used to wash out any small blood clot that may be in the bladder. A small incision is made through the skin to one side of the middle line to accommodate a small glass drainage tube passed down to the neighborhood of the sutures in the bladder wall. The original skin incision is closed by sutures and a gauze dressing under a double spica bandage is applied. The catheter is left in the bladder, tied in position, and by means of a rubber tube attached to it, it conducts urine into a vessel containing lotion for a few days.

On the Relative Value of Symptoms of Acute Peritonitis.—Collating symptoms given by various authors, E. S. Bishop makes the following list: Sudden and continuous pain; tenderness; hot, dry skin; temperature elevated, normal, or depressed; hard, "wiry" pulse; quickened respiration; tympanites; clear note on percussion, unless effusion has occurred, when there is dulness in the flanks; distended abdomen; altered facial expression; flexed thighs and characteristic position of the body; and, later, vomiting. None of these is absolutely pathognomonic, but he pins his faith on the existence or non-existence of rigidity of the abdominal muscles. With acute peritonitis there is always rigidity of the abdominal muscles. This rigidity is temporary, lasting only three or four days; it is therefore useless as a sign of chronic peritonitis. True rigidity must be carefully distinguished from mere stiffening of the abdominal muscles. In making the examination the surgeon must find time to sit down. His hand must be warm, warmer, if possible, than the patient's skin. The tips of the fingers are not to be used. The entire hand should come in contact with the abdomen like a feather, so that it is almost impossible for the patient to say when actual contact is made. It should then lie without any weight, almost entirely supported by the surgeon's own muscles for a few moments motionless, then gradually and gently move with an imperceptible sliding action over the surface. Thus, and thus only, will he be qualified to say whether or not there is actual muscular rigidity.

Monogamy in its Relation to Longevity and the Diseases of Late Life.—H. Campbell believes that all non-accidental deaths occurring before the end of reproductive life are racially considered deaths of the unfit, such deaths acting beneficially on the race by limiting the production of unfit offspring. The majority of men among the civilized have children by one wife only, and she is generally about the same age as the husband. The effect of this is to reduce the age-limit of reproduction in the man to that of the woman. A man, therefore, marrying a woman about his own age and possessing the power of propagation into advanced life leaves no more children to inherit his superior death-resisting powers than the inferior man who dies at the age of forty five. Monogamy in such a case reduces the superior man to the reproductive level of the inferior one, and robs the race of a number of individuals whose birth would diminish the racial tendency to disease in the later years and increase the racial span of life. The effect of monogamy in fact is to increase the racial tendency to disease after middle life, and to shorten the vital span.

Addison's Disease following Enteric Fever.—A case of this rare pathological sequence is reported by H. W. Evans, his patient being a girl aged seventeen years, who after an illness of six weeks presented symptoms suggestive of a typhoid relapse, though no fever was present. The pulse rate markedly increased, and spots were found on the abdomen, around the nipples, and in the axillæ. The further course was one of steady decline, and she died in about three months from the time of the initial typhoid symptoms.

Use of Massage in Recent Fractures and Other Common Injuries.—Clinical lecture by W. H. Bennett.

The Influence of the Buxton Thermal Water on the Excretion of Uric Acid.—By W. Armstrong.

Note on a Case of Failure of Respiration under Anæsthesia.—By F. E. Marshall.

Primary Syphilitic Chancres.—Clinical lecture by Jonathan Hutchinson.

The Primary Disorders of Growth.—By H. Gilford.

British Medical Journal, June 9, 1900.

Personal Experiences of Gout Terminating in Acute Myositis of Entire Left Lower Extremity.—A. S. Myrtle records his own case. Following an injury in which the knee was crushed, gouty symptoms supervened. In November, 1899, he awoke one morning at four o'clock with a sharp pain in the left adductor longus. The entire left extremity from the hip to the ankle was swollen, hard, and painful. Pressure over muscles alone was painful. After taking colchicum, lysidin, and potassium citrate regularly for three days the acute pain disappeared. Eczema supervened. Six hay-flower baths at 98° F. gave relief. Loss of power in muscles of leg and soreness continued. After ten constant-current electric baths the œdema disappeared and a mile walk could be taken. The doctor believes that gout had been silently at work for months and broke out thus violently, invading cellular and muscular tissues, avoiding joints, tendons, and vessels.

Treatment of Chronic Gout.—William Bane, basing his notes on experimentation and clinical investigation, finds that uric acid at least plays an important incidental part in the pathology of gout. There is little evidence in favor of the theory of uric-acid formation by the kidneys. In treating chronic gout our aim should be to prevent the formation of abnormal proteid decomposition substances, and the accumulation of these and other waste products in the system, and to promote their elimination. The question of diet and exercise is considered and the relative values of various drugs are discussed. Gouty subjects should take a relatively large amount of water between meals.

A Case of Persistent Adenoids in a Middle-Aged Woman.—E. F. Potter records an instance of typical chronic mouth breathing with impaired hearing. The post-nasal space was occupied by a considerable mass which obscured the upper half of the septum, extending across the vault from tube to tube. The mass resembled somewhat a sarcoma, but microscopical examination, after removal under anæsthesia, showed it to be adenoid which had undergone inflammatory changes. The age (forty-seven) is considerably below that of Solis-Cohen's case (seventy), still it is of sufficiently rare occurrence at this time of life to warrant comment.

A Note on Gout.—James Edmunds says he has discarded sodium salicylate for the potassium salicylate, "cardiac depression" not being observed. As long as the urine becomes turbid on cooling from deposition of urates he uses potassium bitartrate. None of the remedies impudently advertised for uric acid can compete with some very simple and inexpensive ones. As an aperien the gives: ℞ Pulv. guaiaci, potass. bitart., sulphur. præcip., āā ℥ i.; pulv. trag. co., ʒ ii. M. S. A teaspoonful at bedtime in a wineglassful of gruel.

An Address on the Hill Stations of India as Health Resorts.—By Sir Joseph Fayrer.

Case of Cerebellar Abscess: Operation; Recovery.—By T. H. Haydon.

Magnesium Sulphate in Dysentery.—By J. L. Dickie.

Clinical Lectures on Pneumonia.—By James Barr.

Certain Uses of Collodion.—By D. W. Samways.

Berliner klinische Wochenschrift, May 28, 1900.

Congenital Lack of Nerve-Structure. — O. Heubner describes a case of the variety to which Moebius has given the name of "infantiler Kernschwund." It is that of a child aged eighteen months, who was backward in respect to power of standing, walking, and speaking. In addition there were a lack of control over both abducentes of the eyeball, complete paralysis of the left facial nerve, diminished activity of those muscles supplied by the left motor oculi, a complete paralysis with considerable atrophy of the left half of the tongue, and a complete lack of tear secretion. There was also complete lack of response of the affected structures to both faradism and galvanism. The condition is referable to congenital structural defects in that part of the cerebro-spinal axis from which the nerves going to the affected areas arise.

Experiences in and Reflections upon the Treatment of Gonorrhœa.—L. Casper gives a general review of the treatment of gonorrhœa, stating that up to the present time nothing has been discovered which can be regarded as a therapeutic specific in this affection. A simple, uncomplicated case is not to be looked upon as a dangerous malady. The condition is quite otherwise as soon as complications develop. Many of the latter are induced by a purposeless and careless therapy. The abortive treatment is a myth so far as practical success is concerned. All instrumentation is contraindicated in the florid stage. The author has had good results with injections of thallinum sulphate, which seems to have, in his judgment, a distinct specific antigonorrhœic effect. Of the antiseptic salts those of silver are the best and the oldest; the nitrate is the best of all.

The Criminal Insane.—E. Siemerling gives a general review of the literature of this subject, calling attention to the various eras which have been characterized by the introduction of new symptomatological terms and the changes of medical opinion relative to the care of this class of unfortunates. He calls attention to the efforts which have been made to study this class of persons on the basis of anthropology and biology as inaugurated by Lombroso in 1887–90. He does not regard the latter's views as entirely correct, for he thinks that Lombroso has gone further than facts warrant in making his classification so definitely on the basis of various physical stigmata of degeneration.

Influenza and Chronic Cardiac Disease.—Concluding article by Dr. Schott (Bad Nauheim).

Experimental Irritation of the Spinal Marrow of Decapitated Persons.—By A. Hoche.

Deutsche medicinische Wochenschrift, May 31, 1900.

A Case of Carcinoma of the Œsophagus Treated with Permanent Cannula.—C. A. Ewald describes with illustration a case in which a man, aged sixty-four years, was admitted to the Augusta Hospital in Berlin for difficulty in swallowing. There was almost complete stenosis of the œsophagus opposite the bifurcation of the trachea. A cannula was introduced and considerable relief was experienced. Silk threads attached to the instrument were brought out through either nostril and tied beneath the septum. He gained in weight for some time. Rectal alimentation was finally resorted to. A month and a half later the patient died. At the autopsy the tube was found well engaged in the centre of the growth, and the view was taken that the cancer had grown downward beyond it so that its function was interfered with. Curschmann has had good results from permanent tubes in fourteen cases. The writer demonstrates the technique in the clinic twice a year, and finds that the introduction presents no difficulties; his results, however, do not equal those of Curschmann.

Observations on Diseases of the Pancreas.—J. Israel relates an instance of extirpation of a movable cyst of the pancreas. The interesting feature was the abnormal mobility of the tumor without a long pedicle being present, or descent of the spleen, and without the slightest trace of enteroptosis. It depended upon abnormal mobility of the whole pancreas. The history is given in full. Three other instances of pancreatic disease are given. In one case there was permanent and decided benefit from entire emptying of the sac by means of puncture. Four years later the cyst was found never to have filled again. At intervals there had been attacks of vomiting and pain which made it seem probable that pancreatic calculi were in process of formation. The history is also given of necrosis of the pancreas with peripancreatic abscess formation, and of a case of cyst in which double-sided incision resulted in cure.

On the Symptomatology of Hysterical Deafness.—Ernst Barth relates an instance of sudden deafness after fright in a girl aged eleven years. This was suddenly recovered from, and again, after an interval, came on after a second fright and persisted, but the appreciation of musical tones was found, by tests, to be still present, as though regulated from an acoustic centre disconnected with or as a subdivision of the sense of hearing.

New Observations upon the Changes in the Pyramidal Giant Cells in the Course of Paraplegias.—By G. Marinesco.

French Journals.

The Treatment of Dysenteriform Entero-Colitis of Infants by Guarana Powder.—R. St. Philippe says infantile diarrhœas vary in form, aspect, cause, and pathogenesis, and no single treatment can be laid down for all. They should be carefully distinguished from one another, and the appearance of the stools themselves will lead to the proper treatment. The glairy dysenteriform entero-colitis is a variety apart, characterized by special etiology, symptoms, and therapeutic indications. This variety of enteritis is favorably modified by fresh guarana powder, which should be used after cold maceration and should be prepared some time in advance. The dose varies with the patient's age, from 50 cgm. to 2 gm. in the twenty-four hours. The physiological action is evidently complex, but it appears to act in a substitutive and tonic manner. The remedy should be ranked with other anti-dysenteric drugs.—*Le Bulletin Médical*, June 6, 1900.

Ovarian Cyst with Twisted Pedicle in a Young Subject.—L. Monnier successfully removed a cyst from a girl aged sixteen years, the pedicle being found twisted. He concludes that moderate-sized cysts in young women have a natural tendency to become twisted. This complication is to be diagnosticated by finding a fluctuating tumor which has been the seat of sudden, violent pain, extending over the entire belly, but more severe in one groin, accompanied by vomiting, the peritoneal facies, and also at times by a scarlatiniform or rubeoliform eruption. Such a rash was present in another of the author's cases in a girl aged fourteen years, as well as in the present instance. Immediate operation is proper if the symptoms are severe, with aggravation of the peritoneal signs, agitation, insomnia, etc. Otherwise the acute symptoms may be allowed to subside before operation.—*Journal de Médecine de Paris*, June 3, 1900.

Sterilization of the Hands.—Pierre Delbet, after a series of experiments, finds that it is possible to render the hands aseptic even after contact with most septic substances. He washes in very hot water, not flowing, but in a basin so as to get a good soap solution. This is kept up for five minutes, changing the water once. He then brushes with ninety-per-cent. alcohol until a bichloride solution stays evenly upon the whole surface, showing complete removal of fatty matter. He ends by immersion in corrosive-sublimate solution for one minute. He concludes that surgery can be done as aseptically without as with rubber gloves.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, June 7, 1900.

Trichorrhexis Nodosa.—Paul Paymond presented a man with small nodosities along the hairs of the mustache. This is a rare localization for the infection in his experience. The node formation and subsequent breaking of the hair so as to form a brush-like end is due to a diplococcus constantly found by the author. Antiseptic treatment has not given important results. It is better to shave the parts for a few weeks, practising rigorous antisepsis of the skin surface. The toilet articles must be carefully looked after, since nodosities have been observed upon hair-brushes.—*Journal de Médecine de Paris*, June 3, 1900.

Archives of Pediatrics, June, 1900.

Remarks upon the Treatment of Whooping-Cough.—Francis Huber finds that in some cases, when intubation is not practicable, one of the following methods gives good results: Sending the children much in the open air, or out upon the water; giving more food as soon as vomiting is over; pushing forward the jaw, as in anæsthesia, in many cases has relieved the paroxysm and prevented the vomiting. A third method is the use of codeine in small and repeated doses to the verge of slight narcosis, sufficient to overcome the spasm of the glottis. A few cases treated in this way have been carried safely over the danger point. As a rule it is not necessary to employ the remedy for more than a few days or a week, at the end of which period the severity of the attack is relieved, food is retained, and the usual routine treatment may be continued.

A Cretin Successfully Treated with Thyroid Extract.—H. Oliphant Nicholson reports the case of a little girl two years and eight months old, who, up to the age of eight months, had seemed to be normal. At that time a change occurred, and when seen by the author she presented the evident signs of cretinism. Thyroid treatment consisting of about 2¼ grains of thyroid powder daily, was instituted, and in about three months' time very few traces of cretinism remained. Two photographs illustrate the condition before treatment and that after four months' taking of the remedy, the difference being very striking. Unfortunately the child contracted measles of a malignant type and died.

Acute Glandular Fever.—W. F. Boggess describes the course of this disease, the high, irregular fever, chills, pain in the back, and involvement of lymph nodes. Rest in bed and careful nursing, with local applications to the neck of belladonna and ichthyol, he found useful, combined with calomel to unload the bowels, followed by intestinal antiseptics, salol, naphthalin, dermatol, and the use of tonics and reconstructives.

Clinical Observations upon the Operative Treatment of Tuberculous Peritonitis.—By Augustus Caillé.

Pancreatic Digestion of Casein.—By B. K. Rachford.

Bulletin of the Johns Hopkins Hospital, May, 1900.

Urinary Anomalies.—T. R. Brown describes a simulative nephritis after nephrotomies and nephropexies. The characteristic feature is the presence of an enormous number of casts, the urine quickly clearing up in the course of a few days. The condition is referable to the handling of the kidney, taking sutures through the renal substance, ether irritation of the renal tissue, and diminution in elimination of fluids almost invariably seen after ether anæsthesia. Brown further describes post-operative glycosuria, which he divides into toxic, those associated with diseases and injuries of various kinds, and puerperal. He also alludes to "malingering mellituria," narrating the history of a young girl who placed in the vessel containing her urine lumps of sugar taken from food brought to her on a tray, and who for a long time eluded detection.

Acute Leukæmia in Childhood, with Report of a Case.—T. McCrae reports the case of a boy aged three years. A full description of the patient's various symptoms is given, the acute stage running a short course. Thirteen other cases in children are reported and briefly analyzed. Eleven of the thirteen cases were males. A bibliography of the literature bearing on the subject is given.

Personal Experience in Operations for Stone in the Bladder.—By A. T. Cabot.

The Practitioner, June, 1900.

Acute Phagedæna of the Nose, Eye, and Face in a Syphilitic Subject.—A. Phillips relates a rare case in a soldier, aged twenty-six years, who contracted syphilis in India two years ago. There was at first a small ulcer in the roof of the mouth which spread rapidly. Fourteen days after first seen the nasal cavities were filled with fetid sloughs, and the cartilaginous septum had necrosed. A sloughing ulcer occupied one ala of the nose, and gangrene attacked the opposite side. The entire external nose was necrotic within three weeks of the first observation. Succeeding patches of skin became red and œdematous and melted away. Death occurred by septic infection one month from the onset. Treatment was without effect, but scraping and cauterization arrested the oral ulcer.

Tabes Dorsalis.—James Taylor gives in the form of a clinical lecture the history of cases of tabes, illustrating the various phases and stages. Two were in women—one only twenty-three years of age. She did not show the Argyll-Robertson pupil reaction. There is little doubt of the relation of syphilis in the large majority of cases. The argument that one cannot cure tabes by antisyphilitic treatment has no force. The most common symptom is the pain; the next most common the girdle sensation. A large proportion of subjects have difficulty in walking. A common affection is that of the sphincters, especially of the bladder. The three large divisions are: (1) those with marked ataxy; (2) other symptoms presenting without ataxy; (3) optic atrophy and usually no ataxy.

On Some Points Connected with the Management of Stricture of the Urethra.—W. H. Bennett takes an unusual case as a text for a clinical lecture, and goes through the various steps of urethral exploration and treatment. After internal urethrotomy the proper-sized sound should be freely movable in the canal. The meatus should always be slit in withdrawing the urethrotome. If it is not cut, urethral spasm will occur and cause the sound to be grasped. Organic stricture is not curable in the strict sense of the term by any means at present at our disposal. Avoid a too slavish devotion to traditional routine methods: approach each case with an open mind, common sense, and gentleness.

The Static Method in X-Ray Work.—By A. D. Griffiths.

Cream and Fat in Infant Feeding.—By G. F. Still.

Treatment, May, 1900.

Healed Phthisis.—H. W. Syers says that the evidences of healed phthisis will be constantly found in the post-mortem room when systematically looked for. He believes that there is no remedy, no panacea for the cure of phthisis. He protests against the use of creosote. He has seen improvement follow the use of counter-irritation, using equal parts of the tincture and the liniment of iodine painted on over the affected apex sufficiently often to roughen the skin, but not to make it sore. Six-per-cent. iodine vasogen acts equally well. Most cases will and must be benefited from judicious feeding, judicious clothing, and from access to pure air.

Infection through the Tonsils.—Frederick A. Packard calls attention to the secondary lesions following angina; among these are endocarditis, pleurisy, albuminuria, skin lesions, such as erythema nodosum, purpuric, multiform, morbilliform, scarlatiniform, urticarial, herpetic, and indeterminate, chorea, phlebitis, acute yellow atrophy of the liver, peritonitis, acute hydrocele, strabismus, palsy, in some rare cases pyæmia, and very frequently acute articular rheumatism. In the few fatal cases of rheumatism in which the tonsils were examined after death, streptococci and staphylococci have been found.

Dublin Journal of the Medical Sciences, June, 1900.

The Dublin Method of Effecting the Delivery of the Placenta.—H. Jellett contributes a polemic article maintaining the following propositions: (1) That the method of effecting the delivery of the placenta by external manipulations, as opposed to its manual removal or its delivery by traction on the funis, was originated in Dublin; (2) that Credé's method, when originated *de novo* in Germany, was identical in principle with the Dublin method, and that it rapidly came to assimilate itself to the Dublin method in its most important details; (3) that, consequently, there is no difference between the Dublin method and Credé's method, and that inasmuch as the method originated in Dublin many years before the time that Credé discovered it for himself, its name is and ought to be "the Dublin method."

Toxins and Antitoxins.—A. C. O'Sullivan reviews our knowledge of the source of antitoxins and the nature of their action. He states his general conclusions as follows: (1) The toxin enters into chemical, or molecular, combination with the cell protoplasm, and when in this combination is neutralized—*i.e.*, is innocuous for other cells. (2) The toxin enters into chemical combination with the antitoxin, and when in this combination is neutralized. (3) The antitoxin is produced by the cell, and is thrown off by the cell into the blood. (4) The cells which produce the antitoxin are the same cells as those which combine with the toxin.

On Commercial Pepsin.—By C. A. Cameron.

The Journal of Tropical Medicine, May, 1900.

Ankylostomiasis in the Leeward Islands.—H. A. Alford Nicholls says that the facts concerning the life history of the parasite of this disease show: (1) that the worms in their larval stages are intimately connected with the soil; (2) that the adult worms develop from larvæ after the latter are introduced into the digestive canal of man; (3) that the worms act as minute leeches, extracting blood and causing little bleeding points by their bites; (4) that, owing to their minuteness, a multitude of the worms are necessary to produce any serious deterioration of the vital organs; (5) that the worms cannot multiply within the body, and that, therefore, in most instances, fresh infections are necessary to prolong disease; (6) that as the larvæ are developed in the soil from eggs deposited thereon in human dejecta, certain obvious and simple sanitary measures are all that are necessary to arrest the propagation of the parasite, and therefore to rid any district of ankylostomiasis.

A Note on Mosquito Nets and Malaria.—R. W. Felkin recalls the fact that Gordon Pasha gave him the advice never to sleep in Central Africa except under a mosquito net, as he was convinced that it acted as a filter against malarial poison, as well as against the mosquitos and other insects which he thought might cause the fever. The author describes the portable mosquito netting which he made and constantly used. For one week in Fatiko, where he thought there were no mosquitos, he failed to use the net, and a short time afterward had a bad attack of fever. This might have been a mere coincidence, but he slept under the net thereafter. A few insects are usually to be found inside the net. By holding a light at one corner and outside the net, they usually fly to it and can then easily be killed. Urinals with covers should be used inside the net.

What Becomes of the Mosquito during the Dry Season?—St. George Gray, from experimentation with mud from a dried pool and with grass picked from its sides, found that mosquito larvæ developed from the grass. He thinks there is no doubt that the eggs of Anopheles remain fertile for a long time after drying, and would suggest as a prophylactic, wherever possible, burning the grass where Anopheles' breeding-places are known to exist, so as to destroy the eggs before they mature, and thus prevent the pools becoming a source of danger to man.

Upon the Part Played by Mosquitos in the Propagation of Malaria.—By George H. F. Nuttall.

The Endemic Centres of Plague.—By Frank G. Clemow.

The Edinburgh Medical Journal, June, 1900.

Has Antitoxin Reduced the Death Rate from Diphtheria in Our Large Towns?—Louis Cobbett, from statistics collected in London, Edinburgh, Glasgow, several other large British towns, Paris, and Berlin, concludes that antitoxin can have but a slight and indirect influence upon the prevalence of diphtheria. The prophylactic use of the substance, in the case of children known to be exposed to infection, might be employed with benefit more largely than it is. The really effective weapon that modern discovery has given us is the bacterial test. It should be brought home to the minds of people that diphtheria is not spread by bad drains and insanitary surroundings, but by direct transference of the bacillus from mouth to mouth. All persons with suspicious sore throats should be examined by the bacterial test, and if the bacillus is found they should be isolated. All persons recovering from diphtheria, however mild the attack has been, should be isolated until the specific micro-organism has disappeared from their throats. A competent bacteriologist should be appointed in every large town to make the necessary examinations.

Cross Infection, So-called, in Fever Hospitals.—Claude B. Ker holds that most of the "cross infection" does not come from other parts of the hospitals, but from outside, being introduced in various ways. First, it may be due to a wrong diagnosis made outside, difficult cases of scarlet fever and diphtheria, or scarlet fever and measles, being often confused. Secondly, it may be due to a patient being admitted with two diseases, only one of which has been diagnosed. Thirdly, it is due to the admission of patients who are suffering from one disease and incubating another. The second infection, in the great majority of cases either measles or varicella, is developed some days after admission. This is by far the most common of the causes of so-called cross infection, and it is quite impossible to avoid.

The Theory and Practice of the Treatment of Ringworm of the Scalp.—W. Allan Jamieson says that the entire scalp must be kept bare of hair, by razor or curved surgical scissors, until the cure is complete. The scalp must be kept rigorously clean, by being washed twice daily with a fluid superfatted potash soap and warm water, the soap being poured on a piece of wet flannel and moderate friction employed. The application then to be made consists of: precipitated sulphur, ʒ i.; salicylic acid, beta naphthol, and ammoniated mercury, āā grs. x.; lanolin, ℥ i. The ointment must be rubbed in carefully and slowly for ten minutes twice a day.

Points of Practical Interest in Surgical Gynæcology: II. Some Pitfalls in Gynæcological Diagnosis.—By H. MacNaughton Jones.

On Some Medical Superstitions. By J. L. Bunch.

Annals of Surgery, June, 1900.

Permanent (Congenital) Dislocation of the Patella.—J. S. McLaren analyzes previously recorded cases and gives notes of one seen in his own practice. His patient was a girl aged nineteen years, whose left knee had always been weak. She presented evidences of having had rachitis in childhood. The condition of the left leg is thus described: Marked genu valgum on the left side; the leg is rotated outward. When the knee is extended, the patella lies somewhat to the outside of the normal position; when the joint is flexed, it passes farther and farther out till it lies on the outer side of the external condyle of the femur, its anterior surface directed outward and forward. It may with force be held in or near the middle line while the knee is being flexed to a certain extent, but on being released it flies out and back. The fossa patellæ of the trochlear surface of the femur can be felt to be partially filled up, as it were, on its outer side, as if the external condyle projected into it, while the outer edge of that condyle, on the other hand, seems to fail altogether and leave a gap under the outer edge of the patella. The x-rays show the position of the patella to be higher up the femur than normal, and give a faint indication of the altered shape of the external condyle.

The Leucocyte Count in Surgery.—Theodore Dunham states that large hemorrhages are usually followed by a marked leucocytosis. After ether operation of any magnitude, the count is as a rule much increased. He is inclined to think that a similar result follows the absorption of iodoform. The increase has also been noticed in carcinoma and sarcoma. The best service, however, which the leucocyte count renders the surgeon is in the diagnosis of acute inflammatory conditions. The leucocytes may help us to infer the presence of a suppurative process not only by their greater abundance but also by qualitative changes which they exhibit. In cases in which a progressive suppurative process is present, a larger or smaller proportion of the polymorphonuclear neutrophiles stains with iodine. This reaction is not found in normal blood and is said not to occur in any disease which could well be confounded with acute abscess.

Splenectomy for Congestive Hypertrophy.—J. W. Bovée reports his third case. His patient was a woman aged thirty-nine years, who had noted the presence of an abdominal tumor two years before, with a small ulcer on the inner side of the anterior surface of the left leg. Diagnosis of enlarged spleen was made, and in due time the latter organ was removed. After a somewhat prolonged convalescence she was allowed to leave the hospital, and her subsequent history was uneventful. Examination of the spleen showed a simple congestive hypertrophy. The limitations and dangers of the operation are discussed by the writer, who takes a conservative view of the general question.

Thyroid Medication in the Treatment of Delayed Union of Fractures.—After a brief review of cases reported by others, F. W. Murray gives his personal experience with one case —that of a man who was struck by a locomotive and sustained two simple fractures of the left femur. Non-union followed, and the man had had several operations before he came under the writer's care. He was again operated upon, but also without result. The administration of thyroid was begun and for a time seemed to offer promising results. The later history of the case, however, was disappointing, and the writer confesses that the result of thyroid treatment in this particular instance was a distinct failure.

Report of a Case of Exstrophy of the Bladder, with Remarks upon the Operative Treatment of that Condition.—By Bransford Lewis.

Operation for Cure of Large Incarcerated Hernia of Long Standing.—By J. C. Weidman.

Interscapulo-Thoracic Amputation for Osteo-Myelitis of the Humerus.—By G. R. Fowler.

Radical Treatment for Curvature of the Penis.—By Eugene Fuller.

Zeitsch. f. Tuberk. u. Heilstätt., Vol. i., Nos. 1 and 2, 1900.

Some of the Problems Involved in the Tuberculosis Question.—Cornet says that one of the points of the disease deserving attention is that concerning mortality statistics. The figures published heretofore have dealt only with isolated countries, or districts of countries, and have appeared sporadically at uncertain intervals. What is needed is a systematic and searching numerical investigation of deaths from tuberculosis, which shall be an international affair, shall be conducted regularly, and shall embrace not only pulmonary phthisis, but also tuberculosis of every other part of the body. The mortality coefficient to be attributed to the tubercle bacillus is furthermore to be estimated not by comparison with death rates, but rather from the living population, and to this end census taking at five-yearly intervals becomes a necessity, and statistics should also be available concerning the number of inhabitants affected by the disease. A defect that is manifest in much of the work that has been done on tuberculosis, as well as in other branches of medical science, is the habit of hasty generalization from a limited number of case histories or animal experiments. Questions that require further investigation are those dealing with the biology of the bacillus, its life history in the body, the conditions that determine its rate of proliferation, virulence, etc. The significance of the lymph glands in influencing the establishment of tuberculous foci, as well as the possibility of the tonsils as affording portals of entry for infection, and the changes produced in the course of the disease by mixed infections, are not yet well determined. Of the aids to diagnosis the diazo reaction of Ehrlich and the Roentgen rays have both yet to establish definite claims for recognition. The question of therapy is still very unsettled, especially the treatment of hæmoptysis and hemorrhage, which has not advanced beyond the purest empiricism.

The Conditions of Infection by Tubercle.—Arthur Ransome says that the conditions necessary for infection by the tubercle bacillus to take place are: (1) A virulent state of the microbe; it is often overlooked how easily the bacillus loses its power of infection. (2) The bacillus needs a certain kind of organic impurity upon which alone it can sustain its virulence. Tuberculosis is essentially a "filth disease," and seldom spreads unless organic impurity is present in houses, workshops, or places of public assembly, and this is generally to be discovered in the aqueous vapor of the air of these places. (3) The third condition of infection is that it must have a susceptible body to attack; race, age, and hereditary tendency all influence this factor. (4) The danger of infection from food is the last and least important factor, inasmuch as perfect sterilization by heat is possible; although the bacillus stands freezing, desiccation, and putrefaction, and resists nearly all the aerial disinfectants, it is easily destroyed by a moderately high temperature. In deducing from these conditions the factors necessary to prevent infection he concludes: (1) All tuberculous matter, sputum, etc., must be destroyed or rendered innocuous by disinfection. (2) Houses inhabited by consumptives should be subjected to a thorough cleansing and disinfection, preferably by Delépine's method of washing all surfaces with a one-per-cent. solution of chloride of lime. (3) Local sanitary authorities should use all the means in their power to render the districts under their control healthily habitable; the same obligation rests on owners of property. (4) Legislation should enforce ventilation of workshops, theatres, etc., and forbid expectoration in public places. (5) The State should insist on the use of the tuberculin test for cattle; meat and milk should be sterilized by thorough heating before use.

The Choice of Tuberculous Cases Suitable for Sanatorium Treatment.—Moeller deprecates strongly the tendency common among both the profession and the laity to consider the sanatorium as the forlorn hope of the consumptive. The always beneficial and often absolutely curative effects of sojourn in pure air, suitable diet, and strictly regulated habits, coupled with avoidance of psychical excitement and bodily exertion, have been too incontrovertibly demonstrated to permit of any difference of opinion as to the value of sanatorium treatment, and the difficulty is mainly one of, firstly, recognizing the disease at a sufficiently early stage, and, secondly, of persuading the patient that his condition is serious enough to demand such radical measures. Cases in which the prognosis is most favorable are those in which the lesion is unilateral and involves the apex; when there is no febrile movement, the digestive organs are not affected, the urine is free from albumin and does not give the diazo reaction, and the general condition has not greatly depreciated. Very unfavorable, on the other hand, is the prospect in those patients the victims of typical "consumption," commonly hereditary in young individuals of markedly phthisical habit; in those who have tuberculous lesions in other parts of the body in addition to the pulmonary involvement, also in those stages of the disease in which cavity formation has taken place, or both apices or a lower lobe are affected.

"Drop-Infection" of Tuberculosis and its Prevention.—B. Fränkel advocates the use of masks of gauze covering mouth and nostrils as almost a necessity in preventing dissemination of the bacilli by patients in the acts of coughing, sneezing, etc. The use of the handkerchief in place of a mask is uncleanly and not a sufficient protection, for the suddenness of onset of a paroxysm of coughing nearly always means infection of the air before the handkerchief can be applied. Inoculation of guinea-pigs with portions of material cut from the masks after twenty-four hours' use by patients in whose sputum the tubercle bacillus was demonstrable, gave a positive result in every instance. This was so even though care was taken to use for the experiments only those portions of the gauze which were quite spotless macroscopically, demonstrating the danger to be apprehended from "drop-infection." Recognizing the many difficulties attempts to introduce the universal employment of masks will encounter, the author has sought to devise some less objectionable substitute, but unsuccessfully, and advises the use of the masks in all cases in which the patient is forced to live in the same room with the healthy without their being separated by a distance of more than three feet.

The Inheritance of the Locus Minoris Resistentiæ in Pulmonary Tuberculosis.—Turban says that the extreme rarity of direct hereditary transmission of tuberculous infection is universally recognized, as also the fact that a tuberculous family history does not necessarily increase the gravity of the prognosis when the disease is contracted. The question of hereditary predisposition, however, is still a mooted one, though the statistics collected by the author would seem to give pretty positive evidence in favor of the theory. Out of fifty-five families, in eighty per cent. children or brothers or sisters were found who were suffering from tuberculosis as well as heads of the families, and a significant fact is that in most of these the lesion was situated in corresponding points of the lungs. The evidence is apparently greatly in favor of an inherited point of lessened resistance, and according to the investigations of Birch-Hirschfeld this would seem likely to be due to a failure in development, which he has found most frequently to involve the region supplied by the posterior apical bronchus.

Respiratory Exercises in the Treatment of Pulmonary Tuberculosis.—Schultzen says that the value of voluntary respiratory gymnastics (as opposed to inhalations of compressed air, the pneumatic cabinet, etc.) in the treatment of pulmonary tuberculosis is still contested by many eminent authorities. He advises it in from sixty-five to seventy-five per cent. of the usual class of cases, and finds that both the general condition of the patient and the diseased focus are favorably affected. The most suitable and satisfactory method consists in carefully graduated and regulated mountain climbing, but this is often not feasible owing to the patient's debilitated condition, and may advantageously be replaced by full, deep, slow inspiration immediately followed by somewhat forcible expiration. This is to be kept up all day long, at first every half-hour two to six times in succession, later at intervals of fifteen minutes.

The Agglutination of Koch's Bacillus; its Application to the Serum Diagnosis of Tuberculosis.—Arloing and Courmont, after a careful series of observations and experiments with different methods of technique, conclude as follows: (1) It is possible to obtain pure cultures of Koch's bacillus from glycerin bouillon and to grow successive generations by careful technique. (2) Using these, it is possible to get a definite serum reaction; in the healthy the blood serum occasionally agglutinates at a proportion of 1 : 5; in the tuberculous usually at a strength of 1 : 5 to 1 : 20. (3) This reaction may serve to diagnosticate ordinary cases and detect latent cases in those apparently healthy. (4) In spite of the technical difficulties to be overcome, the reaction by reason of its harmlessness and its rapidity deserves extended application.

The Curability of Tuberculosis.—Schrötter, without in any way discrediting the value of prolonged sojourn in warmer regions, such as the Riviera, in the treatment of phthisis, warmly recommends that each country should make the most of its own climatic and other advantages, and affirms that by carefully conducted sanatoria erected in well-selected regions it is possible to give the poor at home the same chance for restoration to health that the rich are able to procure by travelling. That even when taken in the later stages the disease may be arrested in cases that seem hopeless, is evidenced by a history quoted in full, but ordinarily the sanatorium cases should be those still in a less advanced state.

The Value of Meat in the Preventive and Curative Treatment of Pulmonary Tuberculosis.—F. Parkes Weber directs attention to the infrequency with which tuberculosis and gouty diseases are found in the same individual, and suggests that there may be some substance circulating in the blood of gouty subjects, in minute quantities, yet sufficient to have an antagonistic action toward the growth of tubercle, and that this is likewise the case in persons taking an unusual amount of food. In accordance with this view he advocates the use of a preponderatingly proteid rather than carbohydrate diet in tuberculous individuals, laying stress on the necessity for seconding the treatment by abundant out-of-door exercise.

The Significance of Tuberculosis as a Cause of Premature Death among the Adult Population of Germany.—Rahts presents a review of statistics showing that of those dying of known causes in Germany between the ages of fifteen and sixty years in 1893, thirty-three per cent. succumbed to tuberculosis; in 1896, 33.4 per cent.; and in 1897, 33.5 per cent., evidence that the proportion of deaths due to this cause is by no means on the decrease.

Zeitsch. für klin. Medicin, Bd. 40, Hft. i. and ii., 1900.

The Relation of Charcot-Leyden Crystals to the Eosinophile Cells.—Benno Lewy states that the Charcot-Leyden crystals are found in leukæmia (all structures), in the expectoration of numerous thoracic diseases, in nasal polypi, in various tumors, in the fæces (helminthiasis), and in normal bone marrow. It is shown that as soon as the eosinophile cells appear in very few numbers no Charcot-Leyden crystals are excreted, but when eosinophile cells appear in abundance, the crystals can always be found. Wherever crystals occur eosinophile cells are in abundance; where no crystals exist the eosinophile cells are few or altogether wanting.

A Case of Pernicious Anæmia with Yellow Bone Marrow in the Epiphyses.—C. S. Engel describes the above case and considers it an instance of the aplastic form of pernicious anæmia. Contrary to the usual forms of pernicious anæmia, no red bone marrow was found in the diaphyses, but yellow marrow in these, as well as in the epiphyses. The ribs contained a dirty gray, watery fluid which, microscopically, was utterly devoid of cells. The fluid consisted of numerous immobile bacilli which were easily stained with Loeffler's methylene blue; in addition to these detritus and fat particles could be demonstrated.

The Pathological Changes in the Digestive Tract in Pernicious Anæmia and the So-Called Intestinal Atrophy.—Knud Faber and C. E. Bloch state that it may be generally accepted that in pernicious anæmia, idiopathic as well as that due to bothriocephalus latus, atrophic inflammatory processes are found in the stomach and intestinal tract. Histories of several cases, microphotographs, and an extensive literature accompany the article.

Diplogonoporus Grandis (R. Blanchard).—Tomei Kurimoto describes a particular kind of bothriocephalus, found for the first time in the human intestinal tract.

A Simple Method for the Direct Estimation of the Color of the Blood.—By T. W. Tallquist.

The Mobility of the Heart upon Change of Position (Cardioptosis).—By H. Determann.

Clinical-Chemical Studies.—By C. V. Stejskal and F. Erben.

Observations upon the Mechanism of Circulation.—By O. Rosenbach.

A Case of European Chyluria.—By W. E. Predtetschensky.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

MEDICAL COUNCIL—CLINICAL SOCIETY—GASTRO-ENTEROSTOMY FOLLOWED BY PYLORECTOMY—ANTISTREPTOCOCCUS IN SEPTICÆMIA—GRAVES' DISEASE—THE ANTIS ON MR. PAGET'S BOOK—THE INTERNATIONAL MEDICAL CONGRESS.

LONDON, June 1, 1900.

THE General Medical Council continued its sittings up to last night. On Friday penal cases were resumed, and they occupied Saturday also. Several names were ordered to be erased from the register. The council is not a body well adapted for judicial inquiries, but it manages to get through this duty with fairness, though its processes are very slow. Entering its second week of work, the first subject on Monday was the prevention of personation. This is an offence which has been actually committed, and one would therefore imagine obvious precautions should be enforced. But these learned councillors seemed to have doubts. Some of them thought it would be a serious departure from routine to require applicants for registration to fill up and sign a form in their own handwriting. The registrar of the Scotch branch has always done this, but the English registrar thinks it would impose a heavy responsibility on him. It is hard to see why the registrar should have been asked for his opinion. He said the difficulty was there being three offices. But a common-sense precaution which has always been taken in Scotland as a matter of course could impose hardships on no one. So if "the man in the street" picked up a lost diploma he might go into the office and register himself in the name it bore—and if it bore the signature of the man to whom it was granted, as many diplomas do, he would not be asked to sign his name to the application, and the registrar might object to the trouble of comparing them. Could you imagine a clearer exemplification of "how not to do it"?

Another important question related to reciprocity of practice between this country and Italy. The council has shilly-shallied so much over this that the Privy Council has intimated its intention to act in the matter. There was much talk on this communication, and at last it was agreed to represent to the Privy Council that the Italian project did not make reciprocity equal between the two countries. Medical aid associations were also talked over, and a deputation was received. There was a report, too, of the committee, but the matter is to come up at a future session. As much may be said for some other reports and questions.

Thanks were voted to the pharmacopœia committee, and other usual votes passed.

On Friday Mr. Barker read at the Clinical Society notes of a case of gastro-enterostomy followed by pylorectomy. The patient was a woman aged fifty-five years, with a tumor to the left of the left rectus under the border of the ribs, and partial intestinal obstruction. It was thought to be a growth of the splenic flexure of the colon, and the abdomen was opened. Then it was found to be a carcinoma of the pylorus. Consequently retro-colic gastro-enterostomy was at once done. Recovery was rapid, and five weeks later the whole of the pyloric end of the stomach was removed. The resulting openings in it and the duodenum were closed. The patient recovered, gained flesh, and was soon eating ordinary food; but recurrence took place, and she died a year later. The first operation was done under local eucain analgesia, the second under chloroform. Murphy's button was employed and came away on the twelfth day. Mr. Barker thought the operation was facilitated by doing it in two stages, but it should never be done except for malignant disease.

Mr. Bidwell said he had operated in the same manner and approved of doing it in two stages. In one case done in one stage the patient died in ten days from adhesions of the jejunum resulting in a kink, to prevent which he suggested that the loop attached to the stomach should not be too close to the duodenum. If it were, regurgitation of bile into the stomach might occur. He liked Halsted's method of suturing, and thought about eighteen days between the two stages a suitable interval.

Dr. Victor Bonny read a paper on a case of septicæmia treated by anti-streptococcus serum and later by nuclein. Of the former, forty-two injections, amounting to 420 c.c., were given in seventeen days. Of the latter, 30 c.c. of a one-per-cent. solution was injected in the course of eight days, during which the temperature fell and convalescence began. There was a suspicion of a gonococcus in one of the examinations of the blood, but confirmation was prevented by an accident. So, though Dr. Bonny thought it improbable, the case proves nothing, for cases of gonorrhœal pyæmia may go on to an extreme degree and yet recovery take place in a remarkable way.

Dr. Pasteur communicated the sequel to a case of Graves' disease shown in April, 1898. A widow, aged sixty-seven years, had the disease for twenty years with tachycardia. The thyroid dwindled, and gradually bradycardia supervened. Whether this last was due to degenerative lesions of the heart or to myxœdema coming on was a question. The latter was the general opinion. A degree of thyroid atrophy in the wake of Graves' disease is interesting. The heart lesions found at the post-mortem did not seem to account for the course of the disease, and the nervous system had not been investigated.

Mr. Stephen Paget's book on "Experimentation on Animals" having been published on your side of the Atlantic as well as this, your readers can easily satisfy themselves as to the moderation of his statements. The anti-vivisectionists here are terribly disconcerted and have put up Mr. Stephen Coleridge as their advocate. He is a counsel and, perhaps naturally, adopts the professional methods of the special pleader without realizing how inappropriate they are to discussions of scientific matters. He would be wiser if he were to cultivate the judicial frame of mind, and certainly more worthy of his distinguished father. But, as I said, he is advocate for the anti-vivisectionists. I do not know whether they pay him for his efforts, but lawyers are not much given to gratuitous work. He has been working the press as well as he could. On Monday I received from the editor of *The Morning Post* a copy containing a letter of his to Mr. Paget complaining of an inaccurate quotation of one of the official certificates, and Mr. Paget's reply that he had quoted the early form instead of the revised one and thanking him for pointing it out. This courteous reply strikingly contrasts with some of Mr. Coleridge's effusions. He seems to take the counsel's liberty of abusing the opposite side to an extent that betrays the emptiness of his case. The journals have treated his one-sided statements as if they were serious arguments, and so we have had long-drawn-out letters leading to nothing. One of your contemporaries has admitted letter after letter of his controverting its review of Mr. Paget's book; but even now Mr. Coleridge is not satisfied. How can a man be who takes up the advocacy of such a craze, and is not qualified by education to discuss medical matters? He has been treated too kindly by the press, perhaps out of respect to the memory of his father, but he ought to know better than to take advantage of this leniency. In one of his letters he whines about Lord Lister not replying to his several challenges to discussion. For my part I think Lord Lister is quite right in maintaining a dignified silence toward a professional advocate whose equipment for scientific debate is so feeble.

On the morning on which the correspondence in *The Post* appeared the newspapers gave information as to some of the barbarous practices of dishonest horse dealers. But these and other cruelties do not seem to attract much attention from anti-vivisectionists and their advocates. Truly the anomalies of human brains seem innumerable.

The International Medical Congress, which will be held in Paris from the 2d to the 9th of August inclusive, has not at present attracted much attention here, but is beginning to be spoken of. Four gentlemen have been appointed to represent the British government officially, viz., two Indian medical officers, one naval, and a local board commissioner (Ireland). Members are asked to send in the titles of their papers before the 10th inst.; if later, they will not appear in the prospectus. Members can join up to July 15th. The fee is 25 francs, and the ticket entitles the holder to a reduction on French railway fares and free entrance to the exhibition. Paris will be full and expenses high.

OUR PARIS LETTER.

(From our Special Correspondent.)

IMPORTANCE OF SANITARY CONDITION IN PARIS DURING THE EXHIBITION—STATISTICS PUBLISHED—CASE OF SMALLPOX—BUBONIC PLAGUE AT PORT SAID—ARTICLES BY LOCHELONGUE AND NETTER—ACCIDENTS AT THE EXHIBITION—AMBULANCE SYSTEM—NECESSITY OF AN AMERICAN HOSPITAL IN PARIS—EXHIBITION OF THE CITY OF PARIS.

PARIS, June 1, 1900.

Now that the exhibition is in full swing, crowds of foreigners and of provincials are flocking to Paris to see the sights, and the health of the city as affected by this rapid influx of visitors is one that merits attention. Any serious outbreak of typhoid fever or smallpox, any hint at the existence of plague in some part of France would be fraught with disastrous consequences. When we consider how many different nations are represented in Paris at this time, and how primitive are the sanitary conditions that obtain among them, it is perhaps to be wondered at that no serious outbreak has as yet occurred. The necessity of vaccination has indeed been insisted on, and to give an example in a humoristic line, Caran d'Ache, the celebrated cartoonist, published recently in the *Figaro* one of his exceedingly clever series of drawings, in which he showed, as a "*clou*" of the exhibition, a procession of medical men, physicians of the hospitals, internes, and aids, all dressed in the garb of the time of Molière, and all prepared to vaccinate the dusky tribes who will furnish amusement at the exhibition. The statistics published so far by the city of Paris are very encouraging, no cases of smallpox being noted in the last weekly report. I must add, however, that last Saturday, on going into one of my former wards at the Beaujon Hospital, I came across a patient just received, who had an eruption resembling that of smallpox. On questioning him, the general history of the case seemed to be that of this infection, with the exception of the pain in the back. The man had just arrived from Lyons, where smallpox would seem to be prevalent. On inquiry I found that the diagnosis of smallpox had already been thought of, and that the man was to be sent to Aubervilliers, a locality close to Paris, where there is a special hospital for such cases.

What is more to be feared than smallpox is the possibility of an epidemic of bubonic plague. The newspapers are daily reporting cases in Port Said, where forty-eight cases have already been declared, with a total of twenty-two deaths. This epidemic was denied at first, and a certain foreign element tried to prevent the health officers from getting to their patients and carrying out the work of disinfection. These obstructionists, as they were called by the newspapers, were, however, overpowered, and it was shown that the French physician who had reported the first case was in the right. A case was reported yesterday at Alexandria, another has been discovered at Smyrna, and a sensation of uneasiness cannot but be felt. Stringent measures have been carried out, however, and it is to be hoped that the disease will not spread.

It may be mentioned in relation with this question that a good article was written recently in the *Presse Médicale* by Dr. Lochelongue, sanitary officer in Egypt, on the bubonic plague and the convention of Venice in 1897. This article showed how the recent knowledge acquired as to the origin and means of propagation of the plague necessitated a change in the regulations concerning quarantine, the old system being quite faulty. Moreover, new lines of traffic, due to the constructing of railways through Asia Minor and Arabia, would naturally completely remove whatever usefulness the Suez Canal may have offered as a sort of filter by which any suspicious cargoes or ships could be arrested. A map accompanied this article, showing the different routes to be followed. A railway, starting from the Indian frontier, has been constructed in Afghanistan as far as Chaman. The Russians are already at Kouchk. The English, the Germans, and the Russians have already mapped out various lines through Asia Minor and Arabia, and these will most likely be constructed in a few years. The classification of merchandise into two distinct categories—on the one hand such articles as rags, old clothes, hair, and leather, on the other anything not comprised in the previous enumeration—is insufficient. Such articles as rice, grain, and breadstuffs can be contaminated by rats, and yet they cannot be prohibited or disinfected. The only way out of this dilemma is to establish, as Dr. Lochelongue said, a species of intermediary quarantine between the ships on one side and the warehouses on the other. Such is the plan that can be carried out in Egypt by the use of "chalands," or large cargo-boats, used to receive cargoes. Dr. Lochelongue demonstrated also in his article that the present regulations concerning ships in quarantine were inadequate. It is not sufficient, for instance, that no death should have happened on board during the voyage, as the hold may be already infected and an outbreak among the passengers may be on the point of showing itself. Then, too, a port is considered safe when ten days have elapsed without a death, and yet the mice and rats may still be suffering from the plague. Dr. Lochelongue ended his article by saying that quarantine, as practised at present, was quite inadequate, and he cited as a proof of this the fact that, railway quarantine being abolished at present, passengers could go direct by rail from Alexandria, which was plague-stricken, to Suez, whereas if they went by sea they had to undergo a quarantine of eight days.

Since the opening of the exhibition two very serious accidents have occurred, due to the haste with which the buildings were put up. A bridge in the Avenue de Suffren, built of wood and what is called "cément armé," gave way and crushed a comparatively large number of persons who were passing below. The bridge had not yet been opened to the use of the public, but the shoring had been removed too soon, it seems. Some scaffolding in the large central hall in the Champ de Mars also gave way, and four men who were working at a great height were killed. Two central ambulance offices have been established inside the exhibition, and there are at all times medical men in attendance ready to render any assistance in case of need. There is getting to be less and less room in the Paris hospitals, on account of the increase in the population, and with the present influx of visitors all the hospitals will be full to overflowing. The result will be that needy foreigners will have some difficulty in finding accommodation when taken seriously ill. The English population of Paris has, of course, its own admirably constructed hospital, the funds for which were given by Sir Richard Wallace, but there does not exist anything of the sort for Americans, and it is more than likely that the need of such an institution will be felt very much during the exhibition. It happens now and then that an American is taken to one of the French hospitals, where, not knowing French, and being surrounded by patients who are not always well disposed toward foreigners, he is certainly not placed in the best conditions for making a rapid recovery. Of all the hospitals in Paris, the one best suited for sending Americans to is that of Boucicaut, as it comes up in its general style and arrangements to what Americans are accustomed to.

I visited this morning a part of the exhibition which is calculated to excite the curiosity of physicians. It is the exhibit made by the Assistance Publique in the pavilion of the City of Paris. If one enters by the Champs-Elysées gate, which is certainly the finest by far and the most impressive, he should go down the right bank of the Seine till he comes to the Pont des Invalides, cross over the temporary wooden bridge, and enter the building which is at the right of the Invalides bridge. The building is in the form of a large hall, with a gallery running around it. In the centre is a reservoir, which is to be filled with water from four different sources: the Seine, the Ourcq, the Vanne, and the Aure. The first two are used only for washing purposes, according to the sign that is put up on each tank. In a room near-by are exhibited cultures of the different microbes to be found in Paris water. Near the door there are some charts showing the mortality from contagious diseases in some of the large towns in France. Special notice should be paid to a chart showing the prevalence of typhoid and scarlet fever in Paris during the last year. In one month there were seven hundred and twenty cases of typhoid fever and in another month seven hundred and eighty cases of scarlet fever. Diphtheria is decreasing, but the mortality during the last three years is about the same. Still further one comes to the veterinary section, where are shown maps indicating how Paris and its environs are divided into a certain number of districts for the inspection of horses and cattle, specimens in wax of curious lesions such as glanders or actinomycosis, and some large intestinal calculi of the horse. Then there are some good drawings in color of different varieties of mushrooms. The exhibit of the Assistance Publique comes next, and is certainly not very extensive. The most curious thing is an old four-poster bedstead, dating from the last century, and coming from the "Hôtel Dieu, confession 80," so reads the sign. This bed is covered with red tapestry and a green baize cloth, and four wax manikins have been figured, three in the bed and a fourth warming himself beside a brazier. This bed was only exceptionally used for four patients. Different pots and pans are also exposed, so as to give one some idea of the way in which people were taken care of in the hospitals at the end of the last century. A drawing is hung on one of the posts, and it represents the Duke of Chartres bleeding a patient, while his tutor is standing by. On the opposite side of the room is a modern bed, such as is used at the Boucicaut hospital. It is constructed wholly in iron, and is flanked by a night table in iron and porcelain. Plans of different hospitals are hung up on the walls, and surgical instruments, such as they were at the time of Dupuytren and as they are nowadays, are also exposed. Further on one can see a model destined to show how the beds are arranged with glass compartments at the isolation pavilions at the Enfants-Malades Hospital. It consists of a high glass case which reaches to the roof of the ward. An extremely curious object is the "tour des enfants assistés," destined to receive foundlings. It is a sort of crib in a large cupboard placed in the wall of the establishment, and which can revolve on itself. When a child was abandoned, it was placed in this crib, the bell was rung, and the guardian inside the hospital turned the cupboard so as to be able to take the child out. In this way the person who left the child could not be recognized by the doorkeeper. This "tour" was used up to 1860, when it was replaced by an open office, where the children were inscribed. In former years most of these poor children died. Dr. Sevestre and, later on, Dr. Hutinel have done much to ameliorate the hygienic conditions of this Hôpital des Enfants Assistés. Interesting statistics as to the mortality of patients in the hospitals are also shown, and there is a chart indicating the number of foreigners of different nationalities who are taken care of in the different hospitals. In 1888 there were 135,000 patients admitted, and 7,782 were foreigners; in 1899 there were 195,000, of which 9,530 were foreigners. Of this number the greater part were Germans, about 3,200, Italians, Swiss, and Belgians coming next, the English numbering only about 180, and the Americans 85 to 90.

SOMETHING ELSE TO DO FOR SEA-SICKNESS.

To the Editor of the Medical Record.

Sir: Great minds think alike. I have read with deep interest Dr. Herman Partsch's article on what to do for seasickness, in the issue of June 9th. To every word he has written I can say "That's right!" I have been there and know it is all true, for experience is a very good instructor. I can truly claim, I believe, the rather dubious honor of being the champion seasick man of the universe. I always go to sea with a bottle of beef tea at one of the head corners of the berth and a bottle of strong tea at the other; and take a dose after each paroxysm. This prevents the desire for being cast overboard. But Dr. Partsch has forgotten the greatest of all alleviations, viz., ice at the nape of the neck and base of the brain. I was informed as to this remedy by a stewardess on the old Guion Line many years ago. I never knew her name and I don't remember how she looked; but I love her still. On this particular trip I was taking my bride abroad on a wedding-trip (as a rule this is not a recommendable thing to do), and I was so sick that I did not care whether I vomited on my bride from my upper berth or not. After observing me profoundly for two days this good stewardess spoke to me as follows: "You are the sickest man I ever see." Then she went and got the ice, and I lay on it with perfect comfort for the rest of the voyage. I would recommend all those inclined to this terrible evil of the sea to provide themselves with a small rubber bag for an ice-water pillow for the week. Those who have never had this agony may laugh; but not those who have been so stricken.

J. M. W. Kitchener, M.D.

East Orange, N. J.

Poisoning by Hydrogen Arsenide.—An aeronaut was recently poisoned by hydrogen arsenide which escaped from the balloon. This shows the necessity of purifying the hydrogen arsenide used for balloon purposes. The balloon was filled in the ordinary way and nothing peculiar in the odor of the gas was noticed. A few hours afterward persons who had assisted in the operation were taken seriously ill.—*Scientific American.*

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Fifty-First Annual Meeting, Held in Atlantic City, N. J., on June 5, 6, 7, and 8, 1900.

(Concluded from page 1069.)

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

Fourth Day—Friday, June 8.

Post-Operative Treatment of Abdominal Section in Women.—Dr. Walter B. Chase, of Brooklyn, read this paper. He said that, other things being equal, the best after-results in these cases followed proper preparation of the patient and good hygiene. In closing the abdominal incision he recommended the use of chromicized catgut for layer suturing, and silkworm gut when the through-and-through method was followed, the suture not being tied too tightly. He condemned buried unabsorbable sutures, since they remained as foreign bodies liable to cause pain and ulceration. Removal of the through-and-through sutures was recommended after from eight to twenty days, the alternate sutures being removed and the others allowed to remain a few days more. He recommended greater latitude of position after laparotomy than had usually been permitted. In the treatment of shock he advised before the close of the operation the administration of a high rectal enema of a pint of hot salt solution and an ounce of whiskey, together with proper cardiac stimulation. Hemorrhage could be immediately arrested by compression or ligation of bleeding vessels; when practicable the operation should be performed with the patient in bed. Flatulence, nausea, and vomiting, if due to ether narcosis, would subside spontaneously. In nausea he advocated hot water in drachm doses frequently repeated; if vomiting persisted, he gave high rectal enemas of water containing two or three drachms of a saturated solution of sulphate of magnesium at intervals of about two hours until the bowels were opened. If nausea was not present twelve hours after the operation, teaspoonful quantities of hot water or chicken broth at intervals of an hour were given. The quantity might be increased if it was well borne, and it might be followed by beefsteak, lime-water, and milk. The quantity and quality of the urinary secretion should be watched. Evidence of injury to the urinary tract and diminished or suppressed renal secretion, partial or entire, called for prompt and energetic measures, such as saline laxatives, pure water by the mouth, and salt solution by rectal enemas, diaphoresis, and if the arterial pressure was diminished digitalis and persistent dry cupping.

Dr. I. S. Stone, of Washington, agreed with Dr. Chase that morphine was rarely necessary, but there were cases in which patients were apparently saved by morphine. He cited a case in which a patient with symptoms of impending death was remarkably revived by gr. $\frac{1}{8}$ of morphine with gr. $\frac{1}{200}$ of atropine. He had for a number of years used the layer suture in closing the abdomen, but had now discarded it. He emphasized the importance of not using too much medication, finding that better results followed the opposite treatment.

Dr. Reed, of West Virginia, recommended the use of a running stitch of silkworm gut in bringing the fascia together in closure of the abdomen, anchoring the suture at either end. The fascia was thus perfectly apposed, and at the end of ten days or two weeks, by cutting away one end of the shot the strand of silkworm gut came away with ease.

Dr. W. E. B. Webb, of Birmingham, demonstrated the use of a silver wire in the closure of the abdominal incision. The method took the place of the through-and-through suture and did away with the objection to the buried suture.

Dr. Goelet thought that the after-treatment of laparotomy began before the operation, in putting the patient in the best possible general condition. He secured a thorough regulation of the liver and of the excretory organs. When a patient was suffering from shock it was the physician's duty to give morphine; and he had never found any objection to giving it combined with atropine. In closing the abdominal wound he objected to the layer suture because there were apt to be knots in the suture. With deep sutures he tried to avoid the pain by putting on several layers of gauze and tying the sutures over them. In cases of pain and intestinal distention he had seen good results follow the use of asafœtida.

Dr. Ricketts said that anæsthetics had made too many slow operators. He thought digitalis was an over-estimated remedy and that nitroglycerin was overlauded. The best remedy he considered to be the old-fashioned strychnine.

Dr. F. F. Lawrence, of Ohio, stated that good results in abdominal section were secured by short incisions, little manipulations, and short anæsthesias. He thought the effects of the suturing depended more upon the mode of tying than upon the material. If morphine was depended on, it should be given before the patient recovered from the anæsthesia.

Dr. Bonifield said that the thirst after abdominal section was very much increased if the preparatory purgation had been done with salts. This should be accomplished with compound glycyrrhiza. He also urged patients to drink freely of water two or three times before the operation. For the relief of pain he injected phosphite of codeine and chloral into the rectum. The codeine relieved pain and the chloral was given for its quieting effect on the nervous system. The combination acted better than the drugs alone. He thought a patient did not necessarily need stimulants after operation. The treatment should be on the same principle as that of the general practitioners: if the patient required it, a stimulant should be given; if not, it should be withheld, because, if given before it was required, when it was needed there was nothing to depend on. Regarding sutures he thought it a strange statement that there was catgut to be depended upon; and he believed rather that the trouble came from not using enough sutures and there being some capillary hemorrhage.

Dr. Harris said that lest there might be suppuration he rarely allowed the first dressing to remain on more than six or seven days without examination of the wound; also he made it a practice to examine every second day after the sixth or seventh.

Dr. C. C. Thayer, of Clifton Springs, suggested the danger of ileus from handling of the intestines.

Dr. J. C. Biddle thought digitalis, nitroglycerin, and strychnine each had its field. The peritoneum in all cases of laparotomy should be brought closely together; how it should be done was, in his opinion, a matter for each particular operator to decide for himself.

Dr. Engelmann called attention to a suture with which he had no practical experience, but which was advocated by a brilliant young surgeon of Europe—a metallic tier suture which helped to hold the wall in position.

Dr. Chase said, in closing, that he thought our individual experience had much bearing on the rule by which we should work. If doubtful about his own mind, a physician was not in a safe position to work for patients; he must be guided by his convictions, and in so doing he would retain all that was best in his own methods and be able to adopt the good methods of others.

Ovulation and Menstruation Not Independent Functions.—Dr. C. C. Thayer, of Clifton Springs, said that if it was true that ovulation and menstruation were not interdependent, we might regard conception without menstruation as possible. The author quoted instances on record of pregnancy after the climacteric; cases were also quoted of pregnancy occurring before the establishment of the menses, this being a frequent occurrence among the Hindoos. It would seem, then, from literature that menstruation was not an unfailing attendant of ovulation.

Contribution to the Study of Dysmenorrhœa.—Dr. George Tucker Harrison, of New York, drew attention to the importance of this subject to the general practitioner, as well as to the gynæcologist. He showed that light had been thrown on symptoms by recent investigations regarding the innervation of the uterus and ovaries.

The Treatment of Menorrhagia (Dysmenorrhœa) of Pelvic Origin by Electricity.—Dr. G. Betton Massey read a paper with this title. Menstrual pain, he said, was not due to obstruction, but to the attempt of nature to perform a cyclic function with organs that were underdeveloped or diseased. The obstruction theory had been disproven by Schultz, by the speaker, and others, who found no accumulation, and a canal amply capable of drainage. In the obstinate cases, that had been proved to be rebellious to medicinal treatment of the neurotic elements, he found catarrhal endometritis usually present, and obtained cures by the use of the galvanic pole, preferably mercurialized, within the uterine cavity. Dilatation was condemned as unnecessary and at times harmful. The treatment should not be intrauterine unless a persistent discharge was present.

The papers of Drs. Thayer, Harrison, and Massey were discussed jointly.

Dr. Zinke said that he had ceased to use electricity for at least eight years in the treatment of any gynæcological cases. In all cases amenable to treatment he believed a cure could be obtained without the use of electricity. He thought the most difficult cases were those occurring in young girls, since it was often impossible to make a positive diagnosis without examination.

Dr. Herzog, of Chicago, called attention to two types of dysmenorrhœa—one dependent upon inflammatory changes of the uterine mucosa, the other due to inflammatory changes in the ovary. He also named syphilis as a cause of dysmenorrhœa. He observed that the mucous membrane was not thrown off at the time of the menstrual flow.

Dr. Engelmann said he was much interested in the subject, and had studied the menstrual conditions in school-girls. He believed a great number of irregularities were due to nervous conditions. He had gone over nearly five thousand cases, not of hospital patients, but the so-called well women in educational institutions and in business. Of these seventy per cent. suffered more or less pain at the time of menstruation; thirty per cent. suffered severe pain, which increased with the amount of study, diminishing and ceasing during vacation times. He thought the possible nervous cause should impress upon the profession the importance of general management of the case in young girls without examination in order to see what could be attained. He knew that a great many able men said in regard to electricity exactly what Dr. Zinke had said; but his own experience was distinctly at variance with that. He liked the effect of electricity, but he would be unwilling to rely upon it. He would say that, as one of the means of treatment, in its proper place it was as potent and reliable as any remedy we had. It must be used at the proper time, precisely as a drug was given under certain indications. This was also true in regard to inoperable tumors. He was sorry to hear a man whose word was so authoritative as Dr. Zinke's expressing himself as he had.

Dr. Bonifield was surprised at the statement that a large accumulation of fluid in the uterus at the time of menstrual flow caused no pain. It had been his experience that such patients suffered the most pain. Dr. Herzog's observation that the mucous membrane was not thrown off largely at the time of the menstrual epoch, he stated was the very latest observation on that subject. He granted that Dr. Massey might get the results he claimed, but believed that other men claimed just as good results in other ways less objectionable and less troublesome. His method was to pack the uterus with a gauze tampon and produce a miniature labor.

Dr. Laurence said that painful menstruation was not a disease but a symptom; and he believed dysmenorrhœa should be eliminated as a disease from gynæcological nomenclature. He thought the fact should be borne in mind that there were pelvic and uterine and tubo-uterine affections which belonged to the constitutional disorders as did chlorosis and anæmia.

Dr. Zinke did not wish to convey the impression that he had absolutely a distaste for electricity; but there was no case on record in which the use of electricity produced a cure of any diseased condition of the internal genitalia. It might give relief, but personally he had seen no cases in which this was so.

Dr. Thayer was greatly in favor of electricity in dysmenorrhœa. He had used it for twenty years, and was more in favor of it to-day than ever before. Aside from the anatomical malformations, he would say that the more important cause of dysmenorrhœa was a neurotic one. Electricity entered along the line of hygienic and constitutional treatment.

Dr. Massey said, in closing, that he did not want to be behind Dr. Harrison in his homage to Marion Sims, but the thought occurred to him recently that the day of authority in medicine had passed away sometime after he had graduated; that more harm had been done by the blind following of authority in medicine than could be computed. Facts, and not the personality of the man bringing them forward, were wanted. Sometimes great personality led to great error. He referred to the incurable kind of cases and the kind supposed to come to the surgeon. He could not too strongly corroborate the remarks of others, that needless examinations should not be made.

SECTION ON PEDIATRICS.

Third Day—Thursday, June 7th.

Diabetes Mellitus in Children.—Dr. Leopold F. Haas, of New York City, presented this paper, which was read by the secretary. The etiology was said to be still very obscure. Dr. Heinrich Stern, of New York, had collected the histories of one hundred and seventeen cases. These cases were published a few years ago. Phthisis and gout predisposed to this disease. In most of the speaker's cases a family history of one or the other of these diseases was present. The clinical histories of two cases of diabetes were given, in which both patients had what was known as "adenoid habitus." The first case was that of a girl nine years of age, who gave a rheumatic history. She was taken with some fever, pains in the joints, and palpitation of the heart. A rash appeared around the joints affected, with a burning sensation. It was noted that the rash was not itching in character. The child had enlarged tonsils and frequently wet the bed. The usual drugs, such as codeine, etc., were tried with slight improvement. The second case occurred in a boy as the result of being run over by a bicycle. The urine was 1.044 specific gravity, and contained ten per cent. of sugar. He was placed upon restricted diet. Three months later the patient had an attack of measles, and the sugar in the urine was reduced to four per cent. Dr. Haas concluded that diabetes in children was much more common than was generally supposed. He thought that a family history of tuberculosis predisposed to diabetes, and drew attention to the possible connection of this disease with peliosis rheumatica.

Dr. Heinrich Stern, of New York, said that diabetes in children occurred most frequently between the fifth and ninth years, and that he thought this disease was one of development, with some nervous disturbance, probably located in the medulla. He did not think it was due to any physiologico-chemical substance.

Dr. Louis J. Lautenbach, of Philadelphia, spoke of adenoids in this disease. He said that they expressed some deep-seated condition that as yet was not absolutely determined. It was the rule, however, to remove them.

Dr. Louis Fischer, of New York, said that, judging from his German clinic, he thought that cases with a tuberculous family history represented the type of this disease. In one case that he had, there was none of the cardinal symptoms, but there was one per cent. of sugar in the urine. He said that it was his rule to examine the throats of all children coming under observation.

Purpura Hæmorrhagica, or Scorbutus.—Dr. Henry E. Tuley, of Louisville, presented this paper. He spoke of the great difficulty met with in isolated cases, in differentiating between scorbutus and purpura hæmorrhagica. He thought that purpura was an acute infection having its origin in the gastro-intestinal tract. He also gave the classical symptoms of scorbutus, and added cachexia. He said that it was caused by error in diet associated with unhygienic surroundings. He then reviewed the history of a case, that of a young child fed on corn. Symptoms of diarrhœa developed with bloody stools. Spots appeared on the knees, and the lips and teeth were covered with dried blood. The gums bled easily.

Dr. J. P. Crozer Griffith, of Philadelphia, said that there were many diseases in which purpura occurred, and that the eruptions shaded into one another. He said that the purpura in rachitis was around the swollen joints, while that in urticaria was not so marked. In angio-neurotic œdema there were certain eruptions. The name "purpura," like "jaundice," had several meanings.

Dr. Cotton, of Chicago, said that spongy gums did not necssarily mean that the case was one of scorbutus. He thought that it was an accidental condition in a good many cases. It was also found in purpura as well.

Dr. Burnes, of Arkansas, said that scorbutus was common where he lived. He mentioned two cases, one following a fall, the other a case of malaria with severe chills. The patient refused to remain in bed. Purpura developed. It was of a bluish cast. Dr. Burnes thought that malaria might be a factor in causing the purpura, as it was a great blood destroyer.

Dr. Tuley closed the discussion. He said that the term "purpura hæmorrhagica" should not be used and that the disease should be classified as scorbutus.

The Value of Blood Examinations for Diagnostic Purposes.—Dr. J. Brandeis, of New York, read this paper. He dwelt on the importance of blood examinations, and spoke of accurate diagnosis in chlorosis, pernicious anæmia, leukæmia, malaria, filaria sanguinis hominis, and relapsing fever. He then spoke of the importance of such an examination in aiding one to make a differential diagnosis, *i.e.*, chlorosis from pernicious anæmia, typhoid from malaria, malignant disease of the liver from other liver diseases. In this way certain doubtful cases were cleared up. He mentioned several clinical cases and gave their histories.

Differential Diagnosis between Abdominal Typhoid and Appendicitis, by Means of the Iodine Reaction.—Dr. S. Weiss, of Vienna, contributed this paper. It was read by the secretary. If a drop of blood taken from the ear or finger, under antiseptic precautions, was treated with iodine, the red corpuscle in healthy persons became yellow, and the white cells were unaffected. In disease, however, the multinuclear cells were stained, and it was of interest to note that the eosinophiles were never affected. This iodine reaction always showed the presence of pus. Cases of appendicitis and perityphlitis could, by this reaction, be differentiated from typhoid fever.

Dr. J. L. Morse, of Boston, said that a few years ago we did not expect anything from the examination of the blood. Now we expected too much. Blood examinations in children differed markedly from those in adults. He thought the so-called pernicious anæmias in children were not such, but were secondary anæmias. The blood of children reverted to the fœtal type. The presence of leucocytosis was very important. In his own experience he had found no leucocytosis in serous pleurisy.

Hydrencephalocele.—Dr. Carl Beck, of New York, read this paper. He reported several cases, one of which gave a history of a fall of the mother during the first month of pregnancy, at which time she broke three ribs. The cases were illustrated by *x*-ray and other photographs. Several cases were operated upon, and brain substance with cerebro-spinal fluid were found to be contained in the tumors. One patient was alive and doing well after operation.

Symmetrical Development; or, Does Our Present School System Develop the Highest Powers of the Child?—Dr. Stuver, of Fort Collins, Colo., presented this paper. What was the best kind of education, was a very important question. It was necessary to develop all the powers of the child, physically, intellectually, morally, and symmetrically. He said that the predominance of physical development over that of the mind was shown in the modern prize-fighter. Children were born with instincts, not with knowledge, and the child passed through all the stages of intellectual evolution. Teachers should have a clear conception of the phylogenetic development of the child. As an aid in this, they should understand the physiology of the brain as well as general hygiene. In speaking of some of the evils of our school system, Dr. Stuver said that the children in the kindergarten were given too much work to do, thus having a tendency to eye-strain. He thought that too little attention was given to the general health of school-children. They needed open-air exercises. The school sessions, together with the recitations, were generally too long. More time should be given to the so-called manual training. The custom known as "cramming" for examinations was a vicious one. The calls of nature were not properly attended to.

School Break-Downs.—Dr. J. Henry Bartlett, of Philadelphia, presented this paper. He mentioned an article that appeared in the *Ladies' Home Journal* which referred to sixteen hundred children between the ages of eight and fourteen years, who were total physical wrecks. The speaker refused to make any statement for fear of hurting some friend's feelings.

He said that break-downs were rarely caused by overstudy, but that such cases usually occurred during periods of development, such as teething and puberty. This condition was more common in girls than in boys, in the proportion of forty-three to seven. He spoke of the important part that the gastro-intestinal tract played in this condition. Eating in haste had become a national habit.

The Care of the Ear in School-Children.—Dr. Louis J. Lautenbach, of Philadelphia, read this paper. He said that the word "deaf" was too often synonymous with "dumb." The frequency of ear disease among school-children was shown by the statement that seven per cent. were deaf in both ears, and twelve per cent. to twenty-five per cent. were deaf in one ear. He quoted Dr. Knapp as saying that one-half of all ear diseases occurred in children before the tenth year. It was necessary, he thought, to submit the children to regular periodical examinations. The relation of nose and throat trouble to middle-ear disease was very important, for the Eustachian tube in children was always open. When a nasal douche was given, some of the fluid would irrigate the Eustachian tube.

Antecedents of Valvular Heart Disease in Children.—Dr. Frederick A. Packard, of Philadelphia, read this paper. In analyzing a number of cases in children who had suffered from previous illness, he thought that endocarditis was secondary to some form of kidney disease. In adults this affection was due to an infection. Angina resulted from endocarditis. Dr. Packard had collected seventy-five cases from his hospital records, and found that rheumatism was a most important factor in cardiac disease, as was also scarlet fever. Measles, chicken-pox, pertussis, and diphtheria had little effect upon the heart.

Dr. Wahrer said that the examination of children's eyes and ears in the rural districts was impossible. In regard to overwork of children, he said that he did not favor the kindergarten system. We sent our children to school too early, and we gave them too much work to do. The child should be examined by the family physician before it was allowed to go to school.

Dr. E. E. Graham spoke of the changes that took place during development, and how they might be modified by overwork. The system of competitive examinations for higher standing in our public schools was a bad one. He spoke of the "played-out" physical condition of medical students, who were adults, and then asked what it must be with children after examinations. The school hours were too long. At the present season all of our medical colleges were closed, but the children must work until the first of July.

Dr. Sutherland, of Nebraska, said that our public-school system, as it stood, was very faulty. In the first place, he thought that the restrictions placed upon the teachers were greater than they should be. The teachers should have more latitude in giving instruction. Secondly, there was too much politics in the school board. Much of the work done was useless. It was quality of work that was wanted, not quantity. The children should study about the birds, rocks, etc.

Dr. Hyatt, of Pittsburg, said that there was no question so important as this one of the schools. He thought that the children should be classified according to their play as well as their studies. Excesses must be avoided. Physiological exercise of the mind and body was necessary. Dr. Hyatt said that the teachers were overworked.

Dr. Frank Allport, of Chicago, said that he was very much interested in the study of the eyes and ears of school-children. Teachers said that they could not tell what was the matter with the children. It was not desired that they should make a diagnosis, but by using a simple letter chart they could tell whether a child had one weak eye or not. He had arranged a series of ten questions relating to headaches, cross-eyes, and whether the child failed to read any or all of the letters of the chart, etc. These questions were not objectionable, and would not cause the child any discomfort. Dr. Allport said that thirty-three per cent. of the children had some eye or ear disease, and twenty per cent. had some nose trouble.

Therapeutic Value of Liquid Air, with a Practical Demonstration.—Dr. A. Campbell White, of New York, read this paper. He said that he had received letters from all parts of the United States and Mexico, asking him for sample packages, and whether it was given hypodermatically or for abscess of the liver. Among experiments shown by him, Dr. White froze a rubber ball, which became brittle; also a peach, a strawberry, a tomato, mercury, and alcohol. To illustrate the force of liquid air, he worked an engine and a pop-gun with it. The composition of liquid air was the same as that of the atmosphere. The nitrogen was the first gas to evaporate, and thus pure oxygen was left. In medicine, liquid air was used in the form of a spray for local anæsthetic effect and as a cautery. Bacteria were not killed by it, but their activity was suspended for some time. The pain and bad odor of carcinoma were destroyed by it. The most promising effect of liquid air in medicine was upon nævi.

Just before closing the following resolution was adopted:

"*Resolved*, That for the benefit of the physical condition and the mental development of American school-children, the American Medical Association recommends the annual and systematic examination of the sight and hearing of all school-children."

Fourth Day—Friday, June 8th.

Athrepsia Infantum: its Diagnosis and Treatment.—Dr. Louis Fischer, of New York, read this paper. He said that if an infant a few weeks old suffered from vomiting and diarrhœa, and this condition was allowed to become chronic, colic and flatus supervened, and a chronic gastro-intestinal catarrh resulted. The neglect of this condition meant a development of the condition known as "athrepsia." Parrot was the first one to describe this disease, and he divided it into three stages. In the first stage the stools were liquid, curdy, and green, and contained an excess of mucus. The abdomen was distended with gas, the tongue was coated; stomatitis was present, and wasting began. In the second stage all these symptoms were intensified. Wasting became marked, and undigested food appeared in the stools. The stools occasionally appeared dark brown, the color being due probably to the presence of altered bile pigment. The child did not sleep, and the mouth became the site of a parasitic stomatitis. The skin was harsh and dry. Small boils or a rash might appear. The temperature was subnormal. In the third stage the child became moribund. Muscular twitchings were present; little or no nourishment was taken, and finally death occurred, preceded by marked convulsions. The greatest number of cases occurred in bottle-fed children, although some were breast-fed. These latter cases were probably caused by the mother's milk being lacking in some chemical constituent. The percentage of proteid was the one most frequently deficient. The treatment, he said, was to remove the cause if possible, with good hygiene and diet. The so-called "cream mixture" was often of service. This consisted of cream ℥ i., barley water ℥ iii., and sugar ʒ i. He then spoke of the different methods of modifying cow's milk. In France, the law forbade the giving of solid food of any kind to a child under one year of age, without the authority of the family physician. Dr. Fischer said that no matter how beneficial boiling or sterilization or pasteurization of milk might be, one could not transform cow's milk into woman's milk; and further, it was a great mistake to believe that modified cow's milk was a full substitute for woman's milk. In closing, he mentioned the process of hydration of milk with hydrochloric acid, and referred briefly to the small percentage of proteid in condensed milk.

Intubation in Private Practice, and its Perfection.—This paper, by Dr. Joseph Trumpp, of Munich, was read by the secretary. There was a tendency in Europe not to use intubation in private practice. One should not attempt to do it without first having practised on the cadaver of animals. In regard to the serum treatment of diphtheria there were seventy-seven per cent. of recoveries. After describing the technique of the operation, the paper gave a critical discussion of the value of rubber tubes in intubation. The author had not seen any ill effects from their use, and stated further that obstruction, excoriation, etc., occurred less often with rubber than with metal tubes.

The Injuries Resulting from Extubation.—The paper, by Dr. Janos Bokay, of Budapest, was read by the secretary. The author referred to certain injuries which were most likely to occur, such as ulceration of the trachea, etc., and considered the best means of their prevention and treatment.

Dr. William M. Welch, of Philadelphia, said that he felt that there was greater danger connected with intubation in private practice than in the hospital. He related a hospital case that ended fatally before the house physician could reach the patient. If this was liable to occur in a hospital, it was evident that the danger would be even greater in private practice. The safest place for such cases was the hospital. In regard to the size of the tube, Dr. Welch said that one selected according to the age of the patient was often too small. He had had one patient who coughed up the tube half a dozen times in one night. The kind of tube chosen was important. He favored the use of rubber tubes, for they were cleaner than metal ones. In a hospital it made no difference. He said that it would naturally be thought that the rubber tube, being lighter, would be coughed up more easily, but in fact the weight of the tube made little if any difference. He mentioned a case in which the exudate was so extensive that the cast of the trachea and bronchi had been thrown off. Making a false passage was only possible in the hands of an inexperienced operator. The tube occasionally fell down into the trachea. Dr. Welch had had one case of this kind in which he did a tracheotomy. In another case on which he was about to operate the patient coughed it up. Ulceration generally occurred about the bulge of the tube and its lower extremity. He thought that the use of antitoxin in intubation cases had been somewhat disappointing. He said that the comparison of cases of intubation before the days of antitoxin with the cases of the present time was unfair.

Dr. Rigg, of Pittsburg, said that he agreed with Dr. Welch as to the hospital care of intubation cases. His own experience had not been so satisfactory as that some other physicians had reported. In regard to antitoxin, he said that its early use was most important. In many cases it was given too late.

Dr. A. Campbell White, of New York, said that before the days of antitoxin fifty per cent. of the cases of croup were saved and only a small percentage were intubated. In the hospital, intubation had been advised only as a last resort. Now that antitoxin was in use, intubation was performed at once, and in such cases the results had been most successful. Dr. White mentioned a case occurring before the time of antitoxin, the patient being brought to the hospital in a moribund condition. Intubation was done immediately, with artificial respiration, and in a few minutes the child was sitting up. It died, however, in a day or two. In such cases now life might be saved by the use of antitoxin. Those cases in which the membrane extended downward were benefited by intubation, though they generally resulted fatally. He mentioned a case in which the tube fell below the vocal cords.

Dr. Louis Fischer, of New York, in speaking of antitoxin, said that it was his rule to give 3,000 units for an initial dose, and, if no abatement of the symptoms took place in twenty-four hours, to repeat it. He said that antitoxin was the best remedy, combined with calomel and rhubarb. He condemned the forcible extraction of the tube after intubation, and said that it resulted only in injury to the parts. He often gave apomorphine in emetic doses to bring off the pseudo-membrane.

Dr. Rosenthal, of Philadelphia, said that unquestionably intubation was oftener done by the general practitioner than ever before. Every case in which he used the rubber tubes had ended fatally, and he thought that Dr. O'Dwyer was right in using the metal tubes. When a tube was expelled, the one next in the scale should be used. He said that it was not diphtheria that killed, but a septic pneumonia. He mentioned cases of heart failure that occurred six weeks after the disease.

Dr. Welch closed the discussion by saying that croup complicated with measles was invariably fatal. He said that the stenosis was due to the intense congestion of the mucous membrane.

Surgical Circumcision; its Technique; Prevention of Infection; its Legal Control.—This paper was read by Dr. Ferd. C. Valentine, of New York. After referring to the flattering compliment paid to him by being allowed to read a surgical paper before the section on pediatrics, Dr. Valentine recited the local indications for circumcision, and the general conditions in which the operation was required even in the absence of local disturbance. He described the technique of a very simple circumcision, and illustrated it by means of pictures taken from his book on "The Irrigation Treatment of Gonorrhœa: its Local Complications and Sequelæ." Insisting that circumcision was a surgical operation, he averred that it should be performed only by medical men and in a surgical manner. He mentioned the fact that tuberculosis, syphilis, and other diseases were frequently communicated to infants by ritual circumcisers. The infants so infected became menaces to public health. If physicians were guilty of such acts, they would certainly become defendants in courts of law. Dr. Valentine advocated the legal prohibition of circumcision unless it was performed by physicians, and urged that devout Jews, who wished to follow the religious rite, could very well avail themselves of Jewish physicians appointed as ritual circumcisers in order to satisfy the requirements of their religion. These physicians could perform the religious ceremonies without violating asepsis and correct surgical technique. The speaker mentioned that those persons circumcised in youth seemed to be less liable to acquire syphilis than others.

Dr. Louis Fischer asked what was the after-treatment, especially in secondary hemorrhage.

Dr. Valentine said that he thought he would be inclined to use suprarenal extract. It was an historical fact that hæmophilia was more common among the

Jews than in any other race. He said that there was only one accident that could occur during this simple operation, and that was a hæmatoma following the cutting of a vein. This would often give rise to systemic disturbances.

Dr. Rosenthal asked what Dr. Valentine would do in the case of a child only a few days old with an impervious foreskin?

Dr. Valentine replied that there was only one thing to do, namely, to slit the foreskin.

The following papers were read by title: "Tuberculosis of the Knee and Hip Joints in Children; its Diagnosis and Treatment," by Edward A. Tracy, of South Boston, Mass; "Floating Kidney in Children," by Isaac A. Abt, of Chicago; "The Symptomatology of Appendicular Inflammation in Children," by Thomas H. Manley, of New York.

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Third Day—Thursday, June 7th.

Election of Officers.—Dr. N. S. Davis, Jr., of Chicago, was elected chairman and Dr. J. N. Upshur, of Richmond, Va., secretary for the ensuing year.

Therapeutics of Croupous Pneumonia.—This paper was read by Dr. I. M. Allen, of Liberty, Mo. The various forms of treatment of this disease during the past century were outlined. He divided the therapeutic cycles into three periods. During the first epoch blood-letting and emetics were the remedies employed; in the second epoch blistering and expectorants were relied on; in the third or last period a tonic treatment had come into vogue. To Dr. Johnson, of Kansas City, belonged the honor of first classifying pneumonia as an acute infectious disease. It was the practice of the speaker to administer a purgative at the inception of the disease. Digitalis and strychnine were given early in small doses and increased gradually. Alcohol was entirely prohibited. In the later stage of the disease nitroglycerin was given. For specific medication he employed sodium salicylate in doses of gr. xv. every four hours. This was best administered in milk of magnesia. He continued this agent for five or six days. Its value was due to its antiseptic effect on the pneumococcus. The number of pneumococci in the blood and sputa was markedly diminished during its administration. Binz thought that the salicylate was converted into salicylic acid and thus acted as an antiseptic. The antipyretic influence of the drug was also very marked. After the sixth day iodide of potassium and tr. ferri chloridi were to be employed. Oxygen was very valuable. He had obtained positive results in cases of mixed infection from the use of anti-streptococcus serum. He did not restrict the diet unless jaundice was present.

Dr. Boise, of Philadelphia, pointed out the resemblance that existed between the products of the diphtheria bacillus and the pneumococcus of Fränkel. He employed local applications of heat or cold for their effect on pain. Injections of decinormal saline solution were of signal service in many cases. A hospital mortality of twenty-five per cent. corresponded to a mortality of ten per cent. in private practice. Serum therapy offered the best hope for the future.

Dr. Mitchell, of Cincinnati, believed that pneumonia was not an inflammation, but a true toxæmia. He employed hot plunge baths with cold to the head and spine, especially when dyspnœa was marked. This was very valuable in the pneumonias of children. Digitalin and strychnine were given in all cases.

Dr. Hill, of Milwaukee, called attention to the modifying influence of the influenza bacillus on pneumonia. Death resulted (1) from heart failure; (2) from pulmonary obstruction. In all cases he used digitalis during the first two stages and strychnine in the last stage. He believed in external applications for their dilating effect on the capillaries of the surface.

Dr. Melvin, of Saguache, Col., said that the country physicians throughout the West believed that prompt administration of veratrum viride caused the crisis to appear earlier than usual. It certainly modified the course of the disease. Aconite in his practice had been most useful. His cases seldom had a crisis later than the fifth day. Later on digitalis should be employed. The mortality was very much lower than with other plans of treatment.

Therapeutics of Vertigo.—Dr. J. Leonard Corning, of New York, read this paper. He said that vertigo could not be regarded as a derangement induced by morbid forces acting upon the semicircular canals. Considering the multifarious origin of this affection, an action of this kind was physiologically unthinkable. By investigating the condition of the mind during vertigo, and by determining the modification of the reaction time, the writer was able to demonstrate an impairment of the higher mental faculties. To carry out these researches he invented and employed a very ingenious apparatus consisting of a revolving chair of unique construction and a recording apparatus with appropriate electrical connections. From these researches he concluded that vertigo, however produced, must be regarded as a cortical difficulty. Also it was found that the reaction time was very much lengthened by the use of narcotic and sedative drugs, notably the bromides and ether. In this manner he proved what had long been observed, namely, that these drugs inhibited vertigo. His conclusions were that—(1) this derangement of the cortical centres was always accompanied by some impairment of consciousness. (2) This impairment was disclosed by the greater length of the reaction time, and by (3) introspection. (4) Vertigo might, however, be engendered by direct impairment of the functional efficiency of the centres of perception without the interference of the afferent nerves. The vertigo associated with auto-intoxication and that due to intracranial disease was to be thus accounted for. (5) However originated, all forms of vertigo had this in common, that they interfered directly or indirectly with normal cortical action. (6) Rotary vertigo of the milder sort might be inhibited by intense sensory impressions, particularly by those of sound. (7) The impairment of consciousness was in direct ratio to the intensity of the vertigo.

The paper was discussed by Drs. Benedict, of Buffalo, and Hill, of Milwaukee.

Increasing the Value of Cod-Liver Oil by the Addition of Free Iodine and Free Phosphorus.—This paper was read by Dr. Louis J. Lautenbach, of Philadelphia. He described the different methods of preparation of cod-liver oil. He said that the ready absorption and good effects were due principally to the free iodine and phosphorus contained therein. The old method of preparing the oil by a process of expression preserved these principles and many other putrefactive alkaloids. The new method consisted in securing the oil by passing superheated steam through the livers. This oil was far more agreeable to the palate and stomach, but was less valuable. He believed that this defect could be remedied by the addition of free iodine and phosphorus to the ordinary cod-liver oil of commerce. Gr. $\frac{1}{100}$ of pure phosphorus and gr. $\frac{1}{6}$ of free iodine in a tablespoonful, to be taken at bedtime, was the usual dose employed.

Protest against the Use of Proprietary Remedies.—Dr. Daniel Brower, of Chicago, read this paper. He said that the profession was being overwhelmed by proprietary remedies. The manufacturers who projected them copyrighted the name, and patented the process and the resulting product, so that these remedies remained a monopoly for all time. More than twenty-five hundred such new remedies had been introduced within the past few years. An examination of one thousand prescriptions of three leading Chicago druggists revealed that from twenty-one to twenty-six per cent. of those prescriptions contained these remedies. These drugs cost from three to four times as much as they did in other countries. The Code of Ethics expressly said that it was equally derogatory to professional character for a physician to hold a patent for any surgical instrument or medicine, or to dispense a secret nostrum, whether it was the composition or exclusive property of himself or others. It was also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines or in any way to promote the use of them. By the use of these drugs the profession became perpetually at the mercy of monopolists who could fix the price, vary the composition or purity as fancy might dictate. There was no objection to a manufacturing chemist patenting a process. There should, however, not be a monopoly on any product. To those who wished to use combinations the "National Formulary" furnished all of the formulæ of the best combinations that were in general use, at one-third of the price of the corresponding proprietary preparation.

Dr. N. S. Davis, of Chicago, said that we must divide these drugs into two classes: (1) those whose contents or process of manufacture was secret; (2) elegant preparations of well-known drugs in fixed proportion.

Dr. Allen protested against the physician dispensing his own drugs. No one should use any fixed routine combination of remedies for any disease.

Dr. Tompkins, of West Virginia, said that religious newspapers and clergymen were responsible for much of the circulation of these proprietary remedies.

Dr. Lochboehler pointed out the danger of these remedies, in that they put dangerous unknown drugs in the hands of the laity, and he cited several instances in which death resulted from this indiscriminate use of these synthetic drugs by the layman.

Dr. Brower, in closing, stated that there had been a very marked increase in the number of cases of impotence in late years due to the general use by the public of these unknown synthetics. The physicians were responsible because they praised and prescribed the articles, and the public came to know of it through the advertising agents.

Irrigation of the Colon as a Therapeutic Measure.—Dr. George J. Lochboehler, of Washington, D. C., read this paper. He said that for this purpose from two to four quarts of decinormal salt solution should be employed. The tube should have the opening on the end and not on the side. The tube devised by Dr. F. Turck was preferable, in order to prevent the coiling so common with a soft tube. Such large quantities of fluid acted mechanically and were of especial value in strangulated hernia. Irrigation had been used very successfully in a large number of cases of gastro-duodenitis. The speaker reported one desperate case of typhoid fever and two cases of appendicitis, in which a cure was effected by this means. The only contraindication to its use in typhoid fever was during the stage of necrosis, when it should not be employed.

Dr. Brower pointed out the beneficial effect that these irrigations had on the kidneys, and urged their more frequent employment.

Dr. Osborn, of New Haven, spoke of the value of such injections following surgical operations. Many of the disagreeable sequelæ such as thirst, anuria, etc., were thus prevented.

Dr. Culbertson, of Cincinnati, said that as a means of reducing temperature in acute infectious diseases a quart of ice-water thrown into the lower bowel was one of the best. It reduced the temperature at once from a degree to a degree and a half.

Dr. Bernheim stated that as a result of his physiological investigations he found that the reverse peristalsis that was set up in the bowel following such injections carried the salt solution as far as the stomach.

Treatment of Addison's Disease, with Case.—Dr. John V. Shoemaker, of Philadelphia, read this paper. This was a case of Addison's disease in a young man. The administration of suprarenal extract had no effect on the disease. The patient died in a short time of general tuberculosis. The suprarenal glands were markedly involved. A general review of the literature was appended.

The Therapeutic Application of the Organic Extracts.—This paper was read by Dr. O. T. Osborn, of New Haven. He outlined the history of thyroid experimentation. Among other things it was noticed by Kocher that symptoms of myxœdema did not appear when the thyroid was removed in old age. The adult thyroid contained 4 mgm. of iodine, and this was the only tissue of the body that contained that element. It produced diuresis when taken internally. It seemed that the thyroid was necessary for the proper equilibrium of the central nervous system; to regulate the proper quantity of mucin that should appear in the tissues; to regulate the proper amount of connective tissue, especially of the skin; to the proper organization of phosphoric acid for assimilation into bone salts; and, by its vasodilator power, to regulate properly the peripheral circulation, thus regulating the heat loss at least and the normal insensible perspiration, which if disturbed showed on the one hand in the drying of the skin in myxœdema, and on the other in the increased sweating in Graves' thyroid disease. It also seemed to have some power in regulating the rapidity of the cardiac contractions. When large doses of this gland were given to a healthy adult, nausea, vertigo, and other alarming symptoms resulted. Exophthalmic goitre was due to hypersecretion, and therefore the use of the thyroid extract was contraindicated during the continuance of active symptoms. All of these were increased if it was administered. If the gland underwent atrophic changes, as it very often did, later on the reverse condition might occur, viz., the first stage of myxœdema, then it could be given. It was probable that every case of overweight, especially after forty years of age, could be reduced by larger or smaller doses of thyroid extract daily, provided there were no ill effects from its use. After the first two weeks the patient would lose from two to five pounds per week. At the beginning gr. iii. should be given twice a day. This was gradually increased. The disagreeable symptoms were the same as the early symptoms of exophthalmic goitre. The diet needed no modification. Thyroid extract was of value in the treatment of certain skin diseases, such as dry, scaly eczema and psoriasis. It had not been successful in the past because too large doses had been given. The speaker had found it of especial value in dull, heavy-featured children of a strumous diathesis. Enlarged glands in the neck had become normal under its use. Melancholia was occasionally benefited by it. Eighty per cent. of all cases of exophthalmic goitre occurred in women, and it was reasonable to suppose that it bore a close relation to the menstrual function. Thyroid had been successfully employed in some women at the menopause.

Thymus.—He said that intravenous injections of this substance lowered the blood pressure. It had been demonstrated that it did not contain any iodine. It contained a large amount of nuclein and phosphorus. In some cases of exophthalmic goitre it was of service. Its use as yet was entirely empirical.

Pituitary Body.—This gland was divided into two parts; the anterior was glandular and resembled thyroid tissue; the posterior was largely made up of nervous elements. An extract of this latter part, when injected into a vein, raised the blood pressure. When this gland was removed in animals, they died of symptoms like those in human beings from whom the thyroid had been removed. This gland was always diseased in acromegaly. Giantism was due to an increase in the secretion of this body. Acromegaly was due to a perverted secretion. If disease of this gland existed, the thyroid was enlarged, and the reverse also held true. Two successful cases of feeding of the pituitary body in acromegaly were reported.

Suprarenal Extract.—The active principles of this drug did not produce their constitutional effects when administered by the stomach. There was one principle present in the drug which, when administered intravenously, raised the blood pressure more than any other known agent. Degeneration of the adrenals was only one of the many causes of Addison's disease. The general consensus of opinion as to its value in eye and nose diseases was that it was invaluable. For local use ten grains to the ounce was the usual strength. The speaker had had much success in aborting follicular tonsillitis by cleansing the tonsils with a saline solution, swabbing with hydrogen peroxide, and then spraying with suprarenal extract. This was to be repeated in twelve hours. The congestive stage of urethritis was also benefited by injections of this agent. It should be employed locally in all forms of capillary hemorrhage. If used in a cavity of the body, it should be washed out, because it underwent putrefactive changes after a few hours.

Psychic Therapeutics.—Dr. J. C. Culbertson, of Cincinnati, read this paper. He believed that the principal requisites for success were: (1) ability to diagnose; (2) a strong personal influence. Other therapeutic agents were only valuable adjuncts. He would dispense this personal influence just as he would dispense a nervine or an anodyne. Confidence was a potent remedial agent. There was a psychic element present in all disease. This often overshadowed the pathological state. This was especially marked in educated people. A discriminating course of positive injunctions or orders, with placebos, were often of greater value than drugs. One should never be vacillating, but positive at all times. Fear or joy might cause either a cure or a disturbance of the organism, and the personal influence of the physician might save life.

The paper was discussed by Drs. Reamy, Wheatly, and Bernheim.

Dr. Culbertson, in closing, said that a diagnosis should always be made on the first visit, and, no matter whether right or not, the name of the disease should be the same to the patient throughout the whole sickness. Positive men were the successful men.

Fourth Day—Friday, June 8th.

Pharmacological Assay of Drugs and its Importance in Therapeutics.—Dr. E. M. Houghton, of Detroit, who read this paper, said that many of the most important drugs could not be standardized by chemical assay. For this reason animal experimentation was essential. The best theory that had been offered to explain the reactions between the elements of the animal body and drugs was that of chemical affinity. The normal function of a given organ was altered in degree by the union occurring between the protoplasm of its cells and the given drug. This action was quantitative. Other conditions being equal, animals of the same size and weight would respond equally when the same dose of a given drug was administered. In the speaker's experiments, when the conditions were similar, there was not more than two per cent. variance between the results of two observers. He stated the following to illustrate the uncertainty of the present system: He purchased three specimens of tincture of strophanthus. As far as could be determined they were alike, yet upon injecting them into animals the results differed as much as five hundred per cent. The strength of the suprarenal extract might likewise be determined only in this way.

Dr. Lyons, of Detroit, said that in the chemical assay of drugs there was very often a variance of from ten to twenty per cent. between different observers.

The paper was further discussed by Drs. Allen and McClintock.

The United States Pharmacopœia for 1900.—Dr. Joseph Remington, of Philadelphia, presented this paper. He said that the United States Pharmacopœia occupied a unique position among the pharmacopœias of the world. Its authority was established throughout the country mainly through the voluntary assent of doctors and pharmacists of the United States. In other countries the governmental authority was behind it. Among the most important changes to be made in the new pharmacopœia would be the introduction of any product of nature of known origin; also any synthetized product of definite composition which was in common use by the medical profession, the identity, purity, or strength of which could be determined. No compound or mixture would be introduced if the composition or mode of manufacture thereof was kept secret or if it was controlled by unlimited proprietary or patent rights. The average approximate dose of each drug would be inserted. The book would appear about 1903. No restriction would be placed upon the text of the book.

A resolution was adopted condemning the admission of unethical preparations to the exhibition hall of the association in the future. An unethical paper that was presented to the section was returned to its author.

AMERICAN ORTHOPEDIC ASSOCIATION.

Fourteenth Annual Meeting, Held in Washington, D. C., May 1, 2, and 3, 1900.

Harry M. Sherman, M.D., of San Francisco,
President.

(Concluded from page 1072.)

Second Day—Wednesday, May 2d.

Forcible Correction of Spinal Curvature followed by Paralysis.—Dr. H. Augustus Wilson reported a case in which the kyphosis had been noted only a few weeks before he had seen it. There was a family history of tuberculosis. In addition to the statements of the parents, who were careful observers, there was other evidence of the recent development of the deformity. Under profound anæsthesia the patient had been subjected to full extension in the horizontal posture while he had made forcible correction with the hands from above downward. A very decided and audible snap had occurred, such as is present in osteoclasis, but there had been little improvement in the deformity. A second attempt had yielded the same result. A plaster-of-Paris jacket had been applied, the jacket being fenestrated at the kyphosis. The patient was placed in bed with counter-extension. The temperature rose to 101.4° F. on the second day, and remained at this point for about twelve days. It then declined for a short time, but rose again slightly, and remained above the normal for about eight weeks. In a short time sloughing of the soft parts occurred above at the head, and subsequently also over the site of the kyphosis. The latter was so marked that the spinous processes were exposed. There had been no pressure over these points. When discharged at the end of nine weeks the patient was able to move around feebly, but there was no distinct paralysis. In forty days he had been readmitted with a spastic paraplegia, which was almost complete. Apparently the membranes of the cord had become involved in a tuberculous process. Under treatment directed toward immobilization of the spine and improved nutrition, the patient had improved slowly.

Dr. A. M. Phelps was inclined to believe that the forcible correction of the spine had had nothing to do with the subsequent paralysis. The case seemed to him a typical one of pressure myelitis resulting from the invasion of the cord and thickening of the membranes of the canal.

Dr. Ridlon took the same view of this case.

Dr. Lovett said that Dr. Dane's brace was interesting because its aim was to produce torsion. His own studies in lateral curvature had impressed upon him the importance of throwing the weight of the spine backward on the articular processes, not necessarily producing lordosis of the lumbar region, however. The weight should be thrown upon the articular processes a little before the erect position was assumed.

Dr. Phelps asserted that it was only when the spine had been bent backward considerably that any pressure was made on the articular processes.

Dr. Lovett replied that this statement was not in accord with the results of experiment, which showed that these processes came in contact at a point about 15° in front of the erect position.

A Case of Scorbutic Spine.—Dr. John Ridlon reported a case of this kind occurring in an infant of twelve months, and coming on so suddenly that it was difficult to resist the inference that the symptoms were the result of some traumatism to the knee. The child was large and fat, and it had a rough and muddy skin. The legs were held slightly flexed at the knee, and the hands were moved carefully. The range of motion at the ankles, knees, and hips was normal. The spine was arched forward, and held rigidly. The gums were dusky. He ordered the child fed on unsterilized milk, raw meat, and orange juice, and in two weeks the bow was well. In making the diagnosis it should be remembered that acute articular rheumatism was rare in infants, and was accompanied by fever, and that infantile paralysis and rickets must also be excluded. In rickets the onset was gradual, and there were other evidences of the disease besides the spine.

Dr. R. H. Sayre said that his plan of treating such cases had been to put the child on a pillow, made rigid by inserting a short board inside of it, and then changing the diet. Most of his cases had occurred in children who had been fed on sterilized milk or on patent infant foods. One child had had an extremely tender spine and also complete paralysis of the lower extremities.

Dr. Phil. Hoffmann reported one case, occurring in an infant of four months, who had been referred to him as a case of Pott's disease. The kyphosis was sharper than usual in the rachitic spine. The child had made a good recovery.

Dr. Henry Ling Taylor said that he had reported to this association one of the earliest cases of this kind published in this country. In the cases that he had seen there had not been a true paralysis, only a disinclination to use the limbs because of the extreme pain caused by motion. He had not found it necessary to resort to any special mechanical treatment.

Dr. Stewart L. McCurdy, of Pittsburg, said that he had reported two or three cases several years ago. These cases presented a gradual posterior curve rather than a true kyphosis. In some cases there was an almost complete pseudo-paralysis. In none of his cases had there been bleeding from the gums. The absence of pain, fever, and fretfulness enabled one to differentiate between scorbutus and rachitis.

Knee-Joint Surgery for Other than Tuberculous Processes.—Dr. Joel E. Goldthwait, of Boston, presented a paper on this subject. The ages of his patients had varied from four years to sixty-five. He personally believed there was no more danger of opening the knee joint than the peritoneum. If there was any legitimate doubt as to the diagnosis there should be no hesitation in opening the joint and determining the true condition by actual exploration. The importance of doing so was evident when one considered how much more could be accomplished by making an early diagnosis of tuberculosis. The difficulty of making the diagnosis was increased in adults, in whom non-tuberculous lesions of the joints were in the majority. After opening the joint experience had shown that the surgeon must rely less upon the gross appearance than upon the results of microscopical examinations. The present paper was based on a study of twenty-seven patients and thirty-three operations. In five cases both knees had been operated upon. Of the thirty-three operations one was for the removal of loose pieces of cartilage in a woman aged sixty-five years. Three pieces as large as hickory nuts had been removed. In one case the exploratory incision showed a beginning osteo-sarcoma. In eight of the cases the operation had been demanded because of the presence of loose cartilages. The patients were all young men, and in quite a number of them there was a relaxed condition of the joint which had favored the crushing or tearing of the inner edge of the cartilage. The point of contusion seemed to be usually the inner thin edge. Sutures of any kind, because of the structure of the cartilage, cut out almost immediately; hence, the best treatment was removal of the cartilage. Under the latter treatment the joint could be removed in one week, and the after-treatment ended in three weeks. After the first week the dressings should be removed one a day and the joint flexed so as to prevent the formation of adhesions. A flannel bandage was used for the third week. He felt that there was danger of over-treatment in these cases. Apparently the patient suffered no inconvenience from the absence of the cartilage. Of course the mild cases could be relieved by massage and bathing. When there were marked fringes, these should be removed by operation. In the majority of cases the fringes acted as foreign bodies and became locked under the patella during motion just as in the case of the loose cartilage, although the results were not so severe. The frequent resulting attacks of synovitis were followed by coagulation of the synovia, thus forming large coagula in the joint.

Discussion: The Treatment of Vertebral Tuberculosis with Reference to the Forcible Correction of the Deformity.—Dr. John Ridlon opened the discussion. He said that in the past three years he had operated upon eight lateral curvatures under ether and thirty-five cases of Pott's disease. In the worse cases he had gained at first one and one-quarter inches in height, and at the second attempt three-fourths of an inch, but in almost all the cases of lateral curvature this gain had been subsequently lost. He did not think it was worth while now to straighten a lateral curvature case under ether. He had operated on both old and recent cases of Pott's disease. There had been two fatal cases. The first one was really due to the prior existence of tuberculosis, the operation having been done without having kept the patient sufficiently long under observation. In the other fatal case, everything had gone along well for six months or more, and then several abscesses had developed, and the prolonged suppuration had finally resulted in death from exhaustion. In many of the cases he had used almost no pressure with his hands; in others he had used very considerable force. There was almost always some crunching of the bones. None of his patients had subsequently developed paralysis, but he had operated on several cases when paraplegia existed at the time. In the longest case the patient had been in bed about one year, and in the shortest for four weeks, but he had aimed to keep them from six to eight months in bed, allowing them to lie on the face, back, or side. He had had a few cases in which there had been no return of the deformity, and about half a dozen in which the patients had gone for a year without any support or any return of the deformity, although the straightening had been as much as one-half to three-fourths of an inch. In the majority of cases he had succeeded in keeping the deformity reduced to about half of what it had been before the operation.

Dr. Goldthwait said that at the Children's Hospital the usual treatment during the past two or three years had been the application of apparatus in the hyperextended position. He exhibited a series of tracings taken during this period. They showed that the deformity had not increased, or only very slightly. From a consideration of these and the general results obtained, he would hesitate to correct forcibly any spinal deformity resulting from tuberculosis of the spine unless it was associated with an obstinate paraplegia. He was not aware that the method of forcible correction had materially increased the mortality.

Dr. W. R. Townsend said that the method had never appealed to him, and he predicted that the deformity would recur in the large majority of cases.

Dr. De Forrest Willard, of Philadelphia, said that he had looked upon the method as illogical and unsurgical, and accordingly he had employed it only in one desperate case of total paralysis. Here, contrary to his expectations, the operation had been beneficial, and it was only in this class that he would think of resorting to it.

Dr. R. H. Sayre said he believed many cases of severe lateral curvature could be greatly benefited by the application of great force under anæsthesia. The amount of force applied usually to the scoliotic spine was altogether insufficient. By longitudinal traction and torsion, under anæsthesia, he believed much could be accomplished.

Dr. T. Halsted Myers, of New York, said that in all of the four cases in which he had tried forcible correction the result had been unfortunate.

Dr. Galloway said that he had never performed this operation, having always regarded it as unscientific, but he was ready to try it in the first case of Pott's paraplegia presenting itself that was incurable by other methods. So far, he had not met with such a case.

Dr. Weigel thought the reports presented forced one to conclude that the mechanical support used after forcible correction had been inefficient.

Dr. R. Tunstall Taylor, of Baltimore, thought the older mechanical methods were safer and more accurate, and did not introduce the errors incident to the use of a method that involved manipulations by several individuals. This last point seemed to him a matter of considerable importance.

Dr. Phil. Hoffmann expressed some surprise that so much stress had been laid upon the use of forcible correction in cases of paralysis, for he had never seen a case of Pott's paralysis that had not resulted in recovery.

Dr. John L. Porter, of Chicago, said that from his observations of a large number of Dr. Ridlon's cases he felt sure that more than fifty per cent. of these patients were straighter now than when operated upon under anæsthesia.

Dr. Ridlon said he would not attempt to break up a spine that seemed to him to have been entirely cured. In very recent cases in which the weakness, pain, and disability were considerable, he would be disposed to choose Goldthwait's method without anæsthesia. It was the middle class of cases, those with a slowly increasing deformity, that were especially suitable for forcible straightening under an anæsthetic. Dr. Goldthwait's disappointing results, and the discussion just closing, had impressed him more than ever before with the great value of using an anæsthetic.

Dr. Goldthwait said that he had purposely refrained from bringing tracings of cases that he had treated under anæsthesia, because they were no better than those already exhibited by him. He had not observed much difference in cases which had relapsed whether they had been kept in bed or had been allowed up in a short time. Hubbard had shown that, as a rule, Pott's paraplegia was recovered from in from six to nine months, the time depending upon the location of the disease, and provided the patient was kept recumbent. Forcible correction greatly reduced this period of recumbency, and certainly this was a great gain. He would not attempt forcible correction unless paraplegia was present, and he would never use traction or much force to bring about the correction.

Third Day—Thursday, May 3d.

Brace for Lateral Curvature of the Spine.—Dr. Gwilym Davis, of Philadelphia, presented a brace that he had devised for lateral curvature. This brace had a hip band and both an anterior and a posterior upright. A shoulder-piece encircled the high shoulder. From the posterior upright a band passed over the lump and underneath the arm of the affected side. The two points of support were on the arm above and the hip below.

Dr. R. H. Sayre said that if pressure was made on the large side, as it would be with this brace, the peak of this arch would become more and more arched. The force should be directed so as to transfer the leverage in such a way as to turn the vertebræ around on their axes. All forms of apparatus which made pressure on the bulging part simply served to increase this bulging.

Dr. Weigel thought the apparatus exhibited did not afford the necessary fixed point of support. Simply keeping the high shoulder down could not have any special corrective influence on the deformity.

Dr. Davis replied that, in his opinion, the brace did not exert merely a direct pressure, but a twisting force. The question of support was merely a matter of adjustment.

Retardation of Growth as a Cause of Shortening after Coxitis.—Dr. Henry Ling Taylor, of New York, read a paper with this title. He said that his attention had been strongly directed to this subject by a case in which he had had the mortification to find an increase of shortening of four and a half inches in a period of about four years. Further investigation had shown that it was quite common for a shortening of half an inch to take place in the tibia, and an equal amount, or even more, in the femur. In twenty-one cases the shaft of the femur on the affected side had been from one-fourth of an inch to two and a half inches shorter, with an average difference of five-eighths of an inch. In thirty cases, the average shortening on the affected side had been three-fourths of an inch. The patella of the affected side was nearly always smaller and narrower. In twenty-six cases there was a difference of from one-eighth to half an inch in the transverse diameter. In only one measured case had there been no difference, and this patient had never worn a brace. The foot was shorter in a number of cases. The shortening of the various bones was found to be proportionate to the duration. Those cases which had received the least treatment seemed to have less than the average amount of shortening, but there was apt to be more displacement. A comparison of ten cases of old unilateral poliomyelitis, with a similar group of hip cases, showed about the same amount of bone shortening. Further observation seemed to show that the absence of locomotion apparently favored the occurrence of such shortening. Retardation of growth was found in those affections of childhood which disabled one limb, and somewhat in proportion to the amount and duration of the disability and restraint imposed.

Developmental Shortening in Tuberculous Bone Disease.—Dr. Stewart L. McCurdy, of Pittsburg, presented in this paper several illustrative cases corroborating some of the statements made by Dr. Taylor in the foregoing paper.

Dr. R. H. Sayre said that the records of college gymnasiums showed that the average increase of height after the age of nineteen or twenty years was quite surprising. He had noticed in cases in which apparatus had been discarded from one limb a considerable time before the other, when both were affected, an increase in the limb first liberated. All of the small bones of the foot, as well as those more directly connected with the diseased area, were affected in this way.

Dr. Goldthwait said that in a series of cases of hip disease that he had measured some years ago, in practically all a shortening had taken place below the knee. Skiagraphs from these cases showed a perfectly regular atrophy or lack of development of the upper end of the tibia or of the femur, and the epiphysis, instead of being square in front, was wedge-shaped. There was also a marked depression of the epiphyseal line. It was possible that the strap about the calf might have been a factor in producing the atrophy as a result of pressure.

Dr. Weigel said that there was no doubt in his mind that weight-bearing was a very important factor.

Dr. Gibney said that it seemed to him that there should be an elongation of the femur in hip disease as well as in disease of the knee. Most of the investigations that had been made showed that in tuberculous disease of the knee the limb actually lengthened. According to his experience, in some of those dry cases which went on so well at first, an alarming degree of shortening often showed itself after a few years.

Dr. H. Augustus Wilson referred to the recent observations of Dr. Hurd in China regarding the changes taking place in the feet of Chinese women. She observed that after the use of the muscles had been partially restored there was evidence of increase in the diameter and length of the bones. If these observations were accurate, it would appear that very much of the shortening observed in cases of joint inflammation was due to the bandaging and consequent interference with the circulation rather than to the joint inflammation.

Dr. A. M. Phelps said that he had come to the conclusion that the shrinkage of the muscles was largely the result of a neurotic influence—a true degeneration of the muscles due to the reflexes. The circulation in the bone was carried on by the pressure of the muscles, which forced the blood into the bone; hence, if the limb was placed at rest the circulation would be impaired, and the bone would undergo atrophy.

Dr. Galloway observed that one reason for the lengthening of the limb in knee-joint disease was that two epiphyses were subjected to stimulation—the lower end of the femur and the upper end of the tibia.

Dr. Shaffer said he had found that in the cases in which the nervous phenomena had been most marked—especially in the dry cases—the shortening had been proportionately larger than in those even in which suppuration had been present. This fact had often guided him in making a prognosis.

Dr. Ridlon cited a case to illustrate the fact that muscular shrinkage was not always associated with intense reflex spasm.

Dr. H. L. Taylor said that careful measurements from the anterior spine to the knee joint would probably show lengthening in certain of the early cases. The principal thought in the paper was, that the shortening in all of the bones of the lower extremity following hip disease of many years' standing was almost exactly the same as the shortening which followed infantile paralysis of the same duration. This to him was a very striking and surprising fact. He fully agreed with those who attributed this retardation of growth and lack of development to circulatory disturbances. These came in part through nervous influences, and in part from mechanical compression.

Report of Some Studies upon the Articulations of the Foot.—Dr. John Dane, of Boston, presented this paper, which was based on one hundred and seventy-six dissections. He found that adventitious bones were most common at the joint made by the scaphoid and cuboid in front of the os calcis and the head of the astragalus. This bone might coalesce with the cuboid, changing its normal square shape. This and other anomalies of the articulations were pointed out and exhibited, and attention was called to their important influence on the statics of the foot.

Observations on Certain Painful Affections of the Feet.—Dr. L. A. Weigel, of Rochester, made some remarks on this subject, illustrating them freely with skiagraphs from many cases.

Investigations as to the Treatment of Flat Foot.—Dr. E. H. Bradford, of Boston, sent a communication on this subject, which comprised a study of the mechanics of the foot, particularly as regards the various arches of which the foot was composed, and the effect upon these arches of changes of position and of weight-bearing. He stated that when pressure was made behind the scaphoid there was no difficulty in pronating the foot, and the conclusion was reached that there was a point on the foot at which if pressure was applied the pronation could be checked, and at this point it was easy to do this. The foot-plate should, therefore, be constructed with the "lift" at this point.

A Case of Congenital Dislocation of the Wrist.—Dr. Phil. Hoffmann, of St. Louis, reported a case of this kind, and Dr. Gibney followed with another case, in the person of one of the physicians present at the meeting.

A Case of Congenital Dislocation of the Shoulder.—Dr. John L. Porter, of Chicago, present by invitation, reported this case. He said that out of ninety-eight cases of congenital dislocations of various kinds collected by one author, only five were congenital dislocations of the shoulder. The large majority of these dislocations were subspinous. A photograph was exhibited, which he believed to be the only one extant, showing the condition present. In his case delivery had been effected with the aid of forceps, although the labor had not been attended by any special difficulty. When seen by him two months later, the right arm had been abducted slightly and flexed and pronated. The humerus moved voluntarily very little, though the hand had apparently as strong a grasp as the other. Supination was impossible except to a very slight degree. The humerus could be abducted, but not carried across the chest. Examination by a neurologist subsequently showed no evidence of paralysis. He had been able to find twenty-eight cases of this dislocation on record. His conclusions were: (1) It was of the greatest importance to distinguish between traumatic and developmental cases; (2) a successful method of treatment had not yet been established; (3) in cases determined to be developmental by the history and measurements, an early operation before the humeral head had formed a new articular facet, and had itself become deformed, offered the best chances of success.

Dr. A. M. Phelps said that he had had eight cases of congenital dislocation of the shoulder, and had operated on four of them. In all the operative cases he had found fracture of the posterior border of the glenoid cavity. He believed the dislocation was always traumatic—never congenital.

Dr. Gibney said that he had reason to believe many of these cases were treated at neurological clinics as examples of Erb's paralysis, the true condition not being recognized.

Dr. Porter contended that if the condition was always the result of traumatism inflicted at birth, then measurements made within a few months after birth should not give, as they did in some instances, such differences in the development of the extremities.

Rapid Osteoclasis for the Correction of Rachitic Deformities of the Legs.—Dr. Wallace Blanchard, of Chicago, read this paper. By rapid osteoclasis he meant osteoclasis performed in a period not exceeding eight seconds. When operating so rapidly, the circulation of the part was not impaired, and certain unpleasant consequences were thereby averted. By osteoclasis the length of the limb would be slightly increased, whereas by a Macewen supracondyloid osteotomy the limb would be shortened. After osteoclasis it was his custom to make exaggerated correction of the curve. The same plan was adopted for bow-legs. Bending instead of breaking the femur was often sufficient. After eight years' use of the Grattan osteoclast he felt that it had not received its just due. The lighter modifications of this instrument were decidedly inferior to the original instrument. By rapid osteoclasis no injury was inflicted on the soft parts; the instrument did not slip nor did it cause any splintering. Speedy union was the rule, so that all retentive appliances might often be dispensed with after four or five weeks.

Dr. R. H. Davis expressed surprise at Dr. Blanchard's being willing to leave off such appliances so soon, as certainly at this time the callus was not sufficiently hard to admit of this being done without inviting relapse.

Dr. T. Halsted Myers said that he used osteoclasis freely in his service at the New York Foundling Hospital. If the pressure bar was applied on the inner side, the bone could be fractured much more readily than when applied on the outer side.

An Operation for Ununited Intracapsular Fracture of the Hip.—Dr. Gwilym G. Davis, of Philadelphia, read this paper. In two cases treated by him the incision had been made anteriorly, and by blunt dissection the capsule had been exposed and opened. The edges of the fracture had then been freshened and a second incision made on the outer surface of the greater trochanter, and the compact tissue in this part having been perforated two ivory pegs were inserted to hold the fragments together. In the first case steel pegs had been used, and had been allowed to project externally, but they had excited suppuration. For this reason he had discarded the plan of bringing these pins to the surface. Both patients had been between thirty-five and forty years of age.

Officers Elected.—The following officers were elected for the ensuing year: *President*, Dr. Arthur J. Gillette, of St. Paul; *First Vice-President*, Dr. B. McKenzie, of Toronto; *Second Vice-President*, Dr. Henry Ling Taylor, of New York; *Treasurer*, Dr. E. G. Brackett, of Boston; *Secretary*, Dr. John Ridlon, of Chicago.

The next meeting will be at Niagara Falls in May, 1901.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, Tuesday, May 15, 1900.

John H. Huddleston, M.D., Chairman.

Pernicious Anæmia.—Dr. Charles E. Nammack presented a patient forty-eight years of age, who was born in Ireland and who had spent thirty years of his life as a stoker and fireman on board a tropical steamer. For these thirty years he had been in absolutely good health, not sick in bed a single day. His first symptoms consisted of gradually increasing weakness followed by severe vomiting in which there were some blood flecks. He then had his attention called to the fact that his skin was becoming yellow. When he came to the hospital his pulse was 98, his temperature 100° F., and his respirations 22 to 24. He was not very emaciated, but the subcutaneous layer of fat, which is often so well preserved in pernicious anæmia, was not present. He denied all venereal history, though he admits that he has incurred the risk of infection a great number of times. He drank some, but usually not to excess. He had never been what might be called a steady drinker. His teeth were examined very carefully after his admission to the hospital. Some time ago, in the London *Lancet* Hunter described a series of cases of pernicious anæmia in which carious teeth were found. Hunter attributed the blood disorder to the swallowing of septic material from the mouth and its subsequent absorption in the stomach. None of this patient's teeth, however, was carious. The gums were somewhat retracted, but the twenty-three teeth present were in a reasonably good condition. His heart was found to be normal, his liver slightly enlarged, his spleen little if at all enlarged, and his lungs were perfectly normal. There was a scar in his right iliac region, not due to operation for appendicitis, but to the opening of an old abscess. Examination of his stomach contents showed the presence of hydrochloric acid in about the normal quantity. Lactic acid was also present, but only in small amount. The blood count showed 500,000 red blood cells to the cubic millimetre and about the normal amount of white blood cells. There was no leucocytosis, though blood examinations were repeatedly made to ascertain this point. There was twenty per cent. of hæmoglobin, *i.e.*, each of the red cells contained about twice the normal amount of hæmoglobin. The red cells were very varied in character and size and form, *i.e.*, there was marked poikilocytosis. A large number of megaloblasts were present. The diagnosis, pernicious anæmia, seemed clear. It was necessary only to exclude gastric carcinoma. The examination of the stomach contents seemed to assure the absence of cancer in the stomach. Besides, there was no leucocytosis. This would almost surely occur if gastric carcinoma had existed long enough to cause such symptoms as were present in the case. The patient's color was the characteristic lemon yellow of pernicious anæmia, not the muddy yellow of cancerous cachexia.

Frequency of Pernicious Anæmia.—There was no doubt that this disease occurred much more frequently than had been imagined. In this country particularly the old school of practitioners had been inclined to think it very rare. A few years ago Dr. Cabot, of Boston, reported sixty-six cases of the disease before the Association of American Physicians at Washington. At the recent session of that body he increased the number of cases in his report to one hundred and ten. It seemed clear then that those who looked for the disease carefully would find it much oftener than might be expected from the tone of the text-books and the usual authorities on the subject.

Treatment.—The prognosis of the disease still remained as before, absolutely fatal. A ray of hope had recently been thrown on the therapeutics of the disease by Hunter's studies in England. On the theory that the disease was due to the absorption of toxins from the gastro-intestinal tract, these occurring because of the presence of foci of suppuration in carious teeth in the mouth, Hunter advised thorough antisepsis of the gastro-intestinal tract and the use of some serum injected subcutaneously to neutralize as far as possible the septic material which had already found its way into the circulation. An English physician had reported one case successfully treated by this method. The patient used mild antiseptic mouth washes, bismuth and salol and beta-naphthol internally, and was given injections of anti-streptococcus serum. Improvement began at once and was almost marvellous in its rapidity. In forty-five days the blood was perfectly normal. It remained, of course, doubtful as yet whether this rapid recovery was due to the treatment or to one of the well-known remissions of the disease which occurred so frequently. Such remissions seldom produced so rapid an improvement as was reported in this case, and practically never caused a complete return to normal health. The method of treatment was, at least, encouraging.

Scurvy.—Dr. Nammack presented a patient aged forty years, an Austrian by birth, suffering from scorbutic symptoms. He had contracted the disease from the use of unsuitable food in New York. The patient confessed that he drank beer rather freely, used tobacco to excess, and took four cups of coffee a day. During the fifteen years he had been in this country he had never been ill before. He was a carpenter by occupation, worked hard, and lived with extreme frugality. His meals had consisted of coffee and bread, with some sausage, canned and preserved meats of various kinds, with smoked and salt fish and other articles that he could obtain very cheaply. He did not mind the quality of his food, provided he could get it cheaply. He had evidently been living on half-spoiled victuals most of the time. His first symptom was tingling and prickling, with pain in the legs. He then noticed that his gums were tender and bled easily when touched, or when he chewed rough food. Black spots, some of them as large as a silver dollar, occurred on his legs. When he came to the hospital he was found to be poorly nourished, of a dusky yellow color, in marked contrast to the light lemon yellow of the patient suffering from pernicious anæmia, and with large areas of subcutaneous hemorrhage, especially on the backs of his thighs and calves. His mucous membranes were intensely pale and the conjunctivæ especially lacked color. His gums were purple and œdematous. They hung down over the teeth in fungoid masses and bled at the slightest touch. There were petechiæ on his body, but not many on the arms. There were no hemorrhages into the retina. Blood examination gave 2,200,000 red blood cells to the cubic millimetre, and 7,000 leucocytes. The hæmoglobin value was sixty per cent. No megaloblasts were present, and the poikilocytosis was not marked. There was no leucocytosis at any time during the affection. The man was evidently suffering from secondary anæmia due to his scorbutic condition.

Etiology of Scurvy.—This case would seem to be a striking confirmation of the explanation of the origin of scurvy which had been advanced very recently at Ann Arbor. It was not considered to be due to an exclusive diet of any kind, especially not to exclusive animal food, but rather to the absorption of ptomains from decomposing or badly preserved food. It was well known that scurvy did not occur among the Esquimaux, though their diet consisted for most of the year of nothing else than animal food. It did not occur among the negroes in Central Africa, though they lived almost wholly on the plantain. It was infrequent in India and in China, though a great many of the people ate nothing else than rice. Cases of scurvy that had occurred aboard ship from the use of salt meat could be very well explained on the theory of poor preservation of the meat, allowing the production of toxic ptomains in it. It seemed interesting to note, Dr. Nammack said, that none of the soldiers of the late war returned from Cuba or the camps, who came under his observation, showed any signs of scurvy. A great deal of notoriety was given by the newspapers to the embalmed-beef scandal, yet none of the soldiers seemed to have suffered severely from anything like ptomain poisoning as the result of poorly preserved meat. Numbers of them had severe secondary anæmia, as the result of malaria, typhoid fever, and dysentery, but no scurvy was reported.

Bradycardia; Pulse of Thirty-Six.—Dr. James J. Walsh presented a patient, a woman aged thirty-one years, whose pulse was normally about 36 and under excitement went up to 40. There was nothing in her family history that threw much light on the condition. Her mother and five brothers and sisters were living and well. As a child this patient suffered from most of the ordinary diseases of childhood, and there was a tradition in the family that if there was any disease about she would catch it. She played, ran, and skipped rope quite as other children did. Though seen a number of times by doctors they never called attention to the fact that her pulse was slower than normal. About ten years ago she had the grippe, and while convalescing from that her physician called her attention to the fact that her pulse did not rise above 40. Since then she had been apparently in perfect health. For a while she was a dancer on the stage and in private drawing-rooms. She did not notice that she seemed more exhausted than others after severe exertion. Of late she had been suffering somewhat from digestive symptoms, and it was for these that she had come under treatment. Her gastric symptoms had practically disappeared under simple tonic treatment, and now she considered herself in good health once more. The question arose whether the bradycardia was congenital or acquired. It seemed to exist in no other members of the family, and the fact that physicians did not call attention to it when she was young seemed to indicate that her bradycardia was a sequela of influenza.

Cicatricial Stenosis of the Pylorus.—Dr. Freeman Ward presented a patient forty years of age, a man who had been suffering from gastric symptoms for some eight years. He first noticed severe vomiting, in which streaks of blood occurred with pain shortly after eating. This continued for some time and then disappeared, and for years he had very few gastric symptoms. Two years ago he began to have a dull pain in the epigastrium. After a while this became severe, and would wake him up between 2 and 3 o'clock in the morning and compel him to get up and walk about for a while. Frequently spells of vomiting came on during the pain, and then marked relief followed. He noticed that the vomited material often contained particles of food that he had eaten some time before, sometimes as long as twenty-four or forty-eight hours. He was given a Boas test meal, and his stomach contents were removed for examination. Altogether nearly 1,400 c.c. was withdrawn. The total acidity of this was much higher than normal, and hydrochloric acid especially was in excess. All the digestive ferments were present, and starch digestion was particularly good. The patient's stomach was washed out every evening for some days with marked relief. The pain did not recur during the night. He was then put on regular evening lavage. If this lavage was omitted duringt he first two weeks the pain always recurred. Gradually, however, it became possible to lengthen the interval between the lavages. He now could go for thirty-six and sometimes forty-eight hours without inconvenience. His appetite was much better, and he had no discomfort in the epigastrium. He had gained three pounds in weight. Before the regular washing out of his stomach was begun a certain amount of gastric dilatation could be demonstrated. The fundus of the stomach was three fingers' breadth below the umbilicus. It was now in its normal position above the umbilicus. The diagnosis of the case was post-ulcerative stenosis of the pyloric region. The contracted scar tissue of the healed ulcer had materially lessened the lumen of the pylorus and so prevented exit of food. It seemed doubtful whether the present treatment would continue to relieve his symptoms.

Pyloric Stenosis and Loss of Weight.—Dr. Ward also presented a patient aged twenty years who in twelve months had lost seventy-two pounds in weight. His first symptom some three years ago was vomiting, in which there was some blood and a feeling of discomfort amounting almost to pain after the taking of food. There was a distinct area of tenderness in the pyloric region, but no thickening could be felt. The test meal showed the stomach contents and secretions to be perfectly normal. Inflation of the stomach with carbonic acid gas showed that it was not dilated. The state of malnutrition that had developed was so serious that as no medical means seemed of any avail surgical intervention was advised. The operation was done by Dr. Farquhar Curtis, who found the pylorus closed. It had been thought that perhaps a hypertrophic stenosis of the pylorus existed, but the condition was found to be stenosis from the scar of an old ulcer. The patient weighted one hundred and six pounds at the time of the operation. He now weighed one hundred and eighty-two pounds.

Stomach Distention and Diagnosis.—Dr. Ward called attention to the fact that in this case every possible means had been taken to diagnose the presence or absence of dilatation of the stomach. Among other means the introduction of water into the stomach in order to find how much it would hold was tried. At the General Memorial Hospital a resident physician succeeded in introducing ninety-eight ounces of water. At the operation, however, no dilatation of the stomach was found. The amount of water, then, which could be introduced served to show not the actual presence of dilatation of the stomach, but the distensibility of the stomach walls.

Specific Tumor of the Stomach.—Dr. Ward's third patient was a man aged thirty-eight years, who began to suffer with gastric symptoms some eight years ago. His first symptoms were pain shortly after eating, and frequent vomiting in which there was some blood. The pain was increased by acid or irritating foods. The patient went to Carlsbad and was treated by a distinguished stomach specialist, whose diagnosis was gastric ulcer. His symptoms, however, were not allayed by the usual treatment for ulcer of the stomach. The giving of liquid food alone did not cause improvement, and while rectal feeding did away with gastric pains for the two weeks during which it was kept up, just as soon as feeding by the mouth was resumed the pain recurred. Even an absolute milk diet did not prevent the recurrence of pain. Occasionally in the vomited material there were streaks of fresh blood. Once or twice the hemorrhage was rather severe. At times the vomited material contained a substance of dark coffee-grounds appearance. No tumor could be felt anywhere in the gastric region, and there were no special areas of tenderness. As the abdominal muscles were very tense an anæsthetic was given in order to make a more complete palpation for the tumor. No tumor was found. The patient had become very emaciated, and weighed less than one hundred pounds, and it became evident that unless something was done a fatal termination from inanition could be looked for. An operation was performed, when it was found that the pylorus was completely closed by a tumor the size of a tangerine orange. The patient's condition was so poor that it was clear that an operation for the removal of the tumor at this time would almost surely result fatally. A gastro-enterostomy was done in the hope of bringing about an improvement in his condition, and with the idea of doing a secondary operation for the removal of the tumor as soon as the patient's condition justified it. The tumor was considered to be an adenoma of the stomach wall. Without any hope really of doing the patient good, potassium iodide was given in order to be assured that the tumor was not specific. In a few weeks the man gained rapidly in weight. In about six weeks the abdomen was opened a second time, when it was found that the tumor had completely disappeared. The patient had had no trouble since, and now weighed one hundred and forty pounds, having gained over forty pounds in six months.

Specific Treatment for Tumors.—In the discussion of the last case, Dr. James J. Walsh said that it emphasized the necessity for the administration of specific treatment whenever internal tumors existed, even though there might be no specific history. Within the last few months, he had seen a case in which a large tumor of the splenic flexure of the colon led a prominent surgeon to diagnose a rapidly growing sarcoma. The patient was told to prepare for operation, and was told very frankly that the tumor was so large that there was very little hope that the operation would be radically successful. The patient came to New York with the idea of taking the mixed toxin treatment for sarcoma. The man had been a most careful liver, and there seemed no reason at all to doubt his story of the absence of venereal infection. He was put on mixed treatment, however, and in two weeks marked improvement set in. At the end of two months the tumor had practically disappeared.

Dr. Alfred Meyer said that specific tumors might simulate not only any form of neoplasm, but also aneurisms. Within the last few weeks he had seen a case presented before the German Medical Society in which what seemed to be a pulsating tumor occurred at the sterno-clavicular junction. With the idea rather of relieving the pain than of effecting any improvement in what was presumed to be an aneurism, the man was put on rather large doses of potassium iodide. Improvement occurred not only as regards the symptoms, but the tumor became greatly lessened in size. After a few months it completely disappeared.

Relation of Gastric and Urinary Acidity.—Dr. Alfred Meyer called attention to the fact that there seemed to be an inverse ratio between the acidity of the urine and the acidity of the stomach. When the gastric contents were strongly acid the urine was reduced in acidity. This seemed to account for the formation of certain calculi. Dr. Meyer had had under his care two patients in whom there was an excess of gastric acidity and a corresponding deficiency of urinary acidity. In both calculi developed. In one of the patients a phosphatic calculus of the pelvis of the kidney led to a pyelitis which necessitated the removal of the kidney. In the other a simple phosphatic calculus was passed to the bladder. The possible connection of excessive gastric acidity and the formation of urinary calculi was well worth studying. The etiology of calculi was a vexed question. Prophylaxis was now the order of the day in all affections, and if we could ward off the formation of calculi in predisposed individuals it would certainly be a great triumph.

Dr. Nammack said that the lessening in size of tumors and the disappearance of symptoms from them under the administration of specific treatment did not entirely justify the conclusion that the tumors were syphilitic. Sarcomata particularly were often influenced by the administration of potassium iodide. Brain sarcomata and even other brain tumors were often greatly improved by a course of the iodides. It seemed unfortunate that more attention had not been directed generally to the possible good that might be accomplished by the absorptive power of the iodides in these embryonic tumors and in granulation tissue generally.

Absent Knee Jerk with Ankle Clonus.—Dr. Leszynsky said that when Dr. Mills, of Philadelphia, presented some years ago a patient with absent knee jerks yet marked ankle clonus, the condition was considered a rare one. He had seen several such cases, and had one to present this evening. The patient, a man twenty years of age, suffered from Pott's disease when one year old. Later he had a tuberculous osteitis of the knee joint. His right leg was considerably smaller than the left, and his right foot dropped a little in walking. In neither knee could there now be demonstrated any knee jerk even with most careful reinforcement. Well-marked ankle clonus existed on both sides. There were other interesting symptoms. There were some numbness and insensibility of the outer part of the right leg, and some anæsthetic patches in the left ankle. There was also some disturbance of the temperature sense. It was probable then that there was a syringomyelia and that the cavity in the cord occurred only in the lumbar region in the third and fourth segments of the lumbar cord. The centre for the knee jerk was situated here, and it was obliterated by the pathological process of the syringomyelia. It was only when there existed an actual lesion of the lumbar cord as well as some other pathological condition above it, yet with the centre for ankle reflexes left untouched, that there was ankle clonus without exaggerated knee jerks.

Lateral Sclerosis.—Dr. Leszynsky presented a patient who was sent to him some time ago for diagnosis. Two years ago she lost more or less the use of her limbs. Afterward there seemed to have been some improvement, but never a return to the normal. Now she had completely lost the use of both legs. They continued to be well nourished, and no trophic conditions had developed anywhere. It was suspected at first that the case was one of hysterical paraplegia. Against this, however, were the slow and gradual onset, the total absence of pain, the failure to find any symptoms of hysteria in the previous history, and the absence of any cause like emotion, or family or monetary trouble, to bring on the hysterical palsy. Besides, none of the stigmata of major hysteria existed. There were no patches of anæsthesia and no hyperæsthesia. There was a good pharyngeal reflex and the visual fields were not narrowed. There were exaggerated knee jerks and ankle clonus. These last two symptoms, it was formerly thought, assuredly stamped an affection in which they were present as not functional. This was known now not to be true, for both exaggerated knee jerks and ankle clonus had been noted in purely hysterical cases. The long persistence of both these exaggerated reflexes and the amount of exaggeration, however, spoke strongly against hysteria. It seemed probable, then, that the case was one of chronic myelitis of the pyramidal tracts—the so-called lateral sclerosis.

Babinsky Great-Toe Reflex.—There was present in the case the symptom pointed out some time ago by Babinsky in Paris, which had been thought to be of differential diagnostic significance between functional and organic spinal disease. Ordinarily when the sole of the foot was tickled or touched, dorsal flexion took place. If there was disease of the spinal cord itself, especially of the pyramidal tracts, this flexion was limited to the great toe, which immediately after the irritation of the sole was strongly raised toward the dorsum of the foot. This could be seen very readily in this case. Some doubt remained as to the diagnosis of lateral sclerosis, because of the absence of the scissors gait, and the fact that the bowels were not much affected and the bladder was not at all. In women, however, we did not see the development of the scissors gait until late in the disease. Mechanical factors in the muscles of the female leg and the farther separation of the heads of the femora accounted for this. There was some incontinence of fæces, *i.e.*, when the call to go to stool came it must be obeyed at once, or the sphincter was not able to control the intestinal contents. In women incontinence of urine in these cases was not nearly so common as in men. Of late the affection seemed to have made more rapid progress than before. It was probable that if the woman could be kept under observation for some time, it would be possible to decide with certainty that lateral sclerosis was present.

Significance of Babinsky's Reflex.—The presence of the Babinsky contraction of the big toe seemed always to indicate the presence of a pathological condition of the spinal cord. It was not pathognomonic of degeneration of the pyramidal tracts, but it at least indicated some interference with their function. Siller had recently observed it in two cases of cerebral hemorrhage in which the knee jerks were absent. He was inclined to attribute to it an ominous significance in these cases, because both of his patients died.

In the discussion Dr. Nammack said that the presence of the exaggerated reflexes so persistently seemed to him to stamp the affection as organic, not functional. As Patrick, of Chicago, once said, a single objective symptom meant more against the diagnosis of hysteria than any number of theoretical considerations.

Angina Pectoris.—In the attack, rest and fresh air are of use, with morphine hypodermically. Nitrite of amyl up to twenty drops on a handkerchief should be inhaled. Between the attacks, iodide of potassium, gr. v.-xv., should be given daily for months or years. During fifteen days of each month nitroglycerin aids in nutrition of the heart. Ignipuncture or tincture of iodine over the heart region may be of service. Moderation at table should be observed, with suppression of alcohol and tobacco, avoidance of emotion and fatigue.—Paris Correspondent in *Medical Press*, January 17th.

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CONCERNING THE PERITONEUM AND THE TREATMENT OF EXUDATIVE PERITONITIS.*

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THE rapid and extensive progress made in surgery during the last two decades of the nineteenth century has left few unexplored regions, and but little fertile soil to cultivate. It has been said that the new era in surgery will devote itself to the perfection of our present diagnostic knowledge, to the more sharp definition of the indications for or against operative attack, and to the attempt to establish on a rational and sound basis the present therapeutic procedures, thus eradicating all that is useless and cumbersome. In accordance with this view I have prepared this paper; not because I have any new method of treatment to propose for diffuse exudative peritonitis, but rather because I would wish with your aid in discussion to bring some order out of the chaos in which the therapeusis of this disease is involved, and because I would seek to establish a rational basis on which to rest our operative measures. It seems most important at the very outset of these remarks to consider the two cardinal points which underlie the entire subject-matter of peritonitis. These are: (*a*) Is the presence of bacteria alone sufficient to produce an exudative peritonitis, and if not, what else must be added to aid the bacteria in their work? (*b*) What protects the peritoneum from becoming the seat of such an inflammation in the presence of bacteria?

It has been well enough established, both experimentally and clinically, that bacteria alone are not capable of producing an exudative peritonitis. Without entering too deeply into the experiments of Wegner,[1] Grawitz,[2] Waterhouse,[3] and Orth,[4] I may be permitted to quote the conclusions which the above investigators have unanimously arrived at:

1. That the introduction of bacteria, even of the pyogenic types, into the normal peritoneal cavity produces no evil results, provided they are not mixed with caustic or irritating substances.

2. The introduction of non-pyogenic organisms into the normal peritoneal cavity produces different results, depending on whether the organisms injected cause decomposition of albumin, or not. In the latter case even considerable amounts of bacteria and fluid are absorbed, without evil consequences, while in the former general sepsis, but not purulent peritonitis, results.

Opposed to the conclusions I have just mentioned are the results of the investigations of Pawlowsky,[5] Alexander Fränkel,[6] and others, who found that injections of even very small doses of the staphylococcus aureus, or of the streptococcus, produce an exudative peritonitis. We must infer, and even Pawlowsky has conceded this, that there were other factors associated with the bacteria in their experiments, which resulted in the production of the peritonitis established by their injections. Clinically we are very often confronted with evidences that the presence of bacteria alone in the healthy peritoneum is not sufficient to establish an exudative peritonitis. It has fallen to the lot of every one of us to soil the peritoneum with the pus of some very infectious abscesses, and yet in very many cases no peritonitis has developed. The patients have recovered, and exhibited at no time any signs leading us to suppose the coexistence of an exudative peritonitis. In this connection the observations of Bönnecken[7] on the bacteria of incarcerated hernial sacs may be briefly mentioned. He found: (1) In the fluid of incarcerated hernial sacs there are already in an early stage of the incarceration, long before necrosis of the bowels has occurred, micro-organisms. (2) These are both cocci and bacilli, and wander out from the bowel into the hernial sac. (3) Death is due in these cases to peritoneal sepsis, usually without purulent peritonitis.

Again, Tavel and Lanz[8] say concerning this point, that the presence of bacteria which have wandered out into the peritoneum is not sufficient to produce a peritonitis, as long as the other parts of the serosa are normal, and retro-absorption can take place. This is shown by the rarity of peritonitis through wandering of bacteria into the peritoneum. Instances of bacterial peritonitis following such out-wandering of bacteria, in which only this factor is present, have been shown neither experimentally nor clinically.

To what is this protection from the deleterious action of the bacteria due? Several theories have been advanced to account for it. First, the peritoneal serum was supposed to exert a bactericidal action on the organisms which had been introduced (Schnitzler and Ewald[9]). Then again it was advanced that the leucocytes which had wandered out into the peritoneal cavity had overcome and destroyed the bacteria. The peritoneal cells were also said to have bactericidal power. Of all the explanations, the most rational is that which ascribes the protective attribute of the healthy peritoneum against bacterial infection to its rapid absorptive power. The experiments of Grawitz[10] bear out this view; for he found that when the peritoneum is injured by caustics, or when a wound of the peritoneum favors the sedimentation of the bacteria, so that a phlegmon results, then bacterial peritonitis ensues.

This brings us to the consideration of absorption in the healthy and diseased peritoneal cavity—a question that has bothered the ablest physiologists, and one which is even to-day not certainly decided. As an absorbing organ we may consider the peritoneum as being made up of endothelial cells and stroma, the latter supporting a rich supply of vascular and lymphatic vessels. It must be remembered that the peritoneum has an enormous surface exposed for absorption, almost as extensive as the area of the skin. In viewing the question of absorption from this surface, we must consider by what routes, and by what method, absorption takes place.

As to the channels by which absorption takes place, it has been fairly conclusively shown through the labors of Hamburger,[11] Orlow,[12] Adler, and Meltzer,[13] that the chief route is by way of the blood-vessels; the lymphatics, if they enter at all, play but a subsidiary rôle in the path by which absorption occurs in the healthy peritoneum. This helps us to understand the gravity of an absorption of pathogenic organisms by the peritoneum, provided the tissues are not able to cope with them after absorption. For it must be remembered that every absorption of bacteria into the blood is not necessarily followed by a proliferation of these organisms, and furthermore, even when the bacterial resorption is very considerable, bacteriæmia is very rare, at least in human beings. Were the lymphatics more concerned in the absorption from the peritoneal surface, there would be an additional protection in the lymphatic glands against an entrance of the pathogenic organisms into the blood, and the picture of peritoneal septicæmia would probably be a less frequent one.

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* Read in abstract before the Surgical Section of the New York Academy of Medicine, May 14, 1900.

The method of absorption from the peritoneal cavity is still not positively decided. The one school, which includes such able investigators as Hamburger,[14] Cohnstein,[15] and others, argue that they have distinctly proven that resorption from the peritoneal or pleural surfaces follows the physical laws of osmosis and filtration; whereas another school, including equally competent investigators, such as Orlow,[16] Starling, and Tubby,[17] urge that absorption is a distinctly active process, the peritoneal cells being the active factor in the absorption.

Hamburger, the leading exponent of what I may term the physical method of absorption, believes resorption to be due to these factors: (*a*) Imbibition, both molecular and capillary; (*b*) osmosis; (*c*) hydrostatic pressure. He urges, in support of the first of these factors, that all tissues, living as well as dead, can imbibe fluids, and, owing to this property of imbibition, that fluids will pass from the peritoneum to the blood-vessels. But in reference to this the following objection is to be noted: Why should the property of imbibition carry fluids from the peritoneal cavity into the blood and lymphatic vessels? Is this imbibing of fluids and yielding them up to the blood and lymphatic system in itself not a manifestation of cellular activity? Thus when the latter is suspended, as for example after death, imbibition takes place until the tissues have become saturated, and then resorption ceases. This imbibition accounts for the absorption that has been noticed in experiments undertaken after the death of animals. But in the normal living tissues, the cells yield up their imbibed fluids to the blood and lymphatic vessels, and so resorption goes on indefinitely. Hamburger, who attempted to disprove the cellular activity in causing absorption, laid stress upon the results of those of his experiments which showed that even after severe injury to the peritoneum by chemical (NaFl) or thermal means, absorption and the equalization of the osmotic coefficient took place, and that these also occurred in animals dead from a few minutes to twenty-four hours. He apparently overlooked the fact that his chemicals or thermics did not destroy the property of imbibition, owing to which a certain amount of fluid disappeared from the peritoneal cavity, and which he attributed to resorption; and also overlooked the fact that osmosis, a purely physical phenomenon, will occur through any animal membrane living or dead. As regards imbibition, therefore, I might say that it is owing to this property of imbibing fluids that the peritoneal tissues are enabled to accommodate the fluids they have absorbed from the peritoneal cavity, while they are transporting them to the blood and lymphatic vessels. For were they not able to imbibe, it is very evident that no absorption by means of a membrane unprovided with openings could take place.

In reference to his second law of absorption, viz., osmosis, we must remember that when fluids containing diffusible substances in solution are separated by an animal membrane, these diffusible substances will pass through this membrane from the side on which the osmotic tension of that particular diffusible substance is greater, to that on which it is less: thus if hypotonic NaCl solutions are put into the peritoneal cavity, NaCl will osmose from the blood-vessels until the osmotic tension of NaCl is equalized on both sides of the peritoneum; and vice versa, if hypertonic NaCl is placed into the peritoneal cavity, the NaCl will osmose from the peritoneal cavity into the vessels until the osmotic tension is again equalized. The laws of osmosis will explain the passage of diffusible materials through the peritoneal membrane, but as regards the absorption of fluids from the peritoneal cavity, in accordance with the physical laws of osmosis, the proof is not convincing; for were resorption due entirely to osmosis we would expect it to be as rapid after death as during life, and we would not expect the markedly retarded absorption that has been observed by Orlow, while animals were kept under continuous chloroform anæsthesia; so that while osmosis may account for some of the absorption, it must be conceded, as Orlow has expressed it, that the peritoneum is an active membrane in that it modifies the physical laws of osmosis, just as does the intestinal mucosa.

As regards now the third factor, which was described by Hamburger as being concerned in absorption, viz., hydrostatic pressure, I can only remark that this can at the best play but a subsidiary rôle in the mechanism of resorption, inasmuch as the intra-abdominal pressure is never a constant one, but fluctuates with inspiration and exspiration, with the degree of intestinal distention, and with the contraction of the abdominal muscles. The three factors concerned in peritoneal resorption, as formulated by Hamburger, do not sufficiently explain the mechanism of absorption from the peritoneum. Imbibition, both molecular and capillary, enables the cells to carry the fluids only from the absorbing surface to their place of delivery; osmosis will account for the passage of diffusible substances through the animal membrane, and such diffusion takes place from the blood-vessels into the peritoneum, as well as from the peritoneum into the vessels; whereas hydrostatic pressure, being a variable factor, cannot account for the steady, continuous absorption which takes place from serous membranes. This brings me to the consideration of the other theory as to the mechanism of peritoneal resorption, viz., that this is an active cellular process. If resorption is such an active process, then if we can in any way interfere with this cellular activity resorption should be diminished. We know that when chloroform is administered there ensues a temporary paralysis of the cerebral cells, and also of the leucocytes (as shown by Massart), which lose their irritability and their chemotactic function. It would be wrong to suppose that this action of the chloroform is limited only to the cerebral cells and the leucocytes; much more rational is it to suppose that the cells of the entire organism are temporarily paralyzed, and their function consequently impaired. If this were so, we would expect a retardation of absorption while an animal was under the influence of chloroform. This does actually occur, and is beautifully illustrated by the experiments of Orlow.[16] He found that if the serum is taken from an animal and injected into the peritoneal cavity of another animal of the same species it is absorbed, but in less amount in the same period of time when the animal is kept under continuous chloroform anæsthesia than would be the case were the animal not kept under this anæsthetic. Furthermore, we find that bacteria alone (Grawitz and others), when injected into the healthy peritoneum in amounts not too excessive to be absorbed, do not produce peritonitis, but if the peritoneal cells are poisoned at the same time as the injection is made, as for example by the chemical toxins resulting from bacterial life, thus paralyzing their resorptive power, then peritonitis results; or if these cells are destroyed by the action of caustics, then peritonitis results. Now were resorption a purely physical process it would not be retarded by a local disturbance of the peritoneum, such as is produced by caustics or toxins, and the bacteria being at once absorbed, peritonitis would not result. Inasmuch, however, as resorption is an active process, if this activity is in any way interfered with or suspended, then the bacteria can grow and multiply, and produce their deleterious results. I may be permitted in this connection to cite the opinions of some of the investigators on the mechanism of absorption from serous membranes. Thus Starling and Tubby say: "The cells between the blood and the pleural fluid seem to exert a pull on the latter; in fact there is an active absorption going on. The cells must perform a considerable amount of work in this absorption; so that we must look upon them as being actively concerned in the absorption of fluids, such as one-per-cent. saline solution." Quoting again from the same authors: "There is evidence to show that with certain solutions an active absorption from the cavity may take place, whether by the blood-vessels or pleural endothelium we are at present unable to determine." Says Orlow: "These experiments go to prove positively that the peritoneum is not merely a passive membrane, through which fluids simply diffuse, as through animal membranes outside of the body, but that it is an active membrane, in that it modifies the physical laws of absorption, just like the intestinal mucosa."

The arguments thus far advanced, I think, show conclusively that resorption from serous membranes is an active process; and I would beg that this be kept strongly in mind when I come to discuss the treatment of exudative peritonitis, and have to consider the best method of dealing with the exudate.

So far I have considered only the absorption from the healthy peritoneal surface. Let me now take up the question of resorption from the peritoneum when it has become diseased. If the question of absorption in the healthy state is a difficult one to decide, how much more so is it when we consider absorption from the diseased membrane. For here we have to consider not only the changes which have occurred in the peritoneal cells, but also the changes in the blood-vessels, in the blood current, and in the nerve supply. The first question that comes up for discussion is: Is there any absorption from the diseased peritoneum? This can be answered positively in the affirmative. The next point to consider is: What is the rate of absorption as compared with the healthy peritoneum? Here again we have positive evidences in the results of the experimental investigations of Schnitzler and Ewald,[19] who have shown that in rabbits in which a purulent peritonitis exists, the rate of absorption is somewhat slower. In this connection it might be well to state that these investigators have also demonstrated that an increase of peristalsis hastens the rapidity of absorption up to a certain point, beyond which no further increase in the rate of absorption is possible; and vice versa, a slowing of the peristalsis lessens the rapidity of absorption. The final question, By what channels does absorption take place in the diseased condition of the peritoneum? is difficult to determine; it certainly is partly by the lymphatics, for the lymphatic glands are found enlarged in inflammatory conditions of the serous membranes; it probably also occurs by the blood-vascular system, although no experiments have as yet been reported in this connection.* I beg of you to bear in mind, then, that there is quite a rapid absorption from the peritoneal surface, even when it is the seat of a severe purulent inflammation; for I will have cause again to refer to this when I consider the question of drainage of the peritoneal cavity when it is the seat of an exudative inflammation.

I have gone thus into the details of the routes and mechanism of peritoneal resorption, because it is owing to its very rapid absorbing-power that the peritoneum owes its protection against the action of bacteria. This brings me to the final question I proposed at the beginning of this paper, viz., If bacteria alone are not sufficient to produce an exudative peritonitis, what else must be present to aid the bacteria in their work? Briefly stated it may be said that any agent which interferes with the peritoneal protective attribute, viz., the rapid resorptive power, is sufficient to enable the bacteria to produce their deleterious effects. The earliest investigations of Grawitz proved this; for he found that when the peritoneum was injured, *e.g.*, by caustics, or when it was completely destroyed at a local area, the bacteria would sediment at that particular site of injury or destruction, and establish a peritonitis. This protective attribute may be lessened or abolished by (*a*) chemical agents, which cause either a death of the cells, or injury more or less marked, or a disturbance in their physiological function, so that the latter is either temporarily or permanently suspended; (*b*) by mechanical agents, such as gauze, tubes, etc., which act in the same way as the above. This helps us to understand the apparently conflicting results of the experiments instituted by Pawlowsky,[20] on the ability of the healthy peritoneum to withstand the presence of bacteria; for he injected not only bacteria but also their chemical toxins, which latter paralyzed the absorptive power of the peritoneal cells, and so favored the local sedimentation and further action of the bacteria.

To quote from Tavel and Lanz,[21] page 143: "In order that bacteria should develop on the peritoneum, and produce a bacterial peritonitis, there must be already a mechanical or chemical peritonitis. A primary bacterial peritonitis is not a possibility, because the normal serosa, by its resorptive property, absorbs the implanted bacteria, or else it does not respond by inflammation to these bacteria."

To recapitulate from the data I have furnished thus far, it is evident:

1. That bacteria alone, except when in very large quantity, are not sufficient to produce an exudative peritonitis.

2. That this immunity on the part of the healthy peritoneum to the deleterious action of bacteria is due to its very rapid resorptive power.

3. That this resorption under normal conditions is mainly by way of the blood-vessels.

4. That peritoneal resorption is an active cellular process, and not a passive one. This cellular activity is manifested in the diseased as well as in the healthy condition, but to a somewhat lessened degree. The more marked the disease the greater is the interference with this activity, it being least when the peritoneal endothelium has been considerably altered, and ceasing altogether with the destruction of these cells, resorption by much modified peritoneum being similar to resorption by other types of cellular tissue. This conclusion is of the utmost importance in connection with the question of drainage of the peritoneal cavity, and will be referred to again in the latter part of this paper.

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* The writer has commenced a series of experiments with the object of determining the channels by which absorption takes place in the diseased peritoneum and will report the results at a subsequent time.

5. In virtue of its rapid resorptive power primary bacterial peritonitis is not a possibility, unless the bacteria are present in such large numbers as to paralyze the peritoneal cells, and so hinder their rapid resorption. There must primarily be a factor which by interfering with the cellular activity of the peritoneal cells favors a sedimentation of the bacteria, with their consequent further growth and development. Such factors may be either mechanical, *e.g.*, gauze packings, drainage tubes, etc., or chemical, either organic or inorganic in character.

These facts should govern our methods of procedure with the local conditions found in exudative peritonitis, and reference will be made to them again. Before proceeding to the subject of the treatment of such inflammations of the peritoneum, I would wish to direct attention to the rather common fallacy of associating the term "septic" with the purulent types of peritonitis, and to the error of estimating the virulence of the inflammation by the character of the exudate. I have shown in my previous remarks that peritonitis is primarily either a mechanical or chemical process, to which may be added the further element of bacterial life and development, with the toxin production that necessarily accompanies them.

A mechanical or chemical peritonitis may be either dry, *i.e.*, adhesive, resulting in the formation of adhesions between the viscera, or exudative, *i.e.*, with the presence of an exudate in the peritoneal cavity. The character of this exudate varies, it being hemorrhagic, or serous, or sero-purulent, or purulent. Such a mechanical or chemical peritonitis is usually of a benign character; the patients exhibit the classical signs of an inflammation of the peritoneum, but in the vast majority of cases the disease goes on to a spontaneous cure, the exudate being absorbed, or the adhesions becoming organized. If bacteria are added to such a mechanical or chemical peritonitis, the inflammatory process is not altered in character, although it may be in degree; in that the exudate becomes more distinctly purulent, or even fetid, from the products of bacterial life. But there is superadded the element of poisoning from the absorption into the system of the toxins produced by the bacteria. The severity of the case depends on the degree of this intoxication. Some of the worst cases of poisoning from peritoneal absorption of toxins and bacteria occur in patients whose peritonea show absolutely no signs either micro- or macroscopically of a peritonitis. We have designated such pathological conditions as peritoneal septicæmia. Vice versa, many of the purulent types of exudative peritonitis are not at all septic. The bacterial element of a peritonitis then does not modify the inflammation in character, but merely adds another factor in the resorption of either toxins or bacteria, or both, to the local manifestations. How irrational, then, to base our estimate of a peritonitis on the character of the exudate! Thus Pawlowsky[22] has shown that the purulent and fibrino-purulent peritonitides belong to the less intense and virulent forms, whereas the hemorrhagic types, and those in which no macroscopical changes of the peritoneum are evident, are the most virulent and fatal. This toxic factor is the one that determines the prognosis in every individual case, and it bears no relation to the character or amount of the exudate.

The toxæmia and bacteriæmia which are found in septic cases of peritonitis are due, however, not only to resorption from the peritoneal membrane, but in very many cases they are equally due to the resorption by the intestinal mucosa of the toxins and bacteria which are present in the intestinal canal. As we know, the intestine is the habitat of numerous varieties of cocci and bacilli, and these, owing to the stasis of the intestinal contents from the paresis of the muscularis, a result of the peritonitis, take on increased virulence and elaborate products of much higher toxic coefficients. This intestinal resorption must not be considered as playing a secondary rôle in importance to the peritoneal resorption, for often it is the chief factor in causing the toxæmia and bacteriæmia. Furthermore it must be distinctly remembered that patients can die from this intestinal intoxication alone.

How then are we to treat rationally this toxæmia and bacteriæmia? As regards the former the ideal remedies would be antitoxins to neutralize the deleterious influences of the toxins. Such antitoxins we do not possess, hence we must rely on such therapeutic measures as will, in the first place, aid the patients to eliminate the toxic elements from the circulation and tissues, and which will support the patients until they have rid themselves of these toxic substances. The chief excretory channels are the kidneys. It should be our earnest endeavor to promote free diuresis. This is accomplished best by frequent infusions of saline materials into the circulatory system. I am accustomed to infuse either subcutaneously or intravenously, or per rectum, small quantities of hot normal salt solution, about 100 gm. every hour. These infusions both stimulate the circulation and by increasing arterial pressure promote free and copious diuresis. It is very important to make these infusions frequently, and not to inject too much at any one time; for such large infusions merely overload the right heart, thus retarding its action and upsetting the circulation, and so producing congestion of the kidneys and internal viscera with consequent depression of their especial functions. In addition to such frequent infusions I give the patients a nourishing diet, and stimulation as required. When the toxæmia is intestinal in origin, we find these viscera paretic, distended, and congested, for it is this pathological condition of the bowel that has caused the intestinal bacteria to take on increased virulence, and their products consequently to have an increased toxic value. When this condition of the intestine is present it is met most satisfactorily by drawing a distended coil of intestine into the wound, and, after due protection with hot pads, to open it on its convexity, allow the contents to escape, and then insert a long rectal tube into the lumen of the intestine, washing the latter out thoroughly, both distally and proximally to the opening. When the intestinal irrigation is finished, the opening in the bowel is closed by a few Lembert sutures. If the muscular coat of the bowel has become absolutely paralyzed, as is evident by absence of all peristaltic movement and the lack of tone of the fibres, I do not sew up this opening in the bowel at all, but leave a large-sized rectal tube in the proximal end of the intestine, and irrigate the bowel through this with saline solution several times a day, thus favoring free intestinal drainage and elimination of toxic materials.

If bacteriæmia as well as toxæmia exists, I am sorry to say that our present therapeutic procedures will avail us but little. It would appear rational to employ the bactericidal sera in these cases; but after an extended use of these remedies I cannot say very much in their favor. I have attributed the failure of the sera to produce an effect in these cases to the fact that when bacteria have invaded the general circulation, and have not been overcome by the normal resisting-power of the human tissues, by the time clinical symptoms of their invasion of the general system are manifested they have gained so much headway that these therapeutic measures no longer exert any marked influence upon their development and life history.

This brings us to the consideration of the treatment of the exudative peritonitis *per se*. As we practically recognize to-day no idiopathic type of exudative peritonitis, the first thing to consider in this connection is the removal of the cause of the inflammation. This cause may be either a local or a general one—local, in the form of an inflammatory process of some viscus situated within the peritoneal cavity, or contiguous to it; or general, the peritonitis in the latter case being merely a manifestation of a systemic disease, *e.g.*, a bacteriæmia or general toxæmia. When the peritonitis is merely such a concomitant inflammation, the treatment is not to be directed to it, but to the general systemic disease of which it is a manifestation, and such a peritonitis regularly tends to spontaneous cure when the general systemic disturbance is relieved. When, however, the peritonitis is the direct result of a local disease process of a viscus situated within the cavity of the peritoneum or contiguous to it, this acting cause must be removed before we can consider the diseased peritoneum at all. Thus an inflamed appendix must be taken out, a ruptured or perforated intestine must be repaired, an abscess cavity must be drained by proper incisions, etc. Besides removing the cause of the existing peritonitis, we can do but little for the inflamed serous membrane. But in treating exudative inflammations surgically, we must consider two other points, viz., How are we best to remove the products of exudation, and how are we to prevent their re-accumulation? As to the best method of removing the exudate surgeons are at variance. Some prefer to mop out the products of exudation with sponges or compresses of gauze, whereas others consider it best to sluice the peritoneal cavity with large quantities of normal saline solution until the fluid returns from the cavity clear of all exudate, and still others prefer to eviscerate and wash out the peritoneal cavity. There does not seem to be any better reason for the use of the one or the other of these methods beyond the personal predilection of the particular surgeon, and yet it seems that there are special indications calling for the employment of the one or the other of these procedures.

Our chief aim in dealing with any inflamed organ is to injure its structure and nervous mechanism as little as possible by our manipulations. On this basis evisceration, with the traumatism to the nervous apparatus of the intestine and peritoneum that necessarily accompanies this procedure, can hardly be considered a proper and rational mode of cleansing the peritoneal cavity, even though it is the most thorough. Its baneful effects much more than counterbalance its good qualities. As regards simple irrigation without evisceration, Riedel and Kümmel [23] have shown, by experiments on animals, that irrigation of the peritoneal cavity in cases of purulent peritonitis worked unfavorably and harmfully; moreover, that even healthy animals subjected to irrigation of their peritoneal cavity became asphyxiated during the procedure, and that the peritoneum of such animals after death showed ecchymoses and like irritative phenomena on the intestine. No such like effects can be attributed to the introduction of soft mops into the peritoneal cavity for the purpose of removing the exudate, and this is consequently the best method to be pursued. There are, however, cases in which washing of the peritoneal cavity with saline solutions is preferable to drying it out with mops. These are as follows: (*a*) when large masses of fibrin are present in the cavity, these may be dislodged and carried away with the current; (*b*) when the exudate is of a thick, creamy consistency and is spread out among the intestinal coils in all directions. In such cases the exudate can be more rapidly removed and with less traumatism to the peritoneum than by the method of mopping. It is my custom in removing the exudate to take very soft sea-sponges, attach them to long sponge-holders, and carefully pass these into all the fossæ and spaces of the peritoneal cavity. This procedure takes but a very few minutes, and I have several times convinced myself that the peritoneal cavity can in this way be made entirely dry.

As regards the second point in the consideration of the exudate—viz., How are we to prevent the re-accumulation of the products of inflammation?—this necessarily implies the question, Are we to drain the peritoneal cavity, or not? Before entering into this consideration, let me repeat a few of the facts I have brought out in the first portion of this paper; these are, that the peritoneum is an actively absorbing organ; it absorbs almost as rapidly in the diseased as in the healthy state; but wherever it has been modified or destroyed, or removed, there active resorption does not occur, and stagnation with the deleterious action of the bacteria, if they are present, results. As long, therefore, as the peritoneal surface maintains its integrity, drainage of its cavity is superfluous, for it can easily and readily take care of the products of exudation that result from its inflammation. There are, moreover, besides its superfluity several objections to drainage of this serous membrane. These are: (*a*) The danger of secondary infection through the medium of drains. (*b*) All drains are foreign materials to the peritoneum, whose presence is resented by it, and if they are introduced an additional burden is put upon the reactive power of the peritoneal cells, in order to make such materials extraperitoneal. (*c*) The presence of such foreign materials, be they gauze or tubes, by retarding the absorption favors the local sedimentation of bacteria around them, and an augmentation of the existing inflammation. This can easily be shown by injecting organisms into the healthy peritoneal cavity, and into a similar peritoneal cavity into which a piece of gauze or tubing has been placed. In the former case no peritonitis results; in the latter a purulent peritonitis is set up. (*d*) Danger of secondary intestinal obstruction from the adhesions resulting from the use of drains. (*e*) That drainage of the general cavity is not possible for more than a few hours at the utmost, for at the end of this time all such foreign materials have been walled off from the general cavity.

It follows that, as long as the peritoneum is peritoneum, so to speak, drainage is superfluous and objectionable. When, however, a region has been denuded of its peritoneal covering, this area must be drained, for these parts no longer possess their rapid absorbing power, and hence their protective attribute; or when the peritoneum, though intact, has lost its identity as peritoneum, either on account of inflammation or traumatism, then all such affected parts must be drained, even though it necessitates the employment of a complicated system of drainage.

One further point demands our attention in the consideration of the treatment of peritonitis, viz., When is catharsis to be established? The results which are achieved by early free evacuation of the bowels are: (*a*) the prevention of stasis of the intestinal contents, and the increased virulence of the bacteria that goes with such stagnation, and consequently the less absorption into the vascular system of the products of fermentation and bacterial life; (*b*) the increased rapidity of absorption from the peritoneum, on account of the increased peristalsis (Schnitzler and Ewald). As baneful effects resulting from early catharsis may be especially mentioned the goading on to work of an infiltrated and inflamed muscularis, which can certainly result only in increasing the loss of tone, or even in causing paralysis of the muscular tunic of the bowel. When the pros and cons for early catharsis are weighed, it is easily seen that there is more immediate danger from the intestinal absorption of the toxins due to stagnation than from the loss of tone or paralysis which may result from early catharsis. So that when indications of intestinal distention are manifested, free catharsis should be established as soon as possible. When, however, no distention is present, there is certainly no indication for early evacuation of the bowel; in fact, such a procedure is entirely contraindicated. It has been my custom to be guided entirely by this sign as to when to move the bowels: if no distention is manifested, I never hesitate to wait three or four days before resorting to catharsis.

Let me rapidly rehearse, then, the method of treatment of exudative peritonitis that has yielded the best results in my hands: Cœliotomy, the site of the incision depending on the cause of the peritonitis; removal of the acting cause; if the intestine is very much distended, incision of one of the most distended coils and evacuation of its contents; suture of the bowel if its muscular wall is not paralyzed, otherwise drainage of the proximal end of the bowel; removal of the exudate from the free peritoneal cavity by moist sponges; protection of all raw spaces or modified peritoneal surfaces by gauze; closure of the rest of the abdominal wound; in addition the general systemic treatment for the toxæmia and bacteriæmia, as I have outlined in the paper.

I have taken from the records of the Mount Sinai Hospital all the cases of diffuse exudative peritonitis, following upon appendicitis, which have been operated upon during the past three years of 1897, 1898, and 1899. In all there were seventy-three cases, of which nineteen resulted in recovery, or twenty-six per cent. In considering these statistics it should be taken into account that many of these cases were in a most desperate condition on their admission to the hospital, and operation would have been declined by many surgeons. Inasmuch, however, as some of these most desperate cases have resulted in recovery, we have in the hospital adopted the same rule as applies in strangulated hernia, *i.e.*, never to decline to operate unless the patient is actually moribund.

The first table is a very important one, as showing the relation that exists between the mortality and the duration of the peritonitis. Thus:

TABLE I.

Duration of the Disease.	Total Number of Cases.	Cures.	Percentage of Cures.
One day	9	5	55
Two days	14	6	42
Three "	20	5	25
Four "	10	0	0
Five "	5	2	40
Six "	2	0	0
Seven "	6	1	16
Eight "	1	0	0
Nine* "	—	—	—
Ten "	5	0	0

* In one case the duration of the peritonitis was not ascertained.

Thus it is seen that the percentage of recoveries diminishes considerably as the duration of the disease increases. Two apparent exceptions occur in the above table, in that two patients recovered in whom the disease had lasted five days, and one in whom it had been of seven days' duration. This can be explained either on the basis that the history as given by the patient was faulty, or that the peritonitis was not of a very septic type; but as a rule it can be said that the prognosis becomes proportionally bad as the duration of the disease increases.

It is considered by many that children recover more frequently from peritonitis than do adults. But if we compare the percentage of cures in children with that in adults, taking into consideration also the duration of the peritonitis, it will be seen that there is not much difference in the various ages as regards the percentage of recoveries. It is not the age of the patient, but rather the duration of the peritonitis before it has been subjected to treatment, that influences the subsequent course of the disease. (See Table II.)

In the third table which I have prepared I have arranged the cases according to the treatment they have received; in each class I have considered whether the appendix when it was found was perforated or not, for the coexistence of a perforation with the peritonitis materially alters the prognosis for the worse, thus: Appendix was—

Found perforated in 45 cases, of which 11 recovered = 24 per cent.
Found non-perforated in 5 cases, of which 2 recovered = 40 per cent.
Not found at all in 23 cases, of which 6 recovered = 26 per cent.

As regards the treatment four different methods were followed: (*a*) Simple packing of the outer wound, and extensive drainage of the peritoneum with no attempt to remove the exudate; (*b*) mopping out the exudate with soft sponges, combined with more or less extensive drainage; (*c*) irrigation of the peritoneal cavity until all the exudate was removed, combined with drainage; (*d*) evisceration with irrigation, with more or less extensive drainage.

Combined with either one of the procedures enterotomy or enterostomy was performed whenever the intestinal distention was marked enough to demand it. I have not compiled the statistics of the cases in which this procedure was carried out, but we have always found it to benefit materially the septic condition of the patient, and, by relieving the intestinal distention, to favor better and more easy respiration and circulation, and to help to restore the tone of the muscular tunic of the bowel. (See Table III.)

From the above tables it will be seen that the percentage of recoveries was highest in those cases in which evisceration combined with irrigation was practised. It is hardly fair, however, to compare this group of only three patients with the other groups which comprised many more. Comparing the other groups, we see that the percentage of recoveries was highest when the exudate was simply sponged away, being thirty per cent. in these cases, as against twenty-five per cent. when irrigation of the peritoneum was employed, and

TABLE II.

Ages.	DURATION.																			
	1 Day.		2 Days.		3 Days.		4 Days.		5 Days.		6 Days.		7 Days.		8 Days.		9 Days.		10 Days.	
	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.	Cases.	Cures.
Under ten years	3	2	2	1	..	..	..	..	1	0										
Between ten and twenty years	1	0	9	3	6	1	5	0	..	..	..	..	2	1	..	..	..	..	3	0
Between twenty and thirty years	1	1	1	1	5	2	1	0	3	1	1	0	2	0	1	0				
Between thirty and forty years	3	2	1	0	6	1	3	0	..	..	1	0	1	0	..	..	..	..	1	0
Over forty years	1	0	1	0	3	1	1	0	1	1	0	0	1	0	..	..	..	..	1	0

as against fifteen per cent. when the exudate was not removed, the peritoneal cavity being simply drained. Furthermore it will be seen that the duration of the disease had been comparatively twice as long in those cases of recovery in which sponging was employed as in those cases in which the other procedures were carried out; and we have noticed above that this duration of the process was a most important factor in determining the prognosis. Leaving out, then, the cases in which evisceration and irrigation were performed—and the number is entirely too small to draw any conclusions—it would appear that by removing the exudate by sponging the highest number of cures would be obtained. With the removal of the exudate in this manner, as with all the other procedures, some drainage was also provided. But latterly I have not attempted in any way to drain the general peritoneal cavity. If there were any raw spaces I have protected these with gauze wicks, and closed the rest of the abdominal wound. This I consider by far the best procedure. I have followed it thus far in three cases with entirely satisfactory results, all these cases terminating in recovery. The duration of the disease had been two days on an average; the exudate was sero-purulent in character, was diffusely spread over the peritoneal cavity, and the appendix was perforated in all three. After removal of the appendix, the exudate was rapidly sponged out by soft sponges on holders, and the raw surface of the appendix protected by a narrow wick of gauze, which was led out of one angle of the abdominal wound, the latter being closed throughout the rest of its extent. The gauze was removed after twenty-four hours. It was extremely gratifying to compare the convalescence of these patients with that in whom irrigation or packing and drainage had been practised. In the former the pulse and temperature had approached the normal within thirty-six hours, and there was after this comparatively little disturbance; whereas in the latter the temperature and pulse remained high for from four to seven days, and during this period the patients suffered from the traumatism which had been inflicted, or from a local peritonitis, which was taking place around the packings or tubes. From either of these the patients often seemed to succumb, even after the primary inflammation had shown indications of regression.

TABLE III.

Method of Treatment.		Total Number of Cases.	Cures.	Per Cent.
A Simple packing and drainage; no attempt to remove the exudate.	Appendix not found ...	10	3	30
	Appendix perforated	9	0	0
	Appendix non-perforated	0	0	0
	Totals.............	19	3*	15
B. Exudate removed by sponging; drainage.	Appendix not found...	6	2	33
	Appendix perforated ...	16	4	25
	Appendix non-perforated	1	1	100
	Totals.............	23	7†	30
C. Exudate removed by irrigation; drainage.	Appendix not found....	7	1	14
	Appendix perforated ...	18	6	33
	Appendix non-perforated	3	0	0
	Totals.............	28	7‡	25
D. Evisceration combined with irrigation to remove the exudate; drainage.	Appendix not found....	0	0	
	Appendix perforated....	2	1	50
	Appendix non perforated	1	1	100
	Totals.............	3	2§	66

* Of these 3 cases, the duration of the peritonitis had been 3 days in each.

† Of these 7 cases, the duration of the peritonitis had been 5, 2, 2, 3, 7, 1, 2 days respectively.

‡ Of these 7 cases, the duration of the peritonitis had been 1, 2, 1, 2, 1, 3, 2 days respectively.

§ Of these 2 cases, the duration of the peritonitis had been 1, 2 days respectively.

I cannot close these remarks on the peritoneum without again pronouncing against what has been our too active handling of this most sensitive tissue. The pendulum of our activity is gradually swinging the other way, and we are commencing to recognize that gauze packings, irrigation, evisceration not only injure the delicate nervous mechanism of the peritoneum, but also favor, by interfering with the activity of the cellular process, the local sedimentation of bacteria with their consequent local development and deleterious effects. The peritoneum has been endowed with its own protective attribute, which is not heightened by manipulation or the introduction of foreign material. If we supplement the internist's treatment of peritonitis, as formulated by that great master Alonzo Clark, by a removal of the cause of the inflammation, and cease to abuse and injure this delicate membrane, we will meet with more gratifying results.

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Vitiligo in a Baby Three Days Old.—Yukovski says that vitiligo in children is very rare. Most of the cases observed have been among negroes. The child observed by the author was the offspring of white parents presenting no specific history. The child had exophthalmos, myxœdematous skin on the neck and face, a guttural voice, and icterus. The vitiligo was noticed only on the third day. The question arises, whether or not those spots were present at birth. The author accepts the theory of the neurotic origin of the disease. Under the influence of some neurotic influence we have either a local dilatation of the blood-vessels, decomposition of red blood corpuscles, and emigration of melanocites, followed by deep local pigmentation, or local spasm of the blood-vessels, obliteration of the arteries, and secondary pigment atrophy.—*Meditsinskoe Obozrenie*, April, 1900.

THE TREATMENT OF TYPHOID FEVER.

By D. E. ENGLISH, M.D.,

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In the treatment of typhoid fever we should ever bear in mind the nature and probable cause of the disease, for treatment directed to the relief of the symptoms only is not so uniformly successful as a combined symptomatic and specific treatment.

We are told by investigators that the disease known as typhoid fever is due to the presence in the intestine of a microbe, the bacillus typhosus, which may be helped in its work by one or more other microbes; that these minute forms of life give rise to certain poisonous matters in the intestine, which, besides acting as local irritants, find their way into the blood and are diffused throughout the body. Thus we have a local inflammation and ulceration of the intestine; a direct poisoning of the great nervous centres, and an infiltration and enlargement of the lymphatic system of vessels and glands due to a specific poison; as well as the prostration, emaciation, and parenchymatous degeneration of various organs due to long-continued high fever. From this the indication for treatment would seem to be as follows:

I. To empty the gut of all infected matters as soon as possible.

II. To render the gut as nearly as possible uninhabitable by the microbes.

III. To prevent so far as possible the further absorption of the poison.

IV. To neutralize or expel the poison already absorbed.

V. To keep the temperature within safe bounds.

VI. To prevent so far as possible overaction of organs already damaged, *i.e.*, to promote physiological rest, and avert rupture of the intestine.

VII. To support the strength of the patient, and guard against sudden collapse.

I. When a case of typhoid fever is seen early, it is rarely possible to make a positive diagnosis at the first visit. The disease for which it is most often mistaken is malarial fever. In case of doubt it is best to order quinine sulphate gr. iii. every three hours. If, after thirty-six hours, the temperature has continued on a curve typical of typhoid fever, simple malarial fever may be excluded. This initial course of quinine need not prevent the fulfilling of the first indication as outlined above. My favorite purge for this contingency is calomel, because calomel empties the gall bladder, and the bile is nature's own intestinal antiseptic. From ten to thirty grains may be given, according to circumstances. If there has not been free catharsis within six hours, it is well to give magnesium sulphate ʒ i. in a glass of boiled water, every hour until the intestines seem to be well cleaned out.

II. To render the gut uninhabitable by the pathogenic microbes it is necessary to keep it as nearly empty as possible, and as nearly aseptic as possible. How can we keep the intestine empty and at the same time give it physiological rest? While intestinal rest is highly desirable, experience seems to teach that the bowels may be moved once, or even twice, each twenty-four hours without unduly straining them, even in typhoid fever. To accomplish this a small dose of podophyllin, perhaps assisted by a little aloin, may be given morning and night: podophyllin gr. $\frac{1}{8}$ to $\frac{1}{4}$, aloin gr. $\frac{1}{8}$ to $\frac{1}{4}$. Podophyllin is a valuable drug in these cases because it increases the secretion of bile and so promotes intestinal asepsis. While a large dose of calomel will empty the gall bladder, it is probably true that small continued doses do not increase the secretion of bile, and as the local antiseptic properties of calomel in the intestines are feeble, it is not wise to rely on it as an intestinal antiseptic after the initial dose.

III. It is probably not possible to keep the intestine aseptic, although scores of preparations are offered to the profession for that purpose, their promoters claiming unequalled advantages for each. My favorite intestinal antiseptic is carbolated camphor.[1] This preparation I have used in many conditions which seemed to depend on putrefactive changes in the contents of the stomach or bowels, as well as in typhoid fever. It relieves flatulence, renders the fæces nearly odorless, and lowers the temperature decidedly without any apparent weakening of the heart. The camphor, besides being an antiseptic of considerable power, has a good effect on the general nervous system, and acts as a direct tonic and stimulant to the great sympathetic nerve centres in the abdomen. Although this preparation is said not to be a chemical combination, and therefore one would expect to get the individual effects of both of the ingredients, still much larger doses of carbolic acid can be given in this way than when it is administered alone. Ten to twelve drops, representing gtt. iii. to iv. of the acid, may be given every two hours for forty-eight hours before there will be any change in the color or odor of the urine. When this occurs, the dose should be decreased somewhat, or the interval between doses lengthened, but the remedy should not be entirely discontinued until the patient is well advanced in convalescence. The carbolated camphor need not be stopped for slight albuminuria; the albuminuria is caused by the disease, not by the medicine, and I have seen it disappear while the patient was still taking good-sized doses of this remedy. If one ounce of carbolic acid crystals and three ounces of camphor gum are put together in a glass vessel and allowed to stand a short time, the result will be a smooth, transparent, oily liquid, almost colorless when first made, changing with age to a light pink as carbolic acid does; having the odor of camphor, a burning taste when put upon the tongue, and a specific gravity of about 0.990. If kept in an air-tight glass vessel, it remains unchanged for an indefinite time, but when exposed to the air the camphor evaporates faster than the carbolic acid, and the preparation becomes stronger with the acid. To guard against this it is best to keep an excess of camphor in the vessel at all times. An elegant way in which to accomplish this is to fuse about one drachm of camphor in the bottom of an ounce vial, and when it has solidified fill the vial with carbolated camphor. If the acid is not entirely saturated with the camphor the preparation is irritating, or even caustic, to the mucous membranes; but when fully saturated it can be taken pure on the tongue without harm. This preparation mixes freely with fixed oils, vaseline, alcohol, collodion, and ichthyol, and dissolves iodoform in the proportion of one to twelve, completely disguising the odor of the iodoform. It will not mix with water or glycerin. It is best given by dropping the dose into a No. 2 capsule just before it is administered. It will dissolve the capsule if allowed to remain in it long. This preparation will probably keep the intestine as nearly aseptic as it is possible to do with any drug given by the mouth. To empty the intestine and to keep it as nearly as possible empty and aseptic will prevent further absorption of the specific poison, and so fulfil indication No. III.

IV. The best agent for neutralizing the absorbed poison and for expelling it from the body is water. Large and frequent draughts of sterile water will act as a diluent, a diuretic, and a diaphoretic; will relieve in this way, or in these ways, the congestion and irritation of the kidneys and the albuminuria, and will carry the poison out of the system.

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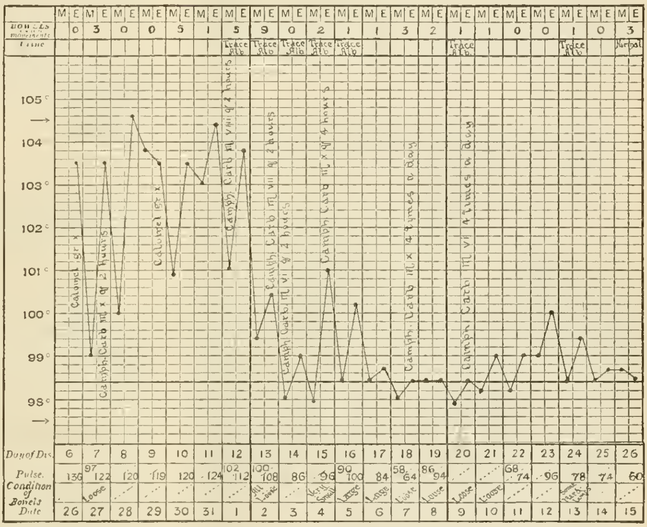
[1] "Camphorated Carbolic Acid." Medical Record, September 30, 1893, vol. xliv., No. 14, p. 426.

V. After the second day of treatment by carbolated camphor the temperature of typhoid fever rarely goes above 103° F., and more often keeps below 102° F. On the third day of treatment there is generally a decided fall, and the temperature does not become high again except by accident, such as constipation, error in diet, or too sudden stopping of the specific treatment. The prostration, typical tongue, iliac gurgling, and perhaps some tympanites, may continue with a nearly normal temperature, but the patient is evidently much better, and finds it difficult to restrain his appetite, and irksome to keep his bed.

In the occasional cases in which I have used means to reduce the temperature, the following tablet, given every one to two hours for five or six doses, has answered the purpose satisfactorily:

℞ Acetanilid.................................. gr. iij.
Camphoræ monobrom.,
Caffeinæ citrat...........................āā gr. ss.
M.

VI. The two organs most liable to damage from overaction in typhoid fever are the intestine and the heart. It is best to have the bowels move once or twice a day; if the patient is taking much milk, four or even five movements a day seem to do no harm. So that about the only way in which we can promote intestinal rest is to keep the patient quiet, not to overfeed him, and to guard against tympanites. The carbolated camphor generally prevents tympanites, but a little turpentine or compound tincture of cardamom will do no harm if another remedy seems indicated. Or a turpentine stupe may be used on the abdomen; but it should not be forgotten that turpentine is a renal irritant and may cause albuminuria, strangury, or nephritis, if used too long or in too large a dose. When it becomes necessary to check the bowels, which is seldom the case, I use small doses, gr. iiss. of Dover's powder, and give as few of them as possible. To prevent cardiac fatigue the most important measure is to keep the patient absolutely quiet. He should lie on the back with the head rather low; the lower extremities should be kept warm, and everything should be done to promote easy circulation of the blood. When the pulse is rapid and soft, small doses of tincture of digitalis (about ♏ v.) in whiskey (about ʒ i.) may be given tentatively about every four hours. The whiskey will tend to prevent the contraction of the arterioles by the digitalis. But these two remedies must be used with care in the early stages, and with the object of resting, not stimulating, the heart. The patient should use a bed-pan and urinal, and should be cautioned against moving a muscle unnecessarily.



VII. To support the strength of the patient adequately without overloading the stomach or fatiguing the intestine demands careful judgment. For the first week no food should be given that will pass through the stomach or leave any débris. For the first two weeks I rely entirely on dissolved beef made after Weir Mitchell's formula, as follows:

℞ Acidi hydrochlor. c. p........................ ʒ i.
Aq. destillat.................................ad ℥ i.
M. S. One teaspoonful to a pint of water for making beef tea.

Put one pint of boiled water, a good pinch of salt, and a teaspoonful of the above prescription in a one-quart glass fruit jar, and shake well. Then add one pound of finely chopped beef, and shake again. Close the jar air-tight and set it in a cool place like the cellar floor, but not on ice, for twelve hours. Then put the jar into water and keep it warm, about 110° F. to 120° F., for four or five hours. Be careful not to let it get too hot. The contents of the jar should be strained through a cloth, and all the liquid squeezed out; the residue will be about the size of a hen's egg and nearly white. This essence may be seasoned with pepper and salt and given warm in ounce doses every hour for the first week, and in two to three ounce doses every hour or two hours during the second week. If the essence is properly made, the residue will be found to consist almost entirely of white fibrous matter, the red muscular fibres having dissolved out.

During the third week one pint of milk may be given every twenty-four hours, but it should be given in divided doses, and largely diluted with sterile water, and with the addition of as much salt as will be palatable. This is better given at about the temperature of the stomach if the patient can take it so. Also in the third week the white of one egg in water, and one entire egg beaten with the juice of one lemon, may be given each twenty-four hours. In making "egg-lemon" the juice of one lemon should first be rubbed with a little sugar, the well-beaten yolk then stirred in, and last the white beaten to a froth spread over the surface. This makes a delicious and beneficial food for the third and fourth weeks. Whether or not the diet should be changed during the fourth week depends largely on the condition of the patient, and must be left to the judgment of the physician in charge, but even in the later stages of typhoid fever it is much safer to give too little food than too much.

In cases seen early and treated in this way there will be very few, if any, embarrassing complications or sequelæ. While the duration of the disease is not greatly shortened the patients get well without excessive prostration or emaciation, and the period of convalescence is shorter than under expectant or simply symptomatic treatment. I have not lost any cases treated in this way, nor have I seen any hemorrhage or perforation. Carbolated camphor may be given in

♏ vi. doses, four times a day, indefinitely, without harm, and it is wisest to continue giving it until the patient is entirely well. The accompanying temperature chart shows about the usual curve under this treatment. This patient travelled over fifty miles from a boarding-school to her home on January 1, 1898, and I first saw her that evening. She continued taking ♏ vi. of carbolated camphor four times a day for a week longer than the chart shows, and the albuminuria disappeared while she was still taking the remedy. She also took podophyllin gr. $\frac{1}{8}$ and aloin gr. $\frac{1}{8}$ once or twice a day nearly every day throughout her sickness. Once or twice in her case, as in a number of others, when the heart seemed to need a stimulant I gave a few doses of the following:

℞ Tr. nucis vomicæ,
Tr. digitalis............................āā ʒ ii.
Spts. vini gal ....ad ℥ iij.
M. S. A teaspoonful, in water, every one to three hours when needed.

Success in the treatment of this disease depends largely on careful watching of the patient, and giving nature a little aid at just the right moment; and on strict sanitation of the bed and room of the patient. This, combined with the specific treatment spoken of above, will save nearly every case of typhoid fever.

THE USELESSNESS OF THE PITUITARY BODY AS A THERAPEUTIC AGENT.[1]

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In 1886 Marie in his original description of acromegaly suggested that the pituitary gland (hypophysis cerebri) played an essential rôle in this disease, and many subsequent observers are still inclined to accept this theory. Pituitary substance has therefore been suggested as a remedy for acromegaly, this being the only pathological condition in which it has been administered for therapeutic purposes. Pituitary tablets are on the market, each three-grain tablet containing one grain of the desiccated pituitary body of the sheep, equivalent to eight grains of fresh gland substance.

The reports thus far published regarding the physiological effects of the injection of the extract of the pituitary body are so contradictory that they are of no scientific value. Andriezen has demonstrated that in the lowermost vertebrates the secretion from the anterior lobe of the gland (prehypophysis) is carried through the central nervous system, and he believes that this secretion possesses either a trophic influence on the nervous tissues, or is in some way concerned in the metabolism of nerve tissue. There is no evidence, however, which would lead us to assume that these studies in comparative anatomy and physiology are applicable to man. While some of the published reports as to the efficacy of the preparations of the sheep's gland have seemed quite encouraging, in so far as the relief of headache and of paræsthesia of the hands is concerned, it is the general consensus of opinion that it in no way influences the progress of this disease, which at best is rarely recognized until well advanced in its course. In all of these cases, other therapeutic measures have been employed at the same time, to which much of the symptomatic improvement may be attributed.

In two patients with acromegaly recently under the writer's observation, the daily administration of the pituitary tablets was continued for several months, but the symptoms were not ameliorated by its use. In both of these patients bitemporal hemianopsia was present as the result of pressure upon the optic chiasm by the enlarged prehypophysis. In one, the remaining half-fields diminished. In the other, one eye has become blind from optic atrophy. This progressive loss of vision would indicate that the hypophysis had continued to enlarge, thus destroying the remaining fasciculus of the nerve.

If we accept the theory recently enunciated by Dr. Harlow Brooks, "that the increased secretion of the prehypophysis in acromegaly acts as a direct stimulus to the connective-tissue cells, and by its persistent action slowly augments their growth," the use of the pituitary-gland preparations would be contraindicated. On the other hand, although extirpation of the gland in dogs has been successfully performed, acromegaly has not followed. It is also a well-established fact, that in man the hypophysis cerebri has been the seat of a destructive process, such as sarcoma, without the presence of any of the pathognomonic symptoms of acromegaly. We must, therefore, conclude that acromegaly is not due to obliteration of the glandular structure of the hypophysis.

It will thus be seen that this alleged remedy for acromegaly has been used only empirically; that it has proved absolutely inefficacious; and that there are neither rational nor logical grounds for its therapeutic administration in the disease for which it has been recommended.

A PRELIMINARY NOTE ON A SIMPLE AND NEW METHOD OF REPEATEDLY STERILIZING SPONGES BY BOILING.

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It is generally acknowledged that for the rapid and thorough removal of blood, pus, or other fluids during operations sponges are often indispensable. Their softness, elasticity, and porosity, the ease with which they absorb fluids, and the readiness with which they yield them on pressure, have given to sponges a unique and valuable place in our surgical armamentarium.

Sterilization by boiling—the simplest and most thorough method of disinfection—has been hitherto impossible, because boiling in water, soda solution, or other antiseptic solutions causes a loss of elasticity and a shrinkage of the sponges.

As the result of a series of investigations into the physical and chemical properties of this material, and based on chemical principles identical with those made use of in the sterilization of catgut by the ammonium-sulphate method,[1] I have devised the following method by which sponges can be repeatedly sterilized by boiling. The steps of the procedure are the following:

1. The sponges are freed from calcareous matter by immersion for twenty-four hours in eight-per-cent. muriatic-acid solution, and are then thoroughly washed in water.

2. They are then boiled for fifteen minutes or longer in the following solution: Potassium hydrate, 1 part; tannic acid, 3 parts; water, 100 parts.

3. They are washed in water, carbolic acid, or sublimate solution until all of the potassium hydrate-tannic-acid mixture (which is of a dark-brown color) is removed.

4. The sponges are preserved in five-per-cent. carbolic-acid solution.

Sponges that have been used can be resterilized by washing them in water, and then boiling them once more in the solution, etc. The solution can be used any number of times, as it does not deteriorate by boiling or by age.

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[1] Read before the New York County Medical Association, May [illegible], 1900, in connection with a discussion on organo-therapy.

[1] Elsberg: "A New and Simple Method of Sterilizing Catgut by Boiling." MEDICAL RECORD, May 5, 1900.

Sponges prepared in this manner are absolutely sterile, and they will be found to have retained all their physical qualities—size, softness, elasticity, power of absorption, etc. The procedure will be described in further detail in a future publication.

105 East Fifty-seventh Street.

A REMINDER FOR THE CARE OF CHILDREN DURING THE SUMMER.

By S. Henry Dessau, M.D.,
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Lest we forget, let us remember that the greatest number of infants and children under three years of age die annually from gastro-intestinal diseases.

Lest we forget, let us remember that, with rare exceptions, the gastro-intestinal diseases of which these children die are of the acute type and occur as diarrhœa.

Lest we forget, let us remember that by far the larger majority of these diarrhœas occur during the summer months. So true is this that they have deserved the general name of summer diarrhœas of infants and children.

Lest we forget, let us remember that, the combined observations and conclusions of eminent men in the profession in all ages until the present time have attributed the underlying cause of these fatal diarrhœas to the excessive heat of the summer months.

Lest we forget, let us remember that, although the advanced knowledge of collateral sciences has demonstrated the important part played by the deleterious action of germs upon infant foods and their immense reproduction under favorable conditions of filth and bad air, without the all-controlling influence of the summer heat no such extensive contamination of the infant's food could occur.

Lest we forget, let us remember that the heat of the summer months is now upon us, and that in our endeavors to protect infants and children against evil attacks of diarrhœas during the season by providing them a suitable and agreeable food, when deprived of nature's own, we should also bear uppermost in our minds and daily thoughts the prime necessity of warning parents to combat the depressing influences of prolonged heat and a humid atmosphere by every conceivable means in their power.

Lest we forget, let us remember that the weak infant has weak physiological functional powers, and for this reason the heat-regulating function is weak and much more easily overcome than in adults. In this way infants and young children manifest a different clinical picture of the bad effects of heat from that of adults, which is recognized as heat-stroke or sunstroke.

Lest we forget, let us remember that one of the first of the evil effects of heat upon the infant is to weaken the digestive function, which is first manifested by a loss of the appetite, and, therefore, above everything else the infant should not be forced or induced to take large quantities of food, nor even the same amounts as usual.

Lest we forget, let us remember that with a combination of germ-impaired food and weakened digestive powers of the stomach under the influence of an excessively heated atmosphere, the very best conditions are presented for an attack of diarrhœa.

Lest we forget, let us remember that under the influence of a greatly lowered vitality of the infant, due directly to the excessive and prolonged heat of the summer months, certain germs, which are always found in the intestinal canal, even during a period of the best of health, are permitted under such altered conditions to exert a poisonous action, and hence even breast-fed babies may and do become the victims of a summer diarrhœa.

Lest we forget, let us therefore remember that, while it is beyond question most imperative to have only the purest food given to babies and young children during the summer season, at the same time it is equally as imperative to impress upon the understanding of mothers and nurses the great importance of keeping the child in as cool a condition in summer as circumstances will permit.

For this purpose the cool country air is best for those whose means can afford it, while for the masses including the poor of large cities other devices must be thought of—such as a liberal use of ice for sucking or eating, bathing in cold water several times in the day if need be, seeking the early morning air, a free ventilation of the sleeping-apartments especially during the night, doing as little cooking in small apartments as possible, using the lightest kind of clothing, in fact letting children imitate little Hottentots; taking short trips on the water to the sea-shore or crossing and recrossing the ferries, visiting the shady parts of the public parks during the heat of the day. All of these need not by any manner of means preclude a strict observance of domestic cleanliness, which produces at least a mental effect of apparent coolness and comfort, nor the general cleanliness of city streets and a free use of flushing, which not only in fact cools the air of the streets, but in addition insures a purer breathing-air freed from decomposing matter.

Seeking the shade of trees is undoubtedly one of the best plans for obtaining cool air in summer. Dr. Chapin has recently called attention to the fact that the foliage of trees has the property of reducing and regulating atmospheric temperature in their immediate vicinity.

Nothing here has been said regarding the infant's food, as the purpose of this simple rubric is to direct attention to the general care of the child.

Bacteriological Study of Meningitis Cerebro-Spinalis Epidemica.—After a very exhaustive study of the literature of this subject, and based upon his own observation of an epidemic of cerebro-spinal meningitis, Khtegloff comes to the following conclusions: (1) The disease is caused by Weichselbaum's intracellular meningococcus; (2) that the meningococcus is a coccus *sui generis*, not to be confounded with other diplococci; (3) that its vitality in agar cultures is especially characteristic; (4) its presence in the nasal secretion of a patient suffering with meningitis is of diagnostic value.—*Meditsinskoe Obozrenie*, April, 1900.

The Relationship of Diabetes Mellitus to Epilepsy.—W. Ebstein says that diabetes or even glycosuria is a very rare complication of epilepsy. There are three possible relationships between diabetes mellitus and epilepsy; the glycosuria may be either the cause or the effect of the epilepsy, or both conditions may arise independently of each other, though due to a common cause. So far as the author can find from the literature on the subject, no proof has yet been furnished of epilepsy determining diabetes or even serving as a predisposing cause. Epilepsy frequently alternates with diabetes and mental disorders in neuropathic families. Also, in a subject free from any neuropathic taint, there may be many predisposing causes determining simultaneously diabetes and epilepsy. The author describes an illustrative case.—*Medical Press and Circular*, May 16, 1900.

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DERANGEMENT OF THE WATER-SECRETING POWER OF DISEASED KIDNEYS.

IT is well known that disease of the kidneys may exist in the absence of usual symptoms, including albuminuria and tube casts; but even when these are present it is desirable to know the extent of the disease, and especially the degree of interference with function. Studies that have recently been made in regard to variations in the freezing-point of the urine seem to promise helpful results in this direction. It has been found that in cases of diffuse disease of the kidneys, the determination of the reduction in the freezing-point of the urine is capable of disclosing quite characteristic changes in renal activity. If the disease attains a degree and extent rendering impossible compensation through increased activity on the part of healthy portions of the kidney, it may be determined from the freezing-point and the amount of the urine that the absolute number of molecules eliminated with the urine in twenty-four hours is abnormally small—molecular oliguria. In healthy persons the osmotic pressure of the urine corresponding to the reduction in the freezing-point is generally greater than that of the blood. The increased osmotic pressure of the urine is related to increased functional activity on the part of the kidneys. The latter is impaired in the presence of diffuse disease of the kidneys, and the reduction in the freezing-point of the urine is in general less than that of the urine in health.

Although healthy kidneys generally secrete concentrated urine, they are also capable of secreting urine whose molecular concentration is considerably less than that of the blood. If greatly diluted urine is eliminated, the water-secreting power of the kidneys exceeds their absorptive power. After the drinking of excessive amounts of water the molecular concentration of the urine may fall to a freezing-point of −0.10° C. It has been shown that kidneys, the seat of diffuse disease, lost not only their water-absorbing but also their water-secreting power in greater or lesser degree. While the freezing-point of the urine in health varies between −3° and −0.10° C., the limits gradually approximate in the presence of diffuse disease of the kidneys in accordance with the character and the severity of the case. Hyposthenuria is therefore but a one-sided symptom of the lessened accommodative power of the kidneys to the needs of the organism in regulating the excretion of water.

Kövesi and Róth-Schulz (*Berliner klinische Wochenschrift*, 1900, No. 15) undertook a series of investigations to determine the changes that occur in the power of the kidneys to secrete a greatly diluted urine in the presence of diffuse disease of the kidneys of various kinds. The method of procedure was as follows: The urine was collected for twenty-four hours, at intervals of four hours, in separate receptacles, and the freezing-point of each specimen was determined. On the following day 1.8 litres of water were administered in the course of an hour, the urine was voided at intervals of half an hour, and the amount and the freezing-point were determined. In healthy persons the kidneys exhibited a great power of accommodation to the variations in the amount of water ingested. The reduction in the freezing-point of the urine rapidly declined as much as 0.10° C. or more after copious drinking. The secretion of greatly diluted urine generally ceased within two or three hours, and was gradually replaced by the evacuation of urine of moderate concentration.

In cases of parenchymatous nephritis it was found that the power of the kidneys to secret dilute urine was greatly reduced, and apparently in proportion to the severity of the renal disease. In cases of interstitial nephritis, on the other hand, the power of the kidneys to secrete dilute urine was, in comparison with the kidneys in health, little if at all diminished. Finally, it was found that the water-secreting power of the kidneys, as well as their power of concentrating the urine, was not impaired in cases of compensated valvular diseases of the heart. In the presence of compensatory derangement, however, the diluting-power of the kidneys was diminished, as in the transition from parenchymatous to interstitial nephritis.

From these investigations it appears that the function of the kidneys is altered in a materially different manner in the presence of contracted kidney and of parenchymatous nephritis respectively, the difference residing in the varying limits of accommodation of the kidneys with relation to the amount of fluid in the organism. These limits are quite considerable in cases of interstitial nephritis, but are diminished in cases of parenchymatous nephritis in accordance with the severity of the disease. It has also been thought that the diminution in the concentration of the urine is more marked in cases of parenchymatous nephritis. The results of the present investigation indicate, however, that the characteristic distinction between parenchymatous and interstitial nephritis resides not in the varying amount of the reduction in the freezing-point of the urine, but in its variability.

The reduction in the freezing-point of the urine in cases of disease of the kidneys depends upon (1) the localization and the degree of the morbid process, which together determine the extreme limits of variability of the concentration of the urine; (2) the amount of water ingested; (3) the degree of preservation of the permeability of the kidneys to solid molecules.

In every case of nephritis a certain amount of water will, in accordance with the permeability of the kidneys to solid molecules, yield urine that is isotonic with the blood. If so much is drunk that this amount of water is sent to the kidneys, the variety of renal disease will have no influence upon the freezing-point of the urine; if less be drunk, the reduction in the freezing-point will be marked in cases of interstitial nephritis, and inconsiderable in cases of parenchymatous nephritis. If, however, more water be drunk than is necessary for the secretion of isotonic urine, the results will be the reverse, and more dilute urine will be secreted in cases of interstitial nephritis than in cases of parenchymatous nephritis. If, in cases of renal disease, the permeability of the kidneys to solid molecules is diminished, and if this diminution is but imperfectly or not at all compensated for, the molecular concentration of the blood is increased and the reduction of the freezing-point exceeds 0.56° C. This result may not appear, or it may be modified if so much water is retained that the increase in the molecular concentration of the blood is prevented, in spite of an increase in the absolute number of solid molecules, or if the proteid metabolism falls so low that the reduced permeability of the kidneys suffices for the elimination of the resulting solid molecules, or if, finally, healthy portions of the kidneys assume vicariously the functions of the diseased portions.

It has been shown that increased osmotic pressure of the blood cannot be considered as the cause of uræmia, as the osmotic pressure may be increased without the occurrence of uræmia, and it may be normal in the presence of uræmia. The studies that have been made in regard to the functional activity of the kidneys by the methods under consideration show that the amount of molecular diuresis can be determined, and in marked cases molecular oliguria can be recognized from a determination of the reduction in the freezing-point and the amount of the urine passed in twenty-four hours. The determination of the freezing-point of the blood is capable of showing whether molecular diuresis is adequate for the elimination of metabolic urinary molecules. If molecular diuresis, as compared with metabolism, in accordance with diminution in the permeability of the diseased kidneys to solid substance, is insufficient, then the reduction in the freezing-point of the blood increases.

Hyposthenuria indicates a reduction in the water-absorbing power, and the more or less marked negative results of the dilution test indicate a reduction in the water-secreting power of the kidneys. If the last two alterations occur in the presence of disease of the kidneys, the usual independence of the elimination of water and that of the solid constituents of the urine is impaired or lost. In the latter event the amount of water eliminated by the kidneys is closely dependent upon the elimination of the solid molecules, so that it is determined by the permeability of the kidneys to solid substances.

The Plague has reappeared in Oporto, a case having been reported on June 23d. This is the first that is known to have occurred in that city since the epidemic was officially declared at an end on February 7th last.

BILLS FOR IMPROVING THE STATUS OF THE CONTRACT SURGEON IN THE UNITED STATES ARMY.

In the Medical Record of March 17th ult., some remarks were made upon the injustice from which the contract surgeons who served in the Spanish-American war undoubtedly suffered, and to which those now in the Philippines and elsewhere are compelled to submit; and the suggestion was thrown out that these disabilities be so far as possible removed and the standing of this necessary branch of the service be established once and for all. This course would seem to be for the best interests of the army and the country at large. It has at last been clearly shown—and the surgeon-general himself has become an unwilling convert to these views—that there is now no hope whatever of obtaining from Congress any increase in the number of the medical corps of the regular army. This on the face of it may not appear to be a far-sighted policy, and probably will not commend itself as such to the judgment of the "man in the street," who will not unnaturally be disposed to think that an increase in the army should carry in its train a corresponding enlargement of the army medical corps, and that at least the army medical corps should be numerically strong enough to attend to the needs of the regular army. However, the opinion of Congress has been otherwise, and it has decided that in the future it will rely upon the medical profession in civil life to supply the additions to the medical staff that may be required with an army in the field. Consequently the question which now confronts the military authorities is how to adjust in the most satisfactory manner the grievances of the acting assistant surgeons and to establish the conditions of their successors upon a firmer and more equitable basis.

The surgeon-general with this end in view has introduced two bills for which he has secured the approval of the Secretary of War. Of the aforesaid bills one provides that acting assistant surgeons of the army should have the same rights and privileges as regards leaves of absence as commissioned officers of the army—this clause applies to the future only; and further, that acting assistant surgeons appointed since May 1, 1898, shall be paid for absence on sick-leave. The other grants commissions as assistant surgeons of volunteers with the rank of first lieutenant to acting assistant surgeons who have served one year, and the rank of captain to those who have served as such lieutenants two years.

These bills, although an earnest of the wish of the surgeon-general to do justice to the men who so patriotically answered their country's call during the Spanish war, and so far as they go quite satisfactory, yet are, in the opinion of the men themselves, too limited in scope. It is held that the bills in question do not deal in a generous way, and in a manner befitting this great and rich republic, with those contract surgeons who were dismissed from the army on account of disease incurred while in discharge of their duty, or who returned to their homes broken in health and unable any longer to follow their profession. The Association of Acting Assistant Surgeons, therefore, has caused to be drafted a bill which is now before Congress embodying both the bills introduced by the surgeon-general—with slight amplifications—and its own. This bill provides for back pay, rank, etc., for acting assistant surgeons who served during the Spanish war, and who were dropped for illness or disability, and also enacts that those who have served for one year or more shall be commissioned assistant surgeons of volunteers with the rank of first lieutenant mounted, subject to honorable discharge whenever their services are no longer needed.

The government would have acted more wisely had it increased to a very considerable extent the strength of the army medical corps, for the fact must be borne in mind that an army medical officer, in order to be competent to fulfil his duties efficiently, needs special training. But as the "powers that be" have determined to place reliance mainly upon members of the medical profession drawn from civil life, it would be unjust, as well as an extreme act of folly, not to treat these men equitably and liberally; for it stands to reason that, if such a course be not followed, the inevitable result will be that in case of war surgeons will be lacking. Therefore, aside from the legality and justice of the question, which are evident enough, the bill of the Association of Acting Assistant Surgeons now before Congress should become law, if only as a matter of expediency.

CHOREA AS A PYOGENIC DISEASE.

A TENDENCY has arisen of late to consider chorea as an infectious disease, although such evidence as exists in favor of this view is circumstantial, rather than direct, and the chain is yet incomplete. A point to which some significance can be attached is the probability that acute rheumatism, with which chorea exhibits certain relations, is also of infectious, though perhaps of multiple, origin. In support of the infectious origin of chorea is the report by Westphal, Wassermann, and Malkoff (*Berliner klinische Wochenschrift*, 1899, No. 29) of a case of acute articular rheumatism, followed by chorea, and complicated by endocarditis and nephritis, in which they succeeded in isolating from the blood, the brain, and the endocardial vegetation a streptococcus capable of inducing polyarthritis in lower animals. The pyogenic nature of both polyarticular rheumatism and chorea had previously been suggested by other observers, one of whom, Mircoli (*Berliner klinische Wochenschrift*, 1900, No. 14. p. 303) now reviews his earlier investigations on this subject. Among seventeen cases of rheumatic chorea, pyogenic cocci were found in the joints in fourteen, staphylococci preponderating, while in three the diplococcus lanceolatus was present as the etiological agent. From a number of considerations, acute rheumatism is looked upon as a variety of pyæmia, but without suppuration; and chorea as a manifestation of the cerebral localization of the pathogenic agency.

The Annual Tetanus Epidemic is due next week.

News of the Week.

Yellow Fever has appeared this summer in many places in Cuba where no cases have occurred in several years. The United States troops have escaped hitherto, except in Quemados and Santa Clara. Up to the last week in June there were but three cases of the disease in Havana. The rains this season have been more than usually heavy in the island.

Philadelphia Pediatric Society.—At a stated meeting held June 12th, Dr. Joseph Sailer exhibited a child presenting a fluctuating swelling in the occipital region, with thrill on palpation, and a murmur on auscultation, which was thought to be due to a form of venous aneurism. Dr. Alfred Hand presented a communication entitled "Acute Adenitis (Glandular Fever) in Children, with Remarks on Terminology and Treatment." Dr. J. P. Crozer Griffith presented a report on three cases of influenza simulating glandular fever. Dr. H. D. Marcus read a report of a case of gravel. Dr. W. R. Nicholson reported a case of infection with the bacillus pyocyaneus. Dr. Charles A. E. Codman reported a case of leucocythæmia.

New York State Conference of Charities and Correction.—Invitations were recently issued by the Hon. William R. Stewart, president of the New York State board of charities, to fifty persons interested in charities and charitable work, to meet in the United Charities Building, at 105 East Twenty-second Street, New York, to organize a "State Conference of Charities and Correction." At this meeting the following officers were elected: *President*, Hon. William P. Letchworth, of Portage; *Vice-Presidents*, Mr. Robert W. De Forest, of New York, Hon. William J. Morgan, of Albany, and Rev. Thomas A. Hendrick, D.D., of Rochester; *Secretary*, Mr. Homer Folks, of New York; *Assistant Secretaries*, Mr. Frederic Almy, of Buffalo, Dr. John F. FitzGerald, of Rome, and Mr. Clarence V. Lodge, of Rochester; *Treasurer*, Mr. Frank Tucker, of New York. It is proposed that the first meeting of this conference shall be held in Albany in November next. In the main the work of the New York State Conference of Charities and Correction will be almost identical with that of the national conference of the same name, except that its scope of labors will not extend beyond the limits of New York State.

Pathological Society of Philadelphia.—At a stated meeting held June 14th, Dr. D. J. McCarthy demonstrated the histological changes in the cells of the sympathetic ganglia from animals suffering from rabies. Dr. M. P. Ravenel presented a communication in which he reported several instances in which bovine tuberculosis was transmitted to human beings. Dr. J. Hendrie Lloyd presented a large cystic kidney from a patient who exhibited aphasia due to uræmia. Dr. Lloyd and Dr. A. M. Seabrooke exhibited the heart and spleen from a patient who had passed through an attack of typhoid fever, and developed symptoms of malignant endocarditis, for the relief of which antistreptococcic serum was unsuccessfully employed. The heart presented vegetations on the mitral leaflets, and the spleen was greatly enlarged and infarcted. Dr. A. O. J. Kelly presented the breasts removed surgically from a woman on account of malignant disease. One of the growths was apparently a carcinoma, while the other was complicated by an enormous chronic hæmatoma. Dr. H. L. Williams exhibited the heart and aorta from a patient in whom gold wire and electrolysis had been employed for the cure of an aneurism of the aorta.

Dr. James F. McKernon has recently been elected professor of otology in the New York Post-Graduate Medical School and Hospital.

College of Physicians of Philadelphia.—At a special meeting held June 18th, the president, Dr. W. W. Keen, announced the completion of the $50,000 library endowment fund.

Dentistry at the International Medical Congress.—It has been decided by the executive committee of the Paris congress to admit as members of the congress all dentists who are duly qualified in France or abroad, even though they are not qualified in medicine or surgery. Members of the dental profession who wish to join the congress will be attached to the section of stomatology.

The Institute of Homœopathy.—At the fifty-sixth annual meeting of this society in Washington last week the following officers were elected: *President*, Dr. W. W. Van Baum, of Philadelphia; *Vice-Presidents*, Drs. A. B. Norton, of New York, George Royal, of Des Moines, and Flora N. Ward, of San Francisco; *General Secretary*, Dr. Eugene H. Porter, of New York; *Recording Secretary*, Dr. Wilson A. Smith, of Chicago; *Treasurer*, Dr. T. Franklin Smith, of New York; *Registrar*, Dr. Henry C. Aldrich, of Minneapolis.

The National Eclectic Medical Association held its thirtieth annual meeting last week in Atlantic City. The following officers were elected: *President*, Dr. E. Lee Stanley, of St. Louis; *First Vice-President*, Dr. J. D. McCann, of Monticello, Ind.; *Second Vice-President*, Dr. A. B. Young, of Memphis, Tenn.; *Third Vice-President*, Dr. J. R. Duvall, of Atlanta, Ga.; *Recording Secretary*, Dr. Pitts Edwin Howes, of Boston; *Corresponding Secretary*, Dr. N. A. Graves, of Chicago; *Treasurer*, Dr. W. T. Gemmill, of Forest, O. The next meeting will be held in Chattanooga, Tenn.

A Would-Be Disseminator of Smallpox.—A man in an Illinois town was angered by the health authorities, who insisted upon the vaccination of his daughter, and devised a novel plan for revenge. There were some cases of smallpox in the town pesthouse, and the fool deliberately made his way into the place in order to infect himself and his clothing with the germs of the disease and so spread it through the town. But he was so pleased with his trick that he couldn't help telling of it, and now the health people have caught him and bathed him, and will keep him in quarantine for some weeks.

The Study of Tropical Diseases by an Army Medical Board.—It is stated in the *Boston Medical and Surgical Journal* that a board of medical officers has been appointed to meet at Camp Columbia, Quemados, Cuba, for the purpose of pursuing scientific investigations with reference to the infectious diseases prevalent on the island of Cuba. The board will act under instructions from the surgeon-general of the army. The detail for the board consists of Major Walter Reid, Surgeon U.S.A., and Acting Assistant Surgeons James Carroll, Aristides Agramonte, and Jesse W. Lazear. It is understood that the board will devote attention chiefly to the investigation of yellow fever. Dr. Agramonte has been studying this disease in Havana for the past eighteen months, while Major Reid and Dr. Carroll, at the Army Medical Museum in Washington, have been engaged in an exhaustive study of Sanarelli's bacillus and serum, the results of which have already been made public. The work of the board will be done in the army laboratory at Quemados.

Pharmacists in the Public Services.—At a meeting of the Executive Committee of the Louisiana State Pharmaceutical Association, held at New Orleans, June 6, 1900, resolutions were adopted indorsing the action of the American Pharmaceutical Association in its efforts to obtain recognition of the profession in the army, navy, and Marine-Hospital service of the United States, and a fair compensation for the duties performed by the pharmacists in these services. Resolutions were also adopted indorsing the movement to obtain for the hospital stewards of the Marine-Hospital service the change in title from that of "hospital steward" to "senior," "junior," and "assistant pharmacist," with the respective pay of $1,200, $900, and $720 per annum, with the present perquisites, and the concessions now granted junior medical officers.

Reciprocity in Medical Licensure.—At the Washington meeting of the American Institute of Homœopathy the committee on legislation made a report advocating uniformity in medical license laws of the various States which will permit an exchange of licenses between States. The co-operation of the American Medical Association and of the National Eclectic Association and other organizations interested in medical licensure is to be requested. The draft of the bill submitted, which will be introduced in Congress, authorized the appointment of a commission of three physicians, representing respectively the American Medical Association, the American Institute of Homœopathy, and the National Eclectic Medical Association, to examine existing laws of the various States, and to recommend such additional legislation as may be found necessary to secure a uniform and efficient standard of qualification.

Complaints against British Army Hospitals in South Africa.—A despatch to *The Sun* from Cape Town states that *The Times* of that city has published an interview with a colonial volunteer, who complains bitterly of the hospital arrangements. He declares that the accommodations, clothing, and food are insufficient, and that there are extortion and robbery by the orderlies, who are largely left without supervision owing to the paucity of medical officers. He speaks in terms of the highest praise of the nurses from Netley.

The "Goutte de Lait" Society is an organization established recently at Rouen, France, with the object of furthering a rational infant feeding. Every effort is made to induce mothers to nurse their own infants, but when this is impossible, the society furnishes a specially prepared and sterilized milk in suitable quantity for one or two sous a day.

The Centenary of the Royal College of Surgeons.—It is proposed to celebrate the centenary of the foundation of the Royal College of Surgeons of England on July 25th and 26th next. On Wednesday, the 25th, there will be a conversazione at the college in the evening. The following day a meeting will be held in the theatre of the University of London in the afternoon, and this will be followed by a festival dinner in the hall of Lincoln's Inn.

A Children's Hospital at Athens.—It is stated in the *British Medical Journal* that, on the initiative of Princess Sophia of Greece, a hospital for children has recently been built in Athens. It is appropriately named "Saint Sophia." The hospital consists of twelve separate buildings, each destined for the accommodation of patients suffering from one form of disease. Four of these are set apart for contagious cases. The new hospital was lately formally opened in the presence of the whole royal family of Greece, the high officers of state, and the municipal authorities of Athens.

Missionaries Lose a Hospital.—Three woman medical missionaries, Drs. A. H. Kelsey, Kaku Sudo, and Hana Abe, the two latter being Japanese, some time ago established the Negishi Hospital, near Yokohama, and ran it in conjunction with their missionary work. Recently, however, the Buddhists gained control of the hospital, and decreed that, while the ladies might continue in medical charge, there should be no more Christian doctrine taught there. The three physicians have, therefore, left the institution, and have opened a dispensary in the neighborhood, where they may resume their medical missionary labors.

Unveiling of the Hahnemann Statue.—The statue of Samuel Hahnemann, which has been erected on the east side of Scott Circle, Washington, was formally dedicated on the afternoon of June 21st. The statue was formally presented to Dr. C. H. Walton, president of the American Institute of Homœopathy, by Dr. J. H. McLelland, of the memorial committee. Dr. Walton then presented it to the government, and it was accepted by Colonel Bingham, superintendent of the public buildings and grounds of Washington. Attorney-General Griggs delivered a brief address. As the draperies were removed from the statue, an ode to Hahnemann was read by Dr. William Todd Helmuth, of New York. The statue, which is of bronze, is the work of the sculptor Niehaus, and its artistic merits were certified to by the National Sculpture Society before permission was given for its erection in Washington.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending June 23, 1900. June 18th.—Passed Assistant Surgeon A. R. Alfred detached from the *Texas* and ordered to the Asiatic station via the *Nippon Maru*, sailing from San Francisco, July 10. The following are commissioned assistant surgeons, to take rank from June 7, 1900, in the order named: J. J. Snyder, H. A. Dunn, A. Stuart, E. M. Blackwell, W. H. Ulsh, M. V. Stone, C. R. Burr, G. F. Freeman, R. O. Marcour, J. K. Payne, Jr., J. Stepp, C. H. DeLancy, F. M. Bogan, R. K. McClanahan, W. E. G. High. June 20th.—Passed Assistant Surgeon G. A. Lung, order of May 25th modified; ordered to the Cavite naval station. June 21st.—Assistant Surgeon J. C. Thompson detached from the naval hospital, Yokohama, Japan, and ordered to the *Newark*.

Obituary Notes.—Dr. Julius Althaus died in London on June 11th, at the age of sixty-seven years. He was a graduate of the University of Berlin in 1855, and soon thereafter settled in London. He was well known for his writings on diseases of the nervous system, and especially on the therapeutic applications of electricity. He was one of the founders in 1866 of the Hospital for Epilepsy and Paralysis.

Dr. Benjamin Douglas Howard died at Elberon, N. J., on June 21st, at the age of sixty years. He was born in England, but was graduated in medicine from the College of Physicians and Surgeons in this city in the class of 1858. He served during the Civil War as surgeon in the regular army, and at the close of the war, after a period of study abroad, was appointed professor of operative surgery in the medical department of the New York University. Subsequently he held chairs in several other medical schools, and in 1873, his health failing, gave up practice and went abroad. He finally settled in London, and took out in 1877 the qualifications of M.R.C.S. Eng. and F.R.C.S. Edin. He was on a visit to this country at the time of his death.

Dr. Tommaso Crudeli, of Rome, well known for his writings on hygiene, died recently. He was formerly professor of anatomy and later of hygiene at the University of Rome, and was an Italian senator.

Dr. B. W. MacNichol died at his home in Westchester, this city, on June 22d, of pneumonia, at the age of forty-two years. He was born in Rondout, and was graduated from the Jefferson Medical College in 1884. He was for several years health officer of the town of Westchester before its incorporation into New York City.

Dr. Lloyd Morris Horwitz died at Helena, Mont., on June 22d, at the age of thirty-eight years. He was graduated from the college department of the University of Pennsylvania in 1882, and from Jefferson Medical College in 1884, serving subsequently as resident physician in the Philadelphia Hospital. He was a son of Dr. Phineas J. Horwitz, U.S.N., of Philadelphia.

Progress of Medical Science.

New York Medical Journal, June 23, 1900.

Inflammation of Meckel's Diverticulum with Resulting Gangrene of the Intestine, Simulating Appendicitis.—W. P. Nicholson reports the case of a young man aged twenty years, who was seized with abdominal pain simulating colic and referred to the left of the umbilicus. Gradually the symptoms of intestinal obstruction developed while the pain shifted to the region of the right iliac fossa. Later the condition became such that a diagnosis of appendicitis with general peritonitis was made, and the abdomen was opened. A coil of distended intestine, jet-black in color, was found crossing the wound at a right angle. The surrounding coils were bound together by lymph. In separating the coils of intestine, the gangrenous portion presented the appearance of bifurcating into two unequal parts, and these were separated. The smaller, about the size of the thumb, was followed in a direction upward, inward, and backward toward the mesentery, to which its bulbous tip seemed attached by strong adhesions. When this was separated, the gangrenous portion of the intestine was easily withdrawn from the cavity, and it was now seen to be the small intestine, entirely gangrenous for about seventeen inches, with a blind tube about five inches long springing from the convex border. Another coil of intestine that had been in contact with the gangrene presented a gangrenous spot about the size of the thumb-nail, and the omentum that covered it was totally gangrenous. The intestine was resected and joined with a Murphy button, the omentum was tied off, and after thorough washing of the abdomen the gangrenous spot was brought up to the wound and well packed about with iodoform gauze, and much of the wound left open. The patient was put to bed in as good condition as when the operation was begun. The vomiting ceased after this, and there was apparently some improvement; but later in the day evidence of increasing failure developed, and he died eighteen hours after the operation. The specimen proved to be a Meckel's diverticulum, inflamed and gangrenous, though there was no evidence of any band constriction, and no obstruction in this sense.

The Value of the Tuberculin Test in the Diagnosis of Pulmonary Tuberculosis.—J. M. Anders collates the experience of various observers, and gives his own in three cases in which the tuberculin test gave a positive reaction which was verified by the subsequent course of the cases. Anders has a fixed belief that tuberculin will tend to occupy its true sphere of usefulness just in proportion as the profession will in future keep in mind two rules as a guide—to wit, moderate dosage and the limitation of its usage to suspicious (incipient) cases and those that are unrecognizable by other means. He entertains no doubt that if these principles were enforced the re-use of tuberculin as a diagnostic agent would rapidly become general, and the results prove highly satisfactory. Finally, if the use of tuberculin as a therapeutic measure in tuberculosis was abandoned (since this rests upon a misconception of the nature of the agent), much of the opposition to an invaluable aid in the diagnosis of latent and incipient cases would be removed. A valuable bibliography is appended.

The Advantages of the Pneumatic Cabinet or Differentiator in the Treatment of Pulmonary Tuberculosis.—J. C. De Vries explains the theory of action of the pneumatic cabinet, the main effect of which is the reduction of pulmonary congestion. It is a most powerful measure for the arrest of hæmoptysis, but when a profuse bleeding points to acute local necrosis as its cause, the cabinet must be used with great caution and in such a way as to diminish vascular tension without tissue distention until the bleeding vessel has closed. In general the cabinet is an instrument by means of which the following results are sought: (1) The strengthening and developing of weak and poorly expanded lungs; (2) the arrest of pulmonary disease in its earlier stages; (3) the prolongation of life with comparative comfort in those cases of pulmonary disease in its later stages in which a cure is impossible.

Clinical and Pathological Observations on Some Early Forms of Epithelioma of the Skin.—By J. A. Fordyce.

Rampancy: The Fervor of the Forehead. A Study of the Anterior Metopic Lobule.—By W. Wood.

Iodine-Bearing Drugs in the Treatment of Chronic Purulent Otorrhœa.—By C. L. Felt.

Perimetric Diagnosis.—By J. W. Sherer.

Boston Medical and Surgical Journal, June 21, 1900.

The Law of Dying Declarations.—M. J. Sughrue summarizes the laws bearing on this point. Among the facts stated we note that it is not necessary that the declarant should be actually breathing his last; even though he lived some time, the declaration is competent if made under a sense of impending death. The form of the declaration is immaterial. It may be made orally, in writing, or may be communicated by signs. In passing upon the weight to be given to dying declarations the jury have a right to consider all the circumstances under which it was made, and all the conditions by which the dying person was surrounded, and the state of mind of declarant, as shown by all that was said and done. Conduct, deportment, condition, all should be noted by the person who is to be a witness. Declarant's conduct in saying farewell to his relatives, in making such provision as is made by persons about to die; if the declarant is a Catholic, if he receives extreme unction, this is of importance as indicating the state of mind. It will be found a most useful practical rule in these cases first to ascertain the state of mind of the dying person, and after that an expression by him that he has no hope of recovery, then to listen to a recital of the story of the crime. It is because of a failure to proceed in this way that physicians frequently obtain an account of a crime which cannot be used in evidence, and it is more often because of inadvertence than want of knowledge; but the result is equally disastrous so far as a successful prosecution is concerned. Particularly is this true in abortion cases, in many of which, apart from the evidence obtained at the autopsy, there is no testimony save the dying statement of the person operated upon, which by reason of the carelessness or ignorance of the person hearing the statement is worthless as evidence.

A Case of Extra-Uterine Pregnancy.—F. Holyoke gives notes of an autopsy made on a woman nine and a quarter hours after death. She complained of terrible abdominal pains, went into collapse, refusing to see a physician, and died. The autopsy showed that large, black, tarry clots covered the omentum, and the abdominal cavity was filled with clots and serum. Beneath the omentum there was found what looked, at first sight, like a large, rupture ovarian cyst with a very vascular wall to which the omentum and intestines were extensively and firmly adherent. This cyst lay between the folds of the right broad ligament. It reached as high as the umbilicus. The cyst wall was ruptured in the upper anterior part. The uterus was pressed high up out of the pelvic cavity to the left, which accounts for the inability to find the os by vaginal examination before the autopsy. This abnormal position of the uterus was produced by the combined pressure of extravasated blood in the posterior cul-de-sac and the forcible bulging of the tumor anteriorly. The uterus was six inches long, the cervix softened and filled with mucus. The body of the uterus was soft and thickened proportionately to its size, though the enlargement was more in the long axis. The lining of the uterus was softened and very pale. The tumor was ruptured at the site of the placenta. In breaking up adhesions the sac wall tore readily, showing, beneath, the amnion, unbroken and adherent throughout to its covering, which was composed of the anterior and posterior layers of the broad ligament; the pregnancy being tubal in origin, and primary rupture having occurred in the early months. The amnion contained a six-months fœtus, lying transversely with its breech toward the right ilium.

The Marks Produced by Pistol Shots.—G. De N. Hough has made experiments with various pistols and bullets of different calibre. The marks consist of the bullet-hole, burn, smut, and tattoo. The articles deals too largely with figures and comparisons to be abstracted, but it is a valuable contribution to the literature of pistol-shot wounds.

Closing Statement for the Remonstrants to the Massachusetts House Bill No. 917, entitled "An Act for the Further Prevention of Cruelty to Animals." Before the Joint Committee on Probate and Insolvency, March 15, 1900.—By H. C Ernst.

Realism in Medicine.—By A. T. Cabot.

Philadelphia Medical Journal, June 23, 1900.

A Contribution to the Study of Exophthalmic Goitre.—Alfred Gordon cites cases in which goitre followed genital affections, floating kidney, nasal affections, etc. He finds that clinical observation, experiments in laboratories, and facts of autopsies, all compel us to look at the disease as having a nervous origin. Scientists generally admit that all the phenomena are the result of a permanent irritation of the vasodilator nerves. Three tables are given, one showing the results of medical treatment, one of operations on the thyroid gland, and one of operations on the cervical portion of the sympathetic nerve. In conclusion the author says that if the sympathetic nerve is the immediate cause of exophthalmic goitre the treatment must be directed to that nerve. If the syndrome of the disease is the result of a mechanical pressure on the sympathetic nerve the pressure must be removed, and if the symptoms persist the sympathetic must be operated upon. If the syndrome of the disease is the result of reflex influence from some remote affection, as fibroid uterine tumors, nasal polyps, etc., these must be removed; and if the symptoms persist the sympathetic nerve must be operated upon. If the syndrome of the disease occurs during the course of any spinal or other organic nervous disease operation should be abstained from. If there is no apparent cause the sympathetic nerve may be operated upon. We should never operate upon the hypertrophied thyroid gland. Medical treatment can be used if the patient refuses an operation, but under it we can never expect any permanent cure or entire removal of the symptoms.

Scarlatina: Some Further Experiments.—William J. Class, believing that the diplococcus described by him as the specific causative factor in scarlatina has had its specificity demonstrated beyond reasonable doubt, has undertaken a search for an antitoxin. A toxin fatal to mice was obtained from pure cultures. Female swine were used for testing susceptibility. A serum has been prepared, and the author purposes to test its effects in the first suitable case of scarlatina that presents itself. He feels confident that investigation will prove the germ he has described to be the true cause of the disease.

Annual Address on General Medicine before the American Medical Association.—By J. A. Witherspoon.

Mütter Lectures of the College of Physicians of Philadelphia.—By John B. Roberts.

Angina Pectoris.—By Clifford Allbutt.

Journal of the American Medical Ass'n, June 23, 1900.

Pathology of Acquired Heart Disease in Children.—J. Dutton Steele first considers the nutrition of the heart in childhood, and finds that the tissues respond more quickly and more readily to stimulation and grow more vigorously in early life than after puberty. The tissues of the child are more yielding and more likely to give way under a sudden distending force than the more closely knitted tissues of older people. The local nutrition of the heart is apt to be better than in the adult because the nutrition of the organism as a whole is better. The effect of acute rheumatism on the heart is studied, and it is found that heart lesions are commoner than after rheumatism in the adult, and rheumatic diseases in children appear very virulent. Puerperal infection in the new-born, acute infectious diseases, diphtheria, measles, rachitis, and scarlatina are all considered in their influence upon the heart. Peri- and endocarditis are not so common as inflammations of the myocardium. In pancarditis any of the three tissues may be the seat of the greatest involvements. Measles has little or no effect on the heart. Lesions of the cardiac tissues are lastly discussed.

Diagnosis of Heart Disease in Children.—J. P. Crozer Griffith says the first thing is to determine whether heart disease present is congenital or post-natal. The principal diagnostic symptoms of the first are cyanosis, clubbing of the fingers, thrill, characteristic murmurs, and the absence of any great enlargement. In general it may be said that in diagnosis of post-natal cardiac affections in childhood we should observe the following points: avoid making a diagnosis from the presence or nature of murmurs alone; remember the altered position of the right side of the heart and of the apex-beat in childhood; remember that the presence of an accentuated pulmonary second sound is normal, not pathological; remember that compensation is acquired very easily in childhood, and that the absence of symptoms does not prove the absence of cardiac disease; remember that the most suggestive symptom is dyspnœa, and that œdema must be studied most carefully before it becomes of value as a diagnostic symptom.

Symptomatology of Valvular Heart Disease in Children.—F. A. Packard says heart disease, especially in childhood, has no symptomatology or no group of symptoms pointing to the heart. The child is in some respects more of a free agent than is the adult; becoming uncomfortable from effort, it remains quiet; made dyspnœic by exercise, it ceases its play, while the adult must continue at his work. Fifty-six cases are analyzed. Twenty-nine patients had shortness of breath, ten had palpitation, nine œdema of the legs, seven precordial pain, six epistaxis, five headache, five had been anæmic, four had abdominal pain, four cyanosis, and four blood-spitting. The existence of any abnormality makes careful examination imperative as to the functional activity and physical condition of the heart.

Prognosis in the Heart Diseases of Children.—A. V. Meigs says the prognosis should be more hopeful in children, as a general thing, than in adults. This is because the tissues in the latter are stiffer and, it may be said, almost brittle. Probably the most important difference between prognosis in children and adults is that the former have the better chance of recovery owing to the opportunity they have of outgrowing the disease.

The Pathology of Congenital Heart Disease.—Alfred Hand says many classifications have been suggested, but none is thoroughly satisfactory, and some are too broadly comprehensive. Faults of development are divided into those that occur early (cor biloculare or triloculare), anomalies arising between the sixth and twelfth weeks, and defects occurring about the twelfth week resulting in anomalies of the valves, persistence of fœtal opening, etc. Other changes are usually the result of fœtal endocarditis.

A Protest against Some of the Evils in the Profession of Medicine.—Oration in medicine delivered at the fifty-first annual meeting of the American Medical Association, held at Atlantic City, N. J., June 5–8, 1900, by J. A. Witherspoon.

The Ideal Physician.—Commencement address, Rush Medical College, Chicago June 21, 1900, by W. W. Keen.

Some Thoughts on Teaching Materia Medica and Therapeutics, Emphasizing Object-Teaching.—By A. H. Peck.

Should the Medical Undergraduate be Instructed in the Principles of Dentistry?—By M. L. Rhein.

Is a Medical Education a Necessary Qualification for Dental Practice?—By Alice M. Steeves.

The Handwriting on the Wall: What Does it Portray?—By A. E. Baldwin.

Report of Case of Primary Carcinoma of the Liver.—By R. C. Harris.

Limitations in Dental Education.—By Eugene S. Talbot.

The Medical News, June 23, 1900.

Some Points in the Management of Obstetric Cases in Private Practice.—Joseph Brown Cooke compares a pregnant woman to a ship at sea. The probability is that no accident will occur, yet the greatest watchfulness is necessary to reduce still further the chance of anything going wrong. In the first place, an accurate history of every case should be kept from the time the patient is first seen to the end of the puerperium. The urine should be examined within a week of the patient's first visit, then monthly until the end of the seventh month, and after that weekly. Another point of importance is the maintenance of absolute asepsis from the beginning to the end of labor. Three weeks before labor is expected, the author sends to the patient's house a wooden box containing four half-gallon bottles of distilled water; one pint of boric-acid solution for the infant's eyes and mouth immediately after birth; one pint of standard sterile salt solution for infusion; three agate basins or trays, one for sponges, one for towels, and one for receiving the placenta with the gush of blood that follows it, and a two-weeks' temperature chart for the nurse's use. The author has discarded every form of so-called aseptic bag, and makes no attempt to carry anything sterile to his cases except operating-gown in a muslin case, gauze, cotton, cord dressings, and sutures of silk and catgut. Instruments and silkworm gut, if it is needed, are boiled in a long, narrow copper tray of such size and shape that it will hold any obstetrical forceps together with cord, scissors, catheter, douche-tube, and any other instruments that may be required in special instances, covered with the minimum amount of water, to secure rapid boiling.

Some of the Physiological Methods and Means Employed by the Animal Organism in its Continual Struggle against Bacteria for Maintenance of Life and Health.—By S. J. Meltzer.

A Protest against Some of the Evils in the Profession of Medicine.—By J. A. Witherspoon.

British Medical Journal, June 16, 1900.

A Case Bearing on the Parasitic Nature of Mammary Cancer.—A. Marmaduke Sheild reports the case of a woman, thirty-six years old, who came to him in June, 1898, suffering from Paget's disease of the left nipple. The case was watched until the diagnosis was definitely established. The so-called psorosperms were found in scrapings of the patch, but there was no perceptible deep induration or signs of cancer present. Nevertheless, in order to make sure of the prevention of cancer, the entire breast was removed. Examination of the skin revealed the usual appearances of malignant dermatitis, but there was no evidence of cancer in the breast beneath. All went well until April, 1900, when a lump appeared in the skin near the sternal end of the scar. This swelling, which was hard, about the size of a large pea, and red in color, was excised and found to be a spheroidal-celled carcinoma, with much fibrous tissue. There was also extreme vacuolation of the epithelial cells—so-called psorosperms. The author regards this case as one showing that the infective nature of so-called malignant dermatitis of the nipple is very extensive and insidious, and takes place far more early than is generally believed. We can hardly doubt, he says, that in this instance there was a connection between the two affections. There was certainly no cancerous change in the mamma to be detected, and he will not admit that "cell proliferation" could have existed or spread so far.

An Easy Method of Mounting and Preserving Mosquitos.—D. C. Rees describes the following simple method which is employed in the laboratory of the London School of Tropical Medicine: "Kill the mosquito by placing it in an ordinary killing bottle, or if this is not available a little chloroform or tobacco smoke will do as well; when dead turn it over on its back, separate the legs if they are together, place a large drop of thick xylol Canada balsam on a slide, invert this gently on to the mosquito, and in this way it is picked up without any chance of injury; then with a fine needle spread out and arrange the wings and legs, and if necessary press down the thorax very carefully. Next pour on some thin xylol Canada balsam; as this runs out it straightens the proboscis and antennæ, and they do not, as a rule, require to be touched. Put the specimen on one side to harden, then chip off the excess of Canada balsam, place glass ring on, and fill up the chamber that is thus formed with Canada balsam. The upper surface of the Canada balsam should be convex, so that when the cover-glass is applied no air bubbles are included. Allow the specimen to harden before sending by post. If the glass rings are not at hand the specimen will keep quite well in the Canada balsam alone, and the last part of the mounting may be completed after the specimen has been sent home. If the mosquito is intended for photographing great care must be taken in mounting it so that it lies as far as possible in one plane."

The Treatment of Pneumonia.—Referring to a previous report of a case of pneumonia treated with Dover's powder, A. de Winter Baker relates the case of a boy thirteen years old, who was suffering from pneumonia of the left lower lobe complicated with otitis media. Two days after the lad came under treatment, tubular breathing was heard in patches at the base of the left lung behind and also slightly at the left apex. The patient was sleepless and delirious. The author ordered Dover's powder gr. v. every four hours, and says the result was magical. The delirium was quieted, the skin acted freely, and the general aspect improved immensely. The dose was subsequently reduced to gr. iiss., and the remedy was continued for about two days. The boy had no alcohol during the acute stage, and only after the temperature fell a little port wine was given to stimulate the appetite. After the Dover's powder was commenced the temperature never rose above 103° F., whereas it was 104° F. the previous day. There was never any necessity for the administration of oxygen or strychnine. The author attributed the good results obtained in this case almost entirely to the Dover's powder.

A Neglected Point in the Treatment of Strangulated Hernia.—C. Hamilton Whiteford says that in a case of this nature the surgeon usually concerns himself chiefly with the condition of the strangulated bowel, which, if gangrenous, is either drained or resected, and if viable is pushed back into the abdomen. In the latter case the patient probably remains absolutely constipated, continues vomiting, and dies within forty-eight hours. He is suffering from an accumulation, above the obstruction, of liquid filth which is rapidly poisoning him. The point which is so frequently overlooked is that his chance lies in the direct evacuation of these intestinal contents. This can be done only by draining the distended bowel through a large tube for several days. A few cases of advanced strangulated hernia end in recovery after reduction of the strangulated bowel, by discharging enormous quantities of liquid fæces per anum, but the majority die with unemptied intestines. This drainage of distended bowel, the author says, is simply the application to strangulated hernia of the principles involved in the treatment of obstructions taking place within the abdomen.

A Recent Observation on Filaria Nocturna in Culex: Probable Mode of Infection of Man.—By George C. Low.

Notes on Gastro-Enteritis, Dysentery, and Enteric Fever.—By J. W. Washbourn.

Remarks on Mauser-Bullet Wounds and Amputation.—By Sir William Stokes.

Two Lectures on Antenatal Diagnosis.—By J. W. Ballantyne.

Clinical Lectures on Pneumonia.—By James Barr.

The Lancet, June 16, 1900.

The Management of the Anæsthetic in Cases in which Respiratory Impediment Exists.—By Dudley W. Buxton. The writer remarks upon certain cases in which interference with respiration occurs in the course of anæsthesia. First, obstructions arising in the upper air passages may be due to enlarged tonsils with a partially occluded nasopharynx, or to pharyngeal abscess, enlarged tongue, or old adhesions between the posterior wall of the pharynx and the tissues about the faucial arches. Two instances in children are quoted. There may also be mechanical interference intensified by the anæsthetic. Cases are cited. Posture is another difficulty, especially when the patient must be placed more or less upon the face and in semi-prone postures. When chloroform is used, the hampered chest movements may produce cyanosis. The following propositions are thought worth tabulation: (1) The individual patient possesses a certain respiratory power. Individuals differ enormously in this respect, and it is the business of the anæsthetist to make himself acquainted with what the author terms the "personal respiratory equation of the patient." (2) This individual power of respiration is interfered with by every form of anæsthetic, more by some than by others, but under any anæsthetic the power of inspiration and expiration is lessened, and in some cases to a very marked degree. (3) This lessened respiratory power may be of little or no consequence under normal conditions, but it becomes a factor of grave danger should any intercurrent cause of respiratory obstruction occur.

Surgical Aspects of Constipation.—S. L. Woolmer records two cases to demonstrate a rare sequel to the most common morbid condition known. Aneurismal dilatation of the colon as the result of chronic constipation exists, but works on surgery do not mention it. In both instances cited the condition of the patient was reduced to one of great gravity. Nothing short of operation could give relief. The histories are given with illustrations. In both cases, the site of the tumor was the last portion of the sigmoid flexure.

An Address on the Value of Tuberculin in Diagnosis and Treatment.—Delivered at the Medical Graduates' College and Polyclinic on February 9, 1900, by T. McCall Anderson.

Fractures of the Inferior Maxillæ Treated by a Modified Method of Wire Suture Aided by the Electro-Motor.—By T. S. Carter.

Contribution to Our Knowledge of Uric-Acid Salts.—By F. W. Tunnicliffe and Otto Rosenheim.

Pyo-pneumothorax due to Empyema Perforating the Lung; Recovery.—By F. Percy Elliott.

Bilateral Dislocation of the Hip, Presumably Congenital.—By Thomas Philip Cowen.

A Few Cases of Brain Injury Clinically Examined.—By Edmund E. Dyer.

Three Cases of Puerperal Eclampsia.—By Frederick Spurr.

Differentiation in Diabetes.—By F. W. Pavy.

Berliner klinische Wochenschrift, June 4, 1900.

The Employment of Alcohol as a Means of Disinfection and the Theory of its Action.—Salzwedel and Elsner have performed a series of experiments by dipping threads in various bacterial cultures and then dipping the threads in an alcoholic solution. They find that for the sterilization of threads infected in this way with staphylococci pus, the bactericidal effect is most certain when the solution has about five per cent. alcoholic strength. In general it appears that the effect is heightened by a slight warming of the alcohol, but the temperature should not exceed 30° C. They further believe that the disinfecting effect of alcohol is due to its dehydrating properties, whereby an environment is established inimical to bacterial development.

Influenza and Chronic Heart Disease.—Dr. Schott (Bad Nauheim) presents several statistical tables showing the distribution of influenza during recent epidemics and the relative proportions between the total number of deaths in some of the European armies and deaths due to cardiac disease. He claims that his figures show that influenza leaves many cardiac evils in its train.

Conception of the Word "Gastric Dilatation" in German Literature since 1875.—By A. Hesse.

The Measure of the Strength of the Heart Sounds, a Diagnostic Aid.—By H. Bock.

Abdominal Typhus.—By Dr. Rumpf.

Deutsche medicinische Wochenschrift, June 14, 1900.

The Importance of the Palatine Tonsil in Young Children as a Port of Entry for Tuberculous Infection.—F. F. Friedmann, believing that the tonsils are the seat of the first manifestations of a number of infectious processes, has carried out a number of histologico-bacteriological examinations to determine whether in children they may not serve as the entrance point in tuberculous disease. Ninety-one autopsy cases and fifty-four living subjects were examined. The processes are described. From the work done it is thought that tonsillar tuberculosis exists under two conditions—a primary infection from food and a secondary infection from sputum containing bacilli. In spite of Koch's doubting that a single instance of human tuberculosis can be positively and without objections attributed to eating the flesh or drinking the milk of a tuberculous animal, the author can see no other explanation for a number of his cases. Primary infection from food is much more frequent in children than the secondary from infectious sputum.

The Dangers of Lumbar Puncture.—F. Gumprecht relates an instance of sudden death after lumbar puncture, making the sixteenth in the literature. The preceding fifteen are briefly referred to. He adds two other instances in which death was not sudden, but occurred a few hours after puncture.

Does there Exist an Amblyopia due to Lack of Use?—By P. Silex.

Contribution to the Question of Hæmophilia.—By Th. Klein.

Isolated Deltoid Paralysis.—By A. Steinhausen.

French Journals.

Treatment of Tuberculosis of the Kidney.—Tuffier says the diagnosis includes, besides a recognition of the affection, a knowledge of the condition of the opposite kidney. When we say that every renal tuberculosis diagnosticated should lead to extirpation, it is equivalent to stating that lesions already severe and extensive are to be treated surgically, since positive manifestations are often to be made out only when the condition is already somewhat advanced. Catheterization of the ureter does not always give the key to diagnosis; it is attended with some dangers, and it is a procedure which is justified only by special clinical circumstances, which are, after all, quite rare. A study of the total quantity of urine without catheterization of the ureters usually permits of serious presumptive evidence as to the state of the renal filter, and in his own experience never deceives. Purulent urine suddenly becomes clear and thus gives testimony as to the functional activity of a single kidney. As often this bacillary localization has an injurious effect upon the general health of the patient, surgical intervention is called for whenever it is possible. Lumbar nephrectomy is the method of choice. The operation when entirely justifiable gives brilliant and lasting results, and is a step in advance in the therapy of this affection.—*Journal des Praticiens*, June 9, 1900.

Secondary Cancer of the Chyliferous Passages; Chyliform Ascites.—Nattan-Larrier concludes that primary cancer of very small volume can give rise to an enormous secondary cancer; just as the secondary cancer can spread by way of the veins and produce cancer of the liver. In the same manner it may become generalized by way of the lymphatics and produce cancer of the lymphatic passages. Secondary cancer of the mesentery, of the thoracic duct, and chyle ducts may evolute in a latent manner and give other signs of a cachexia of rapid course and a moderate chyliform ascites. Obliteration of the thoracic duct and invasion of the mesentery are not sufficient to produce chylous ascites or chyliform ascites if there is not added a solution of continuity or an obliteration of the chyle ducts susceptible of impeding the course of the chyle. Cancerous invasion of the peritoneum when associated with cancer of the thoracic duct can also give rise to chyliform ascites.—*Le Bulletin Médical*, June 9, 1900.

Treatment of Pertussis by Deep Injections of Oil of Gomenol.—Leroux and Pasteau, led by the favorable action of the remedy in bronchitis and phthisis, have tried first inhalations and then deep injections of oil charged with gomenol. Gomenol is a pure natural essence obtained by distillation from a variety of Melaleuca viridiflora cultivated in New Caledonia. Forty patients were experimented upon. From 5 to 10 c.c. of a five-per-cent. oil were injected in the gluteal regions. A series of charts are given with detailed observations in eighteen cases. The results were generally favorable, there being diminution in the number of attacks and shortening of the disease, the average being twelve to fifteen days. Treatment should be persisted in four or five days after the last seizure. The technique of injection is given.—*Le Bulletin Médical*, June 13, 1900.

Renal Tuberculosis.—Albarran says that Tuffier recognizes the value of ureteral catheterization whenever doubt exists about the supposedly healthy kidney. In point of fact these doubts always exist. Tuffier is in error in supposing that the catheter must remain *in situ* for twenty-four hours; from a few minutes to one or two hours is often sufficient. The author says he has practised catheterization of the ureters over one thousand times without accident. He has seen brilliant results from nephrectomy in tuberculous pyonephroses in very cachectic patients with high temperature. Catheterizing the ureters permits us in almost all cases to diagnosticate the state of both kidneys, and presents no dangers when properly done.—*Gazette des Hôpitaux*, June 7, 1900.

Gummata of the Palatine Vault.—Fournier showed a case of atresia of the fauces consecutive to gummous infiltration, and described two forms of lesion, one circumscribed or nodular, and one due to diffuse infiltration causing tumefaction rather than tumor. Five characteristics serve to facilitate diagnosis from the very beginning. They are: deformity of the velum, redness, thickening, hardness or firmness, and immobility or quasi-immobility. When perforation occurs there may be a single or multiple opening of varying diameter, or there may be marginal loss of tissue, or adhesion of the centre with the sides drawn back like curtains at a window, or almost the entire velum may be destroyed. Regurgitation of liquids from the nose in swallowing is one of the most striking symptoms. Another is nasal voice. Ninety-five per cent. of all cases are of the diffuse variety.—*Journal des Praticiens*, June 9, 1900.

Pediatrics, June 15, 1900.

Dangerous Communicable Diseases, How Spread, together with Some Suggestions as to their Restriction.—M. K. Allen says the so-called contagious diseases are usually spread through the medium of atmospheric dust. People should be made to know that dust from handkerchiefs containing dried secretions is laden with germs, and hence is a source of danger. Each soiled handkerchief "should be placed in a paper bag, the top twisted shut, and there remain until it can be boiled." He thinks it not improbable that typhoid is sometimes spread by means of dust containing the germs of the disease. One-third of all children who die under ten years of age die of tuberculosis, and nine millions of the present inhabitants of this country will, at the present rate, die of this disease unless something is done to prevent it. Pneumonia, influenza, diphtheria, typhoid, smallpox, and other contagious diseases are considered in relation to quarantine, disinfection, the responsibility of notification, and the duties of the health board.

A Case of Pneumonia in a Baby Six Weeks Old.—Abraham Goltman relates an instance in which the temperature was 105° F., and the respirations 80. There was visible rapid pulsation in both subclavians and carotids. Stress is laid upon the value of stimulating the benumbed respiratory centre by cold and hot water douches and fairly large doses of drugs considering the age. Strychnine gr. $\frac{1}{150}$ was administered every six hours. Alternating hot and cold plunges for five minutes at a time appeared to work marvellous results.

Some Remarks on Three Symptoms of Rickets.—W. N. Berkeley finds that in many reported cases of paraplegia, anæmia, pseudoleukæmia, hypertrophic cirrhosis, etc., one is strongly tempted to affirm that the real underlying condition was simply rickets. He discusses the three symptoms: rosary, those referable to the head, and those referable to the liver and spleen. In one case related the diagnosis of sarcoma of the spleen had been made.

Foreign Body in the Air Passages.—By J. M. Ray.

Revue de Médecine, May, 1900.

Functions of the Thyroid Gland.—G. Gauthier says that there is no room to doubt that there is a relation of cause and effect between normal functioning powers of the thyroid gland and of the nervous system. The action of the gland is not simply reflex or sympathetic, but direct and intimate upon the development and the nutrition of the nerve cells. Certain cardio-vascular troubles depend upon thyroidism; thyroidin has been proved experimentally to be a heart poison, and like digitalis to have cumulative properties. An injection of thyroid juice lowers blood pressure and dilates the peripheral arteries. In conclusion, all pathological conditions dependent upon a lowering of nutrition may be traced to deficiency of thyroid substance and will often be benefited by thyroid treatment.

Desquamation in Typhoid Fever of the Adult.—Paul Remlinger reports six cases in which desquamation of the skin was observed, which began just at the time when the temperature began to fall. It was scaly in nature, intermediate between that of measles and scarlet fever, and began and was most marked on the lateral portions of the thorax and abdomen. It was limited to the trunk, but in three cases coexisted with alopecia. The author holds that this desquamation is the result of trophic cutaneous disturbance, like falling of the hair. As a prognostic sign it is favorable, indicating the approach of convalescence.

Clinical Study of Some Infectious Diseases.—By H. Roger.

Infantile Gastro-Enteritis.—After a purge and washing out the bowel, a teaspoonful of dry beer yeast or a dessertspoonful of fresh yeast dissolved in 50 or 60 gm. of tepid boiled water should be introduced. The catheter should be withdrawn and the child be kept quiet. Renew two or three times a day. Liquid diet should be given till the fever falls.

Correspondence.

PRIORITY IN THE PUBLIC-BATH QUESTION.

To the Editor of the Medical Record.

Sir: How you manage to be so well informed on all matters medical and hygienic is a marvel. This is illustrated by your editorial of May 12, 1900, in which you were good enough to defend my claims to priority in having introduced public baths in this country, which, as will be shown by an exhibit at the Paris Exposition, is in advance of all others in furnishing the poor with perennial cleansing baths free of all cost.

As a matter of fairness I would ask you to point out the untenability of Mr. Brown's reply to your editorial of May, 1900. You wrote: "Failing to overcome the opposition of Mayors Grant and Gilroy, the doctor 'found' an earnest and able coadjutor in Mr. Goodwin Brown, who in 1895 brought about the passage of a mandatory act, . . . while Mr. Brown deserves credit for aiding Dr. Baruch in this important enterprise, etc."

Any reasonable reader would understand that "this important enterprise" referred to the establishment of free public baths, for which I had been working since 1889, and in which you have taken such great interest for many years. But Mr. Brown chooses to twist your language into meaning he was my coadjutor in the passage of the mandatory act. My connection with the latter is expressed in a letter from Mr. Brown dated April 18, 1895, as follows: "It affords me pleasure to say that the matter which you gave me enabled me to lay before the committee unanswerable arguments, and to you I largely ascribe the credit of the most important measure of the session."

Simon Baruch, M.D.

New York, June 9, 1900.

MOSQUITOS AS A MEANS OF CONTAGION IN LEPROSY.

To the Editor of the Medical Record.

Sir: Replying to Jonathan Hutchinson's statement which you quote in The Medical Record, April 7th, page 616: "The suggestion that mosquitos are a means of contagion in leprosy, has had its advocates. It is, however, I think, conclusively negatived by the fact that of the European immigrants into leprosy districts, scarcely any contract the disease" (*Archives of Surgery*). Let me say that that fact proves nothing. In Japan it is the most notoriously malarial districts, therefore those most infected by mosquitos, Kumagato, Myasaki, Awamori, etc., that are the most leprous. How would Jonathan Hutchinson harmonize that fact with his fish-alimentation theory?

Because in leprous districts it is not the European doctor, nor the immigrant Sister of Mercy who becomes contaminated with leprosy, nor the immigrant negro in malarial districts who contracts malarial fever, is it reasonable to conclude that leprosy is not contagious (inoculable), and that malarial fever is not transmissible by mosquitos? Would any one, because of this last circumstance, dare to say that it is conclusively negatived that mosquitos are a means of contagion in malarial fever?

In the case of the conveyance of plague to man by means of fleas, Dr. Munro, in Montenegro's work, "Bubonic Plague," published in America by William Wood & Company, cites Bandi and Stagnatti, who, observing how few medical men and nurses were attacked by plague, could not believe that the fleas play so important a rôle, since the very greatest care did not prevent fleas passing from the sick to the doctors or their assistants. Yet Simonds' ingenious experiments showed that the plague is transmitted from the rat to man by means of fleas. The healthy rat has very few fleas on him, because he is careful of his toilet. But a sick rat becomes absolutely covered by these insects, because he is neglectful of himself. Simonds put two rats in a cage, one ill of plague, having fleas on it; the other healthy, having none. The healthy one became affected after the death of the sick rat. He then put two rats in a cage separated by a wire netting, one sick of plague, the other healthy, but both without fleas. The sick one died, but the other remained healthy. Thus not until the second intermediary-host factor was at work did contagion take place. Intermediary-host function of fish and mosquitos, in my opinion, is a frequent source of contagion in leprous Japan. There the carp, which feeds mainly on the larvæ of mosquitos, is eaten raw. It is the feast dish, the turkey of Japan, and when served is cut up alive and eaten while the flesh still quivers. If this carp has fed on mosquitos which have sucked a leper's blood, is it unreasonable to believe that it may be the carrier of leprous spores of a bacillary disease from man to man? And because European immigrants to that leprous country may rarely contract leprosy, as rarely as they eat the living carp, is that reason to conclude that mosquitos there may not be a means of leprous contagion?

Albert S. Ashmead, M.D.

THE MODERN HOSPITAL AND ITS RESIDENT STAFF.

To the Editor of the Medical Record.

Sir: In your issue of June 9th appears a report of the meeting of the Medical Society of the County of New York on the evening of May 28th. Among the papers read before that body is one by me entitled "The Governor and His Staff, Being a Glance at the Personnel of a Modern Hospital and a Plea for a Permanent Resident Staff." Your reporter disposes of my paper in three lines, and in those three lines he makes three points: that I dwelt on the incompetence of hospital internes; that I ridiculed the hospital governors, and finally that I failed to offer a remedy for the alleged abuses.

I simply said that the visiting surgeons took no cognizance of a case except their attention was called to it by the house staff; that this house staff sometimes meant a student graduated about five or six months; that by the present hospital system this raw young man was made the judge, the sole judge of what must be done, and done quickly, in a given case; that it requires more judgment and a riper experience to decide offhand and quickly the thing to be done in an emergency, in which an error of judgment may mean death to the sick man, than those young gentlemen—members of the house staff—from the nature of things can possess; for remember, they are green and inexperienced as yet, and not over the furor of enthusiasm that the importance of their high place has inspired.

I said further that if the science of surgery was so rapidly and easily mastered by those young juniors, we have had a wrong conception of the obstacles to be overcome and the great difficulties to be surmounted in acquiring a knowledge of that art.

The man sent from the hospital as its official representative to diagnose the case of a sick woman, whose friends made application for her admission, reported that she was suffering with a contagious disease, and rejected her on that account, though her family physician, who was present, and is the writer, could not agree with him in such diagnosis and was afterward sustained by an expert from the department of health. The physician sent out on this memorable occasion was a very young junior who graduated the previous year, and who had not the slightest compunction to measure swords professionally with a practitioner of twenty years' experience. Another case was cited by me from personal experience in which the ambulance surgeon who was summoned declared a man was suffering from alcoholism, and handed him over to a policeman, who promptly, under protest from the writer, placed him in a cell where he died four hours later. The autopsy revealed fracture of the skull as the cause of death; further examination of the brain and tissues made it plain that the man could not have been addicted to the use of intoxicants—in short, that he was a temperance man.

The errors of judgment, professional and otherwise, committed by these young hospital juniors led me to conclude that their incompetency was clearly proven.

Now, about my ridicule of the hospital governors. This is what I said: that when they put a young man in uniform and gave him charge of an ambulance it was their duty to see that the young so-called surgeon had sufficient knowledge of his business to enable him to make a diagnosis in ordinary cases; that if sometimes diagnosis was difficult, the patient should get the benefit of the doubt, which he did not get; that the governor did not act for the best interests of the hospital, nor with due appreciation of the rights of the community—not to speak of the grievous wrong done to the patient when he sent a young and altogether inexperienced physician to the bedside of one who was desirous of availing himself of the benefits of the hospital. In that case the young doctor, overconfident and bumptious, made a wrong diagnosis, one that reflected on the family physician, put the life of the patient in jeopardy, and put another hospital to unnecessary trouble. I also said that when the governor appointed a man on the house staff, it was for the distinct reason that he knew less than the man he was called on to succeed, and that for the governor's conduct in this matter there was to be found no precedent in the other learned professions, in which merit and known ability are the prime factors in every case where success or promotion is the thing to be attained.

If this is ridiculing the governors, then your correspondent is right. Thirdly, and in conclusion, your reporter says I failed to offer a remedy for the alleged abuses. The correspondent of another paper who was present at the meeting does not agree with your reporter on this point, for he says: "Dr. A. Jacobi spoke briefly in discussion of Dr. Hillis' paper. With much of it he agreed, but he did not see how a better condition of affairs in some respects criticised by Dr. Hillis was practicable. One reform, which he thought might be productive of good results, would be to have the city pay the staff doctors in the institutions which it controls, thereby making it worth their while to stay in the service after they had attained some experience. In conclusion, Dr. Hillis suggested that the house staffs of hospitals should be made up of older and more experienced men, and that they should not be turned away to make room for new applicants just as they have acquired the experience that makes them valuable. Juniors should not be left in charge of a hospital. A six months' graduate of a law school would not be called to argue a case before the supreme court, and Dr. Hillis could not see why a six months' graduate of a medical school should be called on to operate in a case of life or death. Old doctors who have outgrown the manual skill to operate should be employed in the hospitals as an appellate division of the hospital court, where their knowledge and experience could be of use in advising the younger men. 'The worst of all hospitals,' said Dr. Hillis, 'are those where the power of appointing the staff is in the hands of clergymen or of a religious order, regardless of creed or denomination.'" THOMAS J. HILLIS.

June 26, 1900.

STATISTICS OF THE WOMAN'S HOSPITAL FOR 1898 AND 1899.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Will you kindly give space in the columns of the MEDICAL RECORD for the publication of the following statistics, which show the total number of capital operations performed in the Woman's Hospital from January 1, 1898, to January 1, 1900, the character of the cases, and the death rate:

Service of	Vaginal Hysterectomies.	All Other Abdomino-Vaginal Operations	Supra-pubic Hysterectomies	All Other Supra-pubic Abdominal Operations	Total Number of Operations.	Number of Recoveries	Number of Deaths.	Percentages of Deaths.
T. A. Emmet.	1	..	1	14	16	15	1	6.25
H. D. Nicoll..	7	5	29	92	133	127	6	4.51
C. Cleveland..	32	39	29	75	175	162	13	7.42
B. Emmet....	2	4	5	65	76	72	4	5.26
H. T. Hanks.	8	6	10	113	137	125	12	8.75
Totals.....	50	54	74	359	537	501	36	6.70

These figures are made up from the "Record-books of Cases" on file in the hospital, and the medical board pledges itself for the carefulness, fairness, and accuracy of the representations in the facts here given. The records are accessible to any one, properly accredited, who may desire to inspect them. Dr. Bache Emmet was absent in Europe for eight months in 1898, during which time his service was discontinued.

HENRY D. NICOLL, *Secretary of the Medical Board.*

OPERATION IN CANCER OF THE UTERUS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR. I beg to request the correction of a slight, but to me important, error in the report of my remarks on the subject of uterine cancer at page 1067 of the MEDICAL RECORD. I am reported as saying that, in my opinion, "there is no case of malignant disease with adeno-carcinomata of the fundus for which hysterectomy was justifiable, according to the records." What I did say, and have maintained for over twenty years, is, that there is no case of malignant disease of the uterus except cancer originating in and limited to the fundus, for which hysterectomy was justifiable. In proof of this declaration I referred to the melancholy, and not very creditable, records of total ablation for cancer of the cervix, while an absolutely safe and better method of treatment had been amply demonstrated for over a quarter of a century. JOHN BYRNE, M.D.

314 CLINTON STREET, BROOKLYN.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 7, 1900.

WILLIAM H. THOMSON, M.D., PRESIDENT, IN THE CHAIR.

Memorial Address on the Life of Dr. Fessenden Nott Otis.—DR. T. GAILLARD THOMAS read a short address, in which he reviewed, in a fitting manner, the work of the late Dr. Fessenden N. Otis (see page 1073). He was followed by Drs. L. Bolton Bangs and Edward L. Keyes, after which the following resolutions were presented by Dr. Richard H. Derby, and unanimously adopted by the Academy:

"*Whereas*, The New York Academy of Medicine has heard of the death of Dr. Fessenden Nott Otis at New Orleans on the 24th of May, 1900, in the seventy-sixth year of his age;

"*Resolved*, That the following minute be spread upon the records of the Academy:

"Dr. Otis was born in Ballston, N. Y., and was graduated from the New York Medical College in 1852. He was connected for many years with the College of Physicians and Surgeons of this city as clinical teacher, professor and emeritus professor of genito-urinary diseases. He held positions in many of the hospitals in the city. Upon the special subjects which he taught, he was a widely recognized authority. His contributions to the medical press were numerous. Strong in his convictions, he had the courage of them, and while his theories may have been not infrequently challenged, his frank and genial temperament, his freedom from personal littleness or professional jealousy will always be cherished by those whose privilege it was to know the man.

"As an author in other fields than that of medicine, and as an artist of reputation, the world has sustained no slight loss.

"The New York Academy of Medicine hereby records its appreciation of this well-spent life, this loyal devotion to the best interests of science, and this example of a high character."

Pathology of Insolation.—DR. IRA VAN GIESON read a paper on this subject. He stated that the problem of the pathology of insolation, which was still unsolved, was important not only in itself, but also in its relation to other sets of phenomena, such, for instance, as the similarity of certain manifestations of insolation to those in poisoning by snake venom, the losses of consciousness, comatose, convulsive, and tetanoid conditions in general, and to the coma of diabetes and uræmia in particular. The problem was mainly one for the physiological chemist, and the pathological anatomist must follow in his wake. Although, since the great epidemic of sunstroke in 1896, opinions regarding this condition had become unified as regards treatment, we knew next to nothing about its pathology. We could only surmise. Among the various theories which had been advanced, the following were worthy of consideration:

Bacterial origin of sunstroke: Recently the bacterial origin of the disease had been suggested, and perhaps we should not dismiss the theory too peremptorily. Briefly, the theory was that the increase of body heat or the exposure to the conditions under which sunstroke was liable to occur permitted certain bacteria to become infective. The absence of prodromata and sudden onset of the disease argued against this theory.

The caloric theory: The theory that the symptoms of heat-stroke were due to the direct action of the heat was the oldest theory, and had recently been brought into prominence again by the experiments of Goldscheider, Flatau, Ewing, and others, who had found certain changes in the neurons of animals after exposing them to very high temperatures. The animals were placed in heated ovens and then resuscitated, and it was found that their exposure to the heat was followed by lesions in the nerve cells. This theory, Dr. Van Gieson said, failed to explain the origin of the hyperpyrexia in the human subject, and in the animals experimented upon the changes in the cells might have resulted from some concomitant condition, and were not, perhaps, directly due to the heat, although this was the exciting cause. There might have been accompanying changes in the blood. It was known that high temperatures in other diseases were not always accompanied by neuron changes.

The autotoxic theory: The speaker said that his investigations and experiments at the Pathological Institute of the New York State hospitals, during the epidemic of sunstroke in 1896, convinced him that the manifestations of the disease were the result of some poison. It seemed to be a good example of an acute poison originating in the body, and acting most violently on the nervous system, particularly on the ganglion cells which governed the heart and controlled the vasomotor apparatus. The delirium, convulsions, opisthotonos, the mental derangement, etc., could be at least partly interpreted by the changes in the ganglion cells produced by a poison of autogenous origin. In cases which resulted in recovery within a few hours, there was probably very little degeneration of the ganglion cells. Between this grade and those in which the cells were permanently managed, there were probably many intermediate conditions. The source of the poison, as well as its relation to the cessation of perspiration prior and during the attack, were unknown. The sudden onset of the disease in the great majority of cases favored the autotoxic theory. Animal experimentation by Dr. Levene and the speaker had shown that the virulence of the autogenous poison was fully as great as that of snake poison, and in some respects resembled its action. The urine of convalescent patients, when injected into the blood circulation of rabbits, was found to be decidedly hypertoxic, and injections of blood serum taken from two patients gave prompt and decisive results.

Cessation of perspiration: The two classes of animals which perspired most, namely, human beings and horses, were the ones which showed the most classical types of sunstroke, and from this it might be inferred that the occurrence of sunstroke was more or less intimately connected with the cessation of this function. On the other hand, the cessation of the perspiration might be the secondary manifestation of toxic involvement of this secretory function of the sympathetic. It is said that swine showed symptoms of heat-stroke, but it was quite a different disease from that observed in human beings. In swine, when overheated, it was said that the fat which enveloped the animal actually became liquefied, and it was claimed that the melted fat had been extruded both from the gut and mouth. Probably the succession of some of the initial manifestations, expressed in general terms, was as follows: The exciting cause in the form of high external temperature induced a change in the blood: The nature of this change was not known. It might be a change in density, in chemical constitution, or in the addition of a hypothetical toxic agent derived from autogenous sources. The latter factor seemed less probable than either or perhaps both of the first two conditions. As a result of this the angioparesis took place. We should naturally surmise that the angioparesis was a sequence of the paralysis of the vaso-constrictor nerves due to the toxic action of the altered constitution of the blood, if its direct action on the walls of the smaller vessels could be eliminated. The cessation of perspiration and accumulation of carbonic oxide were concomitant with the angioparesis. With the angioparesis and stasis began the hyperpyrexia, for this interfered with the heat loss to the extent of some ninety per cent. The loss of consciousness also was to be attributed to the change in the blood which induced retraction of the higher neuron aggregates. The best working-hypothesis of sunstroke was the theory of auto-intoxication. In fact, sunstroke seemed one of the most outspoken examples of the autotoxic diseases, and should be a most interesting field of investigation. There might be no actual poison derived from the body which gained entrance to the blood, but if the blood was changed in its density or chemical composition, under the conditions imposed by the external caloric agency, this was nevertheless a form of auto-intoxication. Whatever this change in the blood was, it certainly seemed to take place quite suddenly. It would be interesting to compare the blood as affected by snake venom with the condition in sunstroke. In both affections the clotting property of the blood post mortem seemed impaired.

Dr. P. A. Levene briefly referred to the existing theories of the mechanism of sunstroke. These were: (1) The direct action of the temperature on the heart and diaphragm, resulting in asphyxia; (2) direct local active irritation of the skin, resulting in angioparesis, which in its turn retarded the circulation; hence, accumulation of carbonic oxide and asphyxia; (3) high perspiration, causing fall of the blood-pressure; (4) paralysis of the heart produced by heat affected the kidneys, and the disturbance of the function of the kidneys was responsible for the symptoms of sunstroke; (5) the autotoxic theory. Nearly all the theories were speculative. The speaker referred to the fact that in sunstroke there was a marked diminution in the amount of urine secreted and a decrease in the quantity of urea and other ingredients, the specific gravity of the urine being lowered. This fact could not be explained by an organic change in the kidneys (as parenchymatous nephritis), as no albumin or casts could be detected in the majority of urines analyzed. There must be another cause for these changes in the character of the urine secretion. Pfaff, of Harvard, had recently demonstrated that defibrinated blood influenced the function of the kidneys in a similar manner to that produced by sunstroke. This would suggest that extreme heat produced changes in the blood (as a result of the abnormal function of the skin or other organs), similar to those produced by defibrination, or probably even rendered the blood less coagulable than normally. The latter fact was observed by some pathologists in cases of sunstroke. This would be a corroboration of the autotoxic theory. Another explanation for some of the symptoms of sunstroke might be found in the concentration of the blood. Under the old theory which attributed the symptoms of sunstroke to concentration of the blood, it was supposed that the blood became concentrated to such a degree that the heart was unable to propel it. It was more probable that when the blood became concentrated the proportion of salts was increased, and there were a corresponding increase in the osmotic pressure and a depression of the cells of the surrounding tissues. A condition similar to retraction of the cells probably took place under these circumstances.

Dr. George M. Parker, who was a hospital interne at the time of the epidemic of sunstroke in 1896, said that the mortality of the cases under his observation at that time was about sixty-six per cent., the deaths occurring from twelve to thirty-six hours after the onset of the attack. The symptoms were those of an acute general poison. The temperature range was a very wide one, in some cases going as high as 110° and 112° F. Comparatively few cases of sunstroke occurred until after the hot weather had lasted for several days. In one case coming under his observation the attack was followed by motor aphasia, with paresis of the lower extremity, which at the end of three months had not entirely disappeared. He said that the value of early treatment of sunstroke by means of applications of ice or ice-water could not be overestimated. Those patients who received early attention usually recovered rapidly, whereas in those who were neglected for a considerable length of time the reduction of temperature was very slow. The treatment consisted of applications of ice or ice-water, with vigorous rubbing, and considerable stimulation.

Dr. Charles A. Whiting gave his experience with sunstroke cases during the epidemic of 1896. He emphasized the statement made by Dr. Parker that the cases were rare during the first two or three days of the hot spell, and then began to multiply rapidly. The patients usually became delirious when the temperature rose above 106° F. As a stimulant, camphor, given subcutaneously, seemed to be very efficacious.

SECTION ON SURGERY.

Stated Meeting, May 14, 1900.

Charles N. Dowd, M.D., Chairman.

Choledochotomy.—Dr. Howard Lilienthal presented a patient, about thirty-five years old, who was admitted to the Mt. Sinai Hospital December 14, 1899. She first had jaundice six years ago after childbirth. She was then well until three months ago, when there developed epigastric pain, shooting into the back, but not in the right side. There was no colic, but severe intermittent pain. There was no vomiting or distress after eating. The pain recurred every five or six days. Constipation was present; the stools were never clay-colored. About one month ago jaundice occurred after an attack of pain. On admission the pulse was 92, respirations 24, and the temperature 100.4° F. The urine was acid in reaction; specific gravity, 1.024; otherwise negative. The liver extended from the fifth interspace to a finger's breadth below the border of the ribs in the mammary line; its border was about horizontal. There was firm resistance in the epigastrium, most noted under the upper part of the right rectus. The patient was decidedly jaundiced. On December 15th the temperature was 101.2° F. She had not much pain. On December 18th the urine contained bile, albumin, pus, and epithelial, hyaline, and granular casts. The patient's general condition seemed to be improving. On December 18th choledochotomy was done. The gall bladder was not tense. No stones were felt. The cystic duct was apparently free. The common duct contained a mass which, on incision, was found to consist of eight or nine small faceted stones about the size of hickory nuts. Before incision a purse-string suture was made around the point of intended incision. Twelve other stones were obtained from the common duct by milking. A probe passed through into the duodenum. The purse-string suture was then tightened and was reinforced by a few silk sutures. In the upper part a short drain of gauze surrounded by rubber tissue was carried straight down. After the operation there were some vomiting and a mild nephritis which subsided under appropriate treatment. On December 24th the first dressing was changed. The packing was taken out; there was no leakage. The sinus was filled with iodoformized gauze through an endoscope. On January 17th she was discharged, and she has been practically well ever since.

Sarcoma of Dislocated Testicle.—Dr. James Pedersen presented R. M——, aged twenty-seven years. When he was thirteen years old his left testicle was driven through the inguinal ring to the internal abdominal ring, if not entirely into the abdomen, by a severe blow from a flying base-ball. The only immediate effect was local pain on exertion. Apparently neither this nor the failure of the testicle to descend again into the scrotum received any attention. He did not even report the matter to his parents. Gradually a tumor formed in the left inguinal region, and with its growth the local pain on exertion increased. Then frequency of micturition developed. He allowed the condition to take its course throughout the intervening fourteen years until last January, when the pain on exertion had become so great that he could scarcely stand up. The patient's general condition was now very poor; his anæmia and his emaciation combined with his dwarfish stature, presented a sorry spectacle. Local examination showed an apparently normal right testicle; the left half of the scrotum was empty, the corresponding inguinal canal occluded; no evidence of hernia was present. Occupying the left inguinal region was a prominent, rounded tumor, which sloped away toward the median line, but which filled the hypogastrium also and encroached upon the right inguinal region. The tumor could be felt per rectum, on reaching high up. The diagnosis was sarcoma. Operation was advised and accepted. After the patient had had a preliminary week of rest in bed, and liberal diet and stimulation, the tumor was removed February 3d, through the ordinary median incision. The omentum was found adherent over a considerable area of the upper surface of the growth; numerous adhesions bound it to the surrounding structures, and it was tightly wedged in the pelvis between the bladder and the rectum, to both of which it was adherent. When the tumor had been shelled out of the pelvis the pedicle was found springing from the region of the left internal abdominal ring, and a secondary growth was discovered, which from about the middle of the primary extended upward behind the peritoneum to, if not involving, the left kidney. The patient's condition making expedition necessary, the pedicle had to be ligated *en masse* and the retroperitoneal growth, at its junction with the primary, was ligated in two portions and cut. There was considerable hemorrhage from this point. After ascertaining that the bladder had not been wounded, gauze drains were inserted and the abdominal incision was closed. The patient was in extreme shock at this stage, but under active hypodermatic stimulation and the systematic use of high enemata of hot saline solution with coffee he recovered rapidly. Four hours after the operation his pulse was good and his general condition surprisingly so. During the first four days the rectal temperature ranged from 102.8° to 101° F., and the pulse from 112 to 84. On the fifth day the temperature began to rise. On the sixth day the dressings were much soiled with a brownish fluid of fecal odor. Two small drainage tubes were therefore substituted for the gauze wicks, and irrigations of the sinus were instituted. After three or four days the discharge became purulent and the fecal odor disappeared. On the seventh day the patient complained of pain in the left inguinal region. Examination showed a small tumor presenting in the region of the internal abdominal ring. It had the physical characters of intestinal hernia, and as it was reducible with a gurgling sound it was so regarded. It continued to recur, however, in spite of well-directed attempts to keep it back. Apparently as the result of the repeated manipulations, the tumor became inflamed, and by evening of the following day it had increased considerably in size and become irreducible. It was boggy and no longer tympanitic; it now formed an elongated mass, its lower extremity dipping into the upper limit of the scrotal sac. There were no subjective symptoms of strangulation. An ice-bag was kept applied. The following morning the patient complained of increasing pain in the tumor region. The irregular temperature had risen somewhat during the night and there had been considerable sweating. An abscess was, therefore, suspected. Dr. De Garmo, who kindly saw the patient in consultation, excluded incarcerated intestinal hernia and made out a cyst containing fluid (possibly pus). Acting upon his advice an exploratory puncture was made. The needle entered a thick-walled sac and drew off about three drachms of straw-colored serum. In the course of the next twenty-four hours the cyst refilled and the site of the suspected abscess became manifest by a slight prominence of the inguinal region on the same side. Under ether an incision was now made over the scrotal tumor and carried upward across Poupart's ligament. From the former site an egg-shaped cyst, apparently the remains of the former tunica vaginalis, was easily enucleated. From the abscess cavity a large quantity of very foul pus was evacuated. A drainage tube was inserted and the wound closed. From this point on the patient did perfectly well. He was allowed to sit up three weeks after the first operation. The sutured portions of both wounds healed by primary union. Both sinuses were closed by the end of the seventh week. Dr. F. C. Wood, to whom the tumor was submitted for examination, reported it to be a large round-celled sarcoma, devoid of any remnant of testicle tissue. Dr. W. B. Coley, who now kindly saw the patient for me with the view of determining whether injections of the mixed toxins of erysipelas and the bacillus prodigiosus should be resorted to, found that the secondary growth was too widely generalized. Equally, and for the same reason, removal by operation of this growth was impossible. As to the patient's condition at present, instead of being scarcely able to stand up, he now goes about with comparative comfort, and he has gained a little in weight. Micturition is normal.

Abscess of Gall Bladder and Liver; Gall Stone in Common Bile Duct; Kinking of Stomach from Adhesions; Gastric Ulcer; Recovery by Choledectomy and Gastro-Enterostomy.—Dr. Robert F. Weir exhibited a woman aged thirty-five years, on whom he had, in December last, for a distended and painful gall bladder, with temperature elevation and chills, and paroxysmal vomiting, incised the abdominal wall and opened the gall bladder, which contained some two or three ounces of pus, and which had ulcerated through on its posterior wall and had thus invaded the liver tissue, in which there was found a communicating abscess holding over an ounce of pus. Nothing in the way of concretion was found in the gall passages, nor were there jaundice or clay-colored stools present. Many adhesions outside the gall-bladder were encountered. The gall-bladder was drained by a retained tube through which bile flowed moderately for a short time. Her attacks of vomiting soon recurred and were associated with pain in the gastric and hepatic regions. The stools were not clay-colored nor was jaundice present. She re-entered the New York Hospital April 2d, having lately had chills and fever added to her symptoms. There was marked tenderness over the gall-bladder region, and it was thought that this was distended. The incision was along the outer edge of the rectus, which muscle was drawn to the median line after section transversely of its anterior sheath, and then later its posterior sheath was secondarily divided. This gave a large exposure to the parts. The adhesions of the omentum were slowly released, and the gall bladder was found in good condition. As the parts were cleansed it was recognized that a movable calculus was in the upper part of the common duct. This was removed by incision and the wound sewed up. Then a marked kinking of the stomach near the pylorus by adhesions was found which was unloosened, when palpation of the pylorus revealed a sharply thickened mass the size and shape of half an almond on its posterior wall running into the stomach and clearly marking the site of an ulcer. This was treated through the same wound (showing thus its scope) by a posterior gastro-enterostomy combined with entero-anastomosis by the Gallet method. The patient made a rapid recovery. The buttons were discharged on the ninth and thirteenth day respectively. The gall stone was about the size of a bean.

Dr. Howard Lilienthal said that this subject was very rapidly growing in interest, and that operations were becoming more and more frequent. He wished to relate an experience that he had this year with a near relative of his, which showed how differently one will act when such a condition is brought home to you. An old lady about sixty years of age had a very marked attack of cholecystitis which was evidently complicated by gall stones. The fever was moderate but the pain was extremely severe. The gall bladder was palpable and the jaundice was quite deep, disappearing soon after the attack. He believed that taking into consideration the age of the patient and the fact that, after all, a great many individuals have had attacks of that sort and have gotten over them, conservatism was the right thing. This old lady recovered. She might never have another attack. Until he was convinced that there was what might be called "clinical sepsis" which bade fair to become alarming, he would be slow to urge operation upon the gall bladder in old people. In patients of that age the old-fashioned cholecystotomy with removal of the gall stones, even perhaps leaving a fistula, he thought would more surely conserve their lives than anything else he knew of.

Dr. Charles A. Powers, of Denver, was in accord with the remarks of Dr. Lilienthal relative to conservatism, especially in older people. The differential diagnosis between diseases of the gall bladder and bile ducts had been a matter in which, on a number of occasions, he had been absolutely unable to give a positive opinion before operating. No less than three times during the past year had he been in doubt as to whether there was an acute inflammation of the gall bladder or of the appendix. In each instance he made a short incision midway between the two, and with the finger swept the interior; in each instance the gall bladder, and not the appendix, was at fault.

Sarcoma of Mesentery; its Extirpation, with Eight and One-Quarter Feet of Small Intestine; Peritonitis; Death.—Dr. Robert F. Weir showed a specimen of a large sarcoma originally involving the mesentery and subsequently invading the small intestines, which had existed in a man forty years of age, and had been recognized by him for about two months. Prior to that time he had had frequent attacks of indigestion. From February 4th to the date of his entrance to the New York Hospital, March 2d, he had had continued pain in the lower abdomen, in which a mass centrally situated was felt through the abdominal walls, slightly movable but sensitive to touch. It was larger than a cocoanut. A laparotomy done on March 5th showed that it was, as previously diagnosticated from the absence of intestinal obstruction or hemorrhage, of mesenteric origin, and that its nature was, as expected, sarcomatous. It was dislodged with but little effort from the pelvis, which it well filled, being attached to the left side of the brim. In raising up the tumor at the front the small intestine, which was here largely involved, gave way and allowed one or two tablespoonfuls of yellow mucus to escape; though the opening was immediately plugged and the peritoneum adjacent forthwith cleaned and irrigated, this infection had a large influence on the subsequent progress of the case. The tumor being raised above the skin level it was seen that a large resection of the intestine would be necessary to remove the mass. This was decided upon, as the patient's condition was good. It was accordingly done, the mesenteric vessels, when recognized, being duly clamped and ligated prior to division. When ablated it was found that some seven feet and six inches had been removed, but as some eight inches more of the intestine demanded removal by reason of defective circulation, a total of eight feet and two inches was taken away. Instead of an end-to-end anastomosis a lateral union by Murphy's button was resorted to, as it had been shown in several cases that gangrene of the free ends occurred. These ends were simply twisted and duly seared. The patient succumbed to peritonitis at the end of thirty-six hours, due, most probably, to the infection incurred at the operation. It had been shown that a greater length than this, in which the lower end was about one foot from the ileo-cæcal valve, had been successfully removed. The longest piece of bowel taken away was twelve feet, but this patient did not survive. One other resection of eleven feet was survived, and one year later the patient was in perfect health. It was believed that no more than one-half the small intestine could be removed without affecting nutrition. One should always leave as much as one took away.

Differential Diagnosis in Diseases of the Biliary Passages.—Dr. George E. Brewer read this paper which will appear in a future issue.

Concerning the Peritoneum and the Treatment of Diffuse Exudative Peritonitis.—Dr. A. A. Berg read this paper (see page 1113).

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 23, 1900:

	Cases.	Deaths.
Tuberculosis	178	135
Typhoid fever	18	9
Scarlet fever	107	8
Measles	304	14
Diphtheria	257	30
Laryngeal diphtheria (croup)	8	3
Cerebro-spinal meningitis	0	6
Chicken-pox	19	0
Smallpox	4	1

Diagnosis of Incipient Forms of Pulmonary Tuberculosis.—Senator, of Berlin, says the best criteria for an early diagnosis are as follows: "Analysis of the sputum; inoculation of it into animals; reaction to serum and to tuberculin; leucocytosis when it is possible to eliminate all other causes capable of producing it; auscultation and percussion when they reveal changes limited to the apex of the lung; different degrees of expansion of the apices; the artificial catarrh induced by the use of potassium iodide; tuberculous lesions of other organs; previous pleurisies; the habitus phthisicus; cough and sweating."—*British Medical Journal.*

Women's Brains.—Mr. Alexander Sutherland writes in *Nineteenth Century* for May upon "Woman's Brains." Mr. Sutherland points out that as the result of recent investigations it is proved that the average man has from ten to twelve per cent. more brain weight than the average woman, but in proportion to the weight of her body woman has six per cent. more brain than man has. Her average runs about fifty ounces of brain for every pound of weight in her body, while man in proportion to his body has only forty-seven ounces. But, on the whole, he says that "however or wherever we make the inquiry," it is always seen that when men and women are of equal height and weight the men have something like ten per cent. more brain than women. The average brain of a man of genius in only 9.3 per cent. more than that of the ordinary individual. The average woman is to the average man as the average man is to the man of genius, if the weight of brains were to settle it. Lest the average male should be inclined to vaunt himself over his sisters, Mr. Sutherland tells him that even if it were demonstrated that the average woman, because she had ten per cent. less brain weight, had therefore ten per cent. less intellectual capacity than the average man, it would have to be remembered that even then ninety per cent. of the women are the equals of ninety per cent. of the men, and this would seem to imply that the average man has to recognize about forty per cent. of the women as his superiors in intellect.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ended June 23, 1900:

		Cases.	Deaths.
Smallpox—United States.			
District of Columbia, Washington	June 9th to 16th	8	
Illinois, Cairo	June 2d to 9th	1	
Indiana, Evansville	June 8th to 16th	2	
Iowa, Ottumwa	April 28th to May 5th	1	
Kentucky, Covington	June 8th to 16th	9	
Louisiana, New Orleans	June 8th to 16th	35	6
Shreveport	June 2d to 9th	5	
Massachusetts, Fall River	June 8th to 16th	3	
Lowell	June 8th to 16th	3	
Michigan, Grand Rapids	June 8th to 16th	2	
Minnesota, Minneapolis	May 26th to June 9th	26	1
N. Hampshire, Manchester	June 8th to 16th	9	
Ohio, Cleveland	June 8th to 16th	28	2
Youngstown	June 8th to 16th	1	
Pennsylvania, Pittsburg	June 8th to 16th	2	
Porto Rico, Ponce	May 27th to June 4th	1	
South Carolina, Greenville	June 8th to 16th	2	
Utah, Ogden	May 1st to 31st	3	
Salt Lake City	June 8th to 16th	5	
Washington, Spokane	June 8th to 16th	1	
West Virginia, Charlestown	June 12th	10	
Smallpox—Foreign.			
Austria, Prague	May 28th to June 2d	11	
Belgium, Antwerp	May 19th to 26th	1	2
Brazil, Rio de Janeiro	April 13th to May 11th	..	16
Canada, Province of Montreal	June 4th	30	
England, Liverpool	May 26th to June 2d	2	
London	May 26th to June 2d	7	
France, Nice	May 25th to June 6th	3	
Paris	May 26th to June 2d	..	1
Germany, Stettin	May 19th to 26th	1	
Gibraltar	May 20th to 29th	4	
Greece, Athens	May 19th to 26th	4	2
India, Bombay	May 8th to 15th	..	24
Kurrachee	May 6th to 13th	11	9
Madras	May 5th to 11th	..	1
Mexico, Chihuahua	June 2d to 9th	..	[illegible]
Vera Cruz	June 2d to 9th	..	2
Philippines, Manila	April 28th to May 5th	2	
Russia, Moscow	May 19th to 26th	9	4
Odessa	May 26th to June 2d	11	1
St. Petersburg	May 19th to 26th	33	12
Warsaw	May 12th to 19th	..	2
Spain, Corunna	May 26th to June 2d	..	1
Madrid	May 5th to 19th	..	21
Straits Settlements, Singapore	April 28th to May 5th	..	5
Uruguay, Montevideo	April 21st to May 5th	2	
Yellow Fever.			
Brazil, Rio de Janeiro	April 13th to May 11th	..	46
Colombia, Barranquilla	May 26th to June 2d	5	3
Cuba, Havana	June 2d to 9th	..	2
Mexico, Laguna	June 16th	Present.	
Vera Cruz	June 2d to 9th	17	10
Cholera.			
India, Bombay	May 8th to 15th	..	15
Kurrachee	May 6th to 13th	2	
Madras	May 5th to 11th	..	1
Plague.			
India, Bombay	May 8th to 15th	..	304
Kurrachee	May 6th to 13th	178	134
Japan, Osaka	May 13th to 25th	6	
Shidzuoka	May 14th to 17th	3	
Philippines, Manila	April 28th to May 5th	9	7

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